2012-2013 CATALOG

Velleman® Inc.

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VELLEMAN Inc.

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Velleman
Belgium

OUR OFFICES

Velleman Electronique
France

Velleman Spain
Spain

OUR BUYING OFFICES

Velleman China
China

Velleman Hong Kong Ltd
Hong Kong

Velleman Components NV
Taiwan Branch
Taiwan

Product packaging

Box

Bulk

Bucket

Blow mould case

Blistercard

Can

Header

Display

Double blister

Envelop

Shrink-wrap

Plastic hanging card

Slipcase

Reel

Bag

Tube

Bag with header

Carrying bag

Tray

Jar

Window box

KITS

VIDEO APPLICATIONS

VIDEO AND RGB CONVERTER/PROCESSOR
K4600

LEVEL 5

To process a PAL colour video signal it first has to be converted back into the original Red, Green and Blue signals. In this way the colours can be adjusted separately along with, the colour intensity, brightness and contrast. After processing, the signal can then be converted back into the PAL video signal. A choice can be made between PAL Video or RGB outputs. In addition a place has been provided on the PCB for a UHF modulator (our type RFMOD), such that the antenna input of the TV or video can also be used. It is also possible to connect a SVHS input signal.
Specifications:
- colour system: PAL (CCIR)
- controls for brightness, contrast and saturation
- separated controls for Red, Green and Blue
- composite video input (RCA-connector)
- RGB input (option)
- input level: 1Vpp
- input impedance: 75 ohm
- composite video output (RCA-connector)
- RGB-output: 9-pin SUB-D
- output level: 1Vpp
- output impedance: 75 ohm
- housing included
- power supply: 16VDC / 0.5A unregulated
- PCB dimensions: 6.7" x 5.5"
- dimensions: 7.9" x 2.6" x 6.7"

Packaging	Carton /1
EAN code 54 10329 04600 2	UPC code

HOME APPLICATIONS

LIQUID LEVEL CONTROLLER
K2639
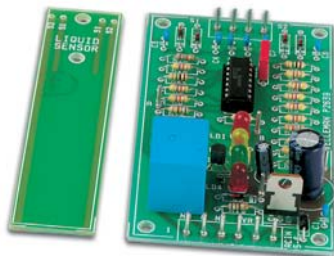
LEVEL 3

Forgotten to turn off the tap, leaking washing machines, water level dropping in your aquarium, rain tank or water tank suddenly dry or over flowing, water in your cellar, etc. Such situations are often the cause of trouble and financial burden. Prevention is better than cure. So use this fluid detector. This multifunctional device is easy to use in a variety of applications : 1) LED control of set fluid level : LOW, MIDDLE, HIGH ; 2) Controller : the relay automatically switches a pump and/or valve to keep the fluid level between the LOW and HIGH marks ; 3) Alarm : if the sensor detects a level which is too high or too low (selectable), the relay will operate a bell or other alarm device.
Specifications:
- power supply: 12-14V AC or 16-18V DC / 100mA
- relay output: 240V / 3A max.
- dimensions:
  - controller PCB: 4.1 x 2.4"
  - sensor PCB: 4.1 x 1"

Packaging	Carton /20
EAN code 54 10329 02639 4	UPC code 8 16353 01082 1

DUAL ELECTRONIC DICE
K3400

LEVEL 1

Board games provide an excellent source of pleasant and healthy entertainment. However, the dice can be a constant source of distraction : they fall off the table, allow cheating, one or more players don't see the results properly and so on. There can be no doubt at all about the result displayed on this electronic dice module, and cheating is out of the question. Two fully independent dice. At your choice you can play with one or two dice. Displays are switched off automatically after 30 seconds to save battery power.
Specifications:
- power supply: 8 to 12V DC or 6V AC / 60mA
- PCB dimensions: 3 x 2.8"

Packaging	Carton /20
EAN code 54 10329 03400 9	UPC code 8 16353 01090 6

MULTITONE CHIME
K6600

LEVEL 1 | **3 x AA**

Electronic tones can be generated simply and cheaply using the device. This kit is primarily intended for use as a replacement for the traditional mechanical doorbell. Of course, it can also be used for many other types of applications. The number of tones may be selected up to a maximum of three, each of which is output one after the other. This can be used to help locate the place being called. Volume and tone can also be set. The existing bell transformer can be used as a power supply.
Specifications:
- adjustable tone and volume control
- 1, 2 or 3 tones selectable
- loudspeaker output: 0.3W / 8ohm
- power supply: 6 to 9V AC / 0.2A or 4.5V battery (3 x 1.5V AA batteries (not incl.)
- idle current: less than 10µA
- dimensions: 2.1 x 2.3"

Packaging	Carton /20
EAN code 54 10329 06600 0	UPC code 8 16353 01083 8

TELEPHONE RING DETECTOR WITH RELAY OUTPUT
K8086

LEVEL 2

Features:
- simply connect in parallel with phone line
- powerful led flashes when phone rings
- the unit will feature a relay output if connected to a 12VDC power supply
- relay output: continuous or on/off to the rhythm of ringing of the telephone
- complete with enclosure
- great for noisy environments, for the hearing impaired, as addional ringer, to replace existing ringer, ...
- accepts standard adaptor & telephone plug
- includes:
  - attractive enclosure
  - adhesive strips for easy fixing
Specifications:
- 10.000 mcd led !
- connects to PSTN line
- RJ11 connector

- supply: 12VDC/100mA adapter (Ex. PS1203)
- output Contact (NO): 1A max.
- dimensions: 3.15 x 2.16 x 1.37"

Packaging	Carton /20
EAN code 54 10329 38380 0	UPC code

TELEPHONE RINGER WITH BUZZER AND LED
K8087

LEVEL 2

Features:
- accepts standard telephone plug
- simply connect in parallel with phone line
- no power supply necessary!
- buzzer sounds and powerful led flashes when phone rings
- great for noisy environments, for the hearing impaired, as additional ringer, to replace existing ringer,...
- includes:
  - attractive enclosure
  - adhesive strips for easy fixing
Specifications:
- 10.000 mcd led !
- connects to PSTN line
- RJ11 connector
- consumption: 10mA max.
- dimensions: 3.15 x 2.16 x 1.37"

Packaging	Carton /20
EAN code 54 10329 38388 6	UPC code

AUDIO/HIFI APPLICATIONS

DISCRETE POWER AMPLIFIER 200W
K8060

LEVEL 5

K8060
Shown with optional heatsink
HSVM100

Features:
- excellent value for money
- fully discrete design using Epitaxial Darlington transistors
- DC supply circuit on board with LED indication
- ideal for active speaker system or subwoofer, guitar amp, home theatre systems, instrument amp, etc.
- comes complete with transistor isolators, spacers and bolts
- overload and short-circuit protection
- OPTIONAL HEATSINK REQUIRED! Also available as completely mounted module VM100

Specifications:
- 200W music power @ 4 ohm load
- 100Wrms power @ 4 ohm load
- 70Wrms power @ 8 ohm load
- distortion: 0.02% @ 1KHz/10W
- damping factor: >800
- frequency response: 3Hz to 200KHz (-3dB)
- sensitivity: 0.6Vrms
- signal to noise ratio: 115dB
- power supply: 2 x 25-30Vac / 120VA
- PCB dimensions: 4.2 x 2.4" (approx.)
- recommended heatsink: HSVM100 (pre-drilled) or S44/75 (not drilled)
- recommended power transformer:
  - 230VAC input, 2 x 30VAC output: 12030
  - 115 / 230VAC input, 2 x 25VAC output: TR8040 (output power reduced by ±15%)

Packaging		Carton	/20
EAN code	54 10329 33505 2	UPC code	8 16353 01044 9

100W SUBWOOFER KIT
K8077

LEVEL 5

Kit contains all necessary parts to build your compact but powerful high quality subwoofer
* Wooden panels not included!
Features:
- bass-reflex system with adjustable tube
- compact size due to dual-speaker principle
- adjustable level and filter response
- auto power-on/off system
- phase switch (0°-180°)
- line level and speaker level inputs for maximum compatibility
- 'Full-range'-option for use in active speaker system
- separate chamber for electronics avoids air leaks
Specifications:
- power output: 100Wrms/ 4ohm (10% THD)
- filter freq. response:
  - wide: 25 - 110Hz (-6dB)
  - narrow: 18 - 65Hz (-6dB)
- speakers: two 6.5" 8 ohm drivers
- line level input sensitivity: 500mV
- auto turn-on level: 5mV
- volume*: approx. 20 liter
- power supply: 120/230VAC
- dimensions: 18.2 x 12.3 x 8.3"

Packaging		Carton	/20
EAN code	54 10329 35506 7	UPC code	

VOLUME AND TONE CONTROL - PREAMPLIFIER
K8084

LEVEL 4

When using one of our amplifiers (big or small), you always need a volume control and preferably also a tone control.
This kit comes complete with all input / output connections and potentiometers.
Furthermore it is possible to amplify or attenuate the input signal.

Features:
- stereo volume control
- stereo Baxandall bass and treble control
- bass and treble potentiometers with centre click
- customizable attenuation or amplification
- complete with knobs
Specifications:
- supply voltage: 2 x 12VAC / 100mA
- frequency response: 3Hz - 500kHz (-3dB)
- standard amplification: x1
- signal to noise ratio: 98dB
- harmonic distortion: < 0.005% (@1KHz)
- maximum output: 5V RMS
- tone control:
  - + and -15dB @ 20Hz
  - + and -15dB @ 15kHz
- Input impedance: 50k ohms
- dimensions: 4.1 x 2.75"

Packaging		Carton	/20
EAN code	54 10329 37444 0	UPC code	8 36479 00960 8

MP3 PLAYER PROJECT
K8095
NEW

LEVEL 5

Finally it is possible to build your own MP3 player!
Create your own home audio system, jukebox, jingle player, audio messages, sound effects, ... MP3, where you want and how you want it!

Features:
- SD card operation
- high-quality VLSI decoder
- 5 Preset folder access buttons
- play-pause, next, previous, search
- volume control
- random and shuffle
- 8 different preset sound modes
- 6 play modes: All, Folder, At power-on...
- infrared receiver
- on-board power amplifier
- RCA pre out
- headphone and speaker outputs
- mono operation is possible
- vertical or horizontal SD card position possible
- suits commercially available LCD types
- optional:
  - LCD: PC1602WRS-KWA-E
  - RF receiver module: RX433N
  - power adaptor: PS1210
  - RF remotes: for EU and US
    · 8-channel RF remote transmitter: VM118R (mounted)
    · 8-channel RF remote control: K8058 (Kit-version)
  - RF remotes: only for EU
    · 4-channel desktop transmitter: VM160DT
    · 4-channel transmitter: VM160T
  - IR remotes:
    · 15-channel IR transmitter: K8049 (Kit-version)

Specifications:
- suitable for SD and SDHC cards
- tested up to 32GB cards

- supports ID3 TAG information: Title, Artist Name, Album Name and Year are displayed on the (optional) 2-line 16 char. LCD
- supports folders to one level deep
- up to 1024 folders, each containing up to 16384 songs
- equalizer settings: Flat , Loudness, Heavy, Clear, Soft, Disco, Live and Hall
- decodes MP3 (MPEG 1.0 & 2.0 audio layer III (CBR, VBR, ABR), Till 320kbit/s. Fraunhofer IIS and Thomson licensed
- amplifier: 2x 5Wrms @ 4ohm
- power supply: 12Vdc/1A
- dimensions: 130 x 99mm / 5.11 x 3.9"

Packaging		Carton	/20
EAN code	54 10329 42030 7	UPC code	8 36479 00929 5

AUDIO ANALYSER
K8098
NEW
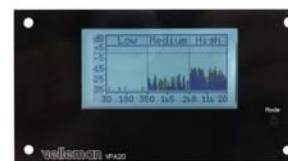
Small and compact unit, ideal for panel mounting.
Give your homemade audio gear a high-tech look. Upgrade existing equipment.

Features:
- measure:
  - Peak power
  - RMS power
  - Mean dB
  - peak dB
  - Linear audio spectrum
  - 1/3 octave audio spectrum
- auto or manual range selection
- peak-hold function
- speaker impedance selection
- language selection
- white backlit LCD
- easy panel mounting

Specifications:
- power measurement into 2, 4 or 8 ohms + bridged amp option
- range: 300mW to 1200W @ 2 ohms
- sensitivity: -34dBu (15.5 mVrms)
- max. input level: 50Vrms @ 220k
- frequency range: 20Hz to 20kHz
- power supply: 12VDC / 75mA
- dimensions:
  - display: 128 x 64mm / 5 x 2.5" (46 x 24mm / 1.8 x 0.95")
  - front panel: 98 x 51mm / 3.8 x 2"
  - mounting depth: 35mm / 1.37"

Packaging		Carton	/20
EAN code	54 10329 42874 7	UPC code	8 36479 00930 1

UNIVERSAL MONO PRE-AMPLIFIER
K1803

LEVEL 2

This kit has been developed as pre-module for a number of audio applications where there is insufficient input signal. Applications as a microphone pre-amplifier or for level correction.
Specifications:
* power supply: 10-30V DC / 10mA
* output impedance: 1Kohm
* adjustable output level: max. 40dB
* frequency range: 20Hz to 20kHz ± 3dB
* max. input signal: 40mV
* PCB dimensions: 1.2 x 1.7"

Packaging | Carton /20
EAN code: 54 10329 01803 0 | UPC code: 8 16353 01081 4

UNIVERSAL STEREO PRE-AMPLIFIER
K2572

LEVEL 2

Universal low-noise stereo pre-amplifier.
Specifications:
* frequency range: 40Hz - 30kHz (-3dB)
* max. input voltage: 50mVrms
* adjustable gain: 40dB max.
* output impedance: 1Kohm
* power supply: 10-30V DC / 5mA
* PCB dimensions: 1.7 x 2.6"

Packaging | Carton /20
EAN code: 54 10329 02572 4 | UPC code: 8 36479 00976 9

STEREO RIAA PRE-AMPLIFIER
K2573

LEVEL 2

RIAA stereo pre-amplifier for md pick-ups. Low noise.
Specifications:
* supply voltage: 10 -30V DC / 5mA regulated
* gain (1kHz): 35dB
* input signal: 5 - 10mV
* input impedance: 47Kohm
* PCB dimensions: 1.7 x 2.6"

Packaging | Carton /20
EAN code: 54 10329 02573 1 | UPC code: 8 36479 00691 1

SIREN KIT
K2604

LEVEL 1

Enter the world of amazing electronic sounds and noises. Create or imitate sirens of all kinds by adjusting 3 trimmers. Powerful sound with a 2W amplifier on the PCB.
Specifications:
* power supply: 8 - 14V DC / 1A
* modulation speed: 0.5 - 5s
* frequency: 300 - 6000Hz
* output power: +/- 2W max.
* dimensions: 3.14 x 2.16 x 0.6"

Packaging | Carton /20
EAN code: 54 10329 02604 2 | UPC code

AM/FM ANTENNA AMPLIFIER
K2622

LEVEL 1

This amplifier provides 22dB gain wherever you need it. DC power supply directly or via the coax cable. Metal housing included.
Specifications:
* gain: 22dB
* power supply: 12V to 15V / 3mA
* input- and output impedance: 50 - 75ohm
* frequency range: 10MHz to 150MHz
* dimensions: 3.4 x 1.4 x 0.9"

Packaging | Carton /20
EAN code: 54 10329 02622 6 | UPC code: 8 36479 00993 6

3W MONO AMPLIFIER
K8066

LEVEL 2

Small but powerful amplifier suits a wide range of applications such as : microphone amp, for doorbells, melody generators, intercom, sound effects, earphones, radio receivers, PC sound card, musical instrument, ...
Features:
* compact size
* low partcount
* no additional heatsink required
* single supply
* wide supply range
* excellent protection
Specifications:
* output power: 3Wrms (4-8 ohm, 15VDC, 10% THD)
* frequency range: 50Hz - 20kHz (1W/8ohm, -3dB)
* gain: 32dB (40x)
* thermal protection
* short circuit protection
* power supply: 6 ~ 15VDC
* current consumption: 500mA max.
* dimensions: 1.6 x 1.9"

Packaging | Carton /20
EAN code: 54 10329 32532 9 | UPC code: 8 36479 00964 6

7W MONO AUDIO AMPLIFIER
K4001

LEVEL 1

This small amplifier is constructed around the TDA2003 IC, capable of delivering 4Wrms at 4ohms. The IC is completely thermally and short-circuit protected. A conventional direct current can be connected as supply.
Features:
* exists also in mounted version VM114: vm114
Specifications:
* music power output: 7W / 4ohm
* RMS output: 3.5W / 4ohm or 2W / 8ohm
* total harmonic distortion: 0.05% (1W / 1kHz)
* frequency response: 20Hz to 20kHz (-3dB)
* signal/noise ratio: 86dB (A weighted)
* input sensitivity: 40mV / 150Kohm
* overload and short-circuit protected
* supply voltage: 15V DC (8 to 18V DC possible) / 0.5A
* dimensions: 2.2 x 1.4"

Packaging | Carton /20
EAN code: 54 10329 04001 7 | UPC code: 8 36479 00694 2

2 X 30W AUDIO POWER AMPLIFIER
K4003
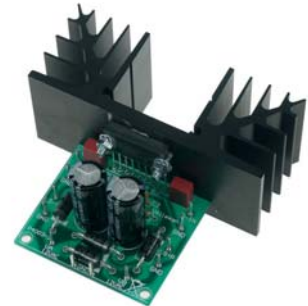
LEVEL 1

This small amplifier is constructed with the TDA2616 IC, with a maximum supply capability of 2 x 15Wrms (4ohm) of 2 x 10Wrms (8ohm). The IC is thermally and short-circuit protected. Additional rectifier and smoothing filter are unnecessary, as alternating current can be directly connected to the unit.
Features:
* exists also in mounted version: vm113
Specifications:
* music power output: 2 x 30W / 4ohm
* RMS output: 2 x 15Wrms / 4ohm or 2 x 10Wrms / 8ohm
* total harmonic distortion: 0.07% (1W / 1kHz)
* channel separation: 70dB
* frequency response: 7Hz to 60kHz (-3dB)
* signal-to-noise ratio: 98dB (A weighted)
* input sensitivity: 300mV / 150Kohm
* transient suppression on/off switch
* overload and short-circuit protection: max. 1h
* supply voltage: 2 x 12V AC / 2A (50W transfo recommended)
* dimensions: 2.8 x 2"

Packaging | Carton /20
EAN code: 54 10329 04003 1 | UPC code: 8 36479 00695 9

200W MONO / STEREO AMPLIFIER
K4004B

LEVEL 3

Universal, robust and compact are the words to describe this amplifier.
Universal : A stereo or a mono amplifier. Three input sensitivities are selectable.
Robust : Overload and short-circuit protection, protection against incorrect power supply polarity and thermally protected too. Speaker transient suppression.

Specifications:
- rms output power: 2 x 50W / 4ohm ; 2 x 40W / 8ohm
- rms mono-bridged power: 100W / 8ohm
- total music output: 200W
- harmonic distortion: 0.01% at 1kHz
- signal-to-noise ratio: 102dB (A weighted)
- stereo channel separation: 85dB
- damping factor (at 100Hz): > 1000
- input impedance: 22Kohm
- input sensitivity: 300mV, 550mV or 1V switchable
- thermal protection: max. 1h
- short-circuit and overload protection: max. 10 sec.
- power supply: + 28V DC and - 28V DC max.
- consumption (2 x 4ohm or mono-bridge 8ohm): 4A max.
- consumption (2 x 8ohm): 2.5A max.
- dimensions: 8.3 x 3.4 x 2.5"

Packaging | Carton /1
EAN code 54 10329 31232 9 | UPC code

400W MONO / STEREO AMPLIFIER
K4005B

LEVEL 4

Universal, robust and compact are the words to describe this amplifier.
Universal : A stereo or a mono amplifier. Three input sensitivities are selectable.
Robust : Overload and short-circuit protection, protection against incorrect power supply polarity and optional thermal protection. Speaker transient suppression.

Specifications:
- rms output power: 2 x 100W / 4ohm ; 2 x 75W / 8ohm
- rms mono-bridged power: 200W / 8ohm
- total music output: 400W
- harmonic distortion: 0.003% at 1kHz
- signal-to-noise ratio: 96dB (A-weighted)
- stereo channel separation: 76dB
- damping factor (at 100Hz): > 2000
- input impedance: 22kohm
- input sensitivity: 150mV, 300mV or 950mV switchable
- supply voltage for 8 ohm: + 35 to 40 VDC and - 35 to 44V DC / 2.5A
- supply voltage for 4 ohm or mono: + 25 to 30V DC and - 25 to 30V DC / 5A
- dimensions: 13.8 x 2.5 x 3.4"
- power supply: K4006

Packaging | Carton /1
EAN code 54 10329 31555 9 | UPC code

POWER SUPPLY FOR K4004B/K4005B
K4006

LEVEL 2

needs transformer :

kit	speaker	power supply	transformer
K4005	2 x 8ohm	2 x 30VAC / 225VA	type 22530
K4005	2 x 4ohm	2 x 21VAC / 300VA	type 30021
K4005	1 x 8ohm	2 x 21VAC / 300VA	type 30021
K4004	2 x 8ohm	2 x 18VAC / 160VA	type 16018
K4004	2 x 4ohm	2 x 18VAC / 225VA	type 22518
K4004	1 x 8ohm	2 x 18VAC / 225VA	type 22518

Packaging | Carton /20
EAN code 54 10329 31156 8 | UPC code

STEREO TUBE AMPLIFIER / CHROME VERSION
K4040

LEVEL 5

For most of us a high power tube amplifier is unaffordable. This kit changes that, so that now everybody can enjoy that sublime "tube sound". The sound of tubes has never been surpassed, nor by transistors, nor by FETs. In the course of developing this amplifier, special attention was given to the housing so that the expensive tubes are on display in a way that is very pleasing to the eye. The weakest point of an tube amplifier are the output transformers ; that's the reason why we use ultra-linear and over-rated output transformers (toroidal) to guarantee a rich bass response. To extend the life of the precious valves, the amplifier is provided with an switch on delay, so that the high voltage is switched on when the tubes are warmed up.

Features:
- pure valve sound with high quality EL34 tubes
- high quality black and chrome housing
- chrome valve socket covers
- easy bias adjustment with LED indication
- removable bottom for easy access and service
- high quality capacitors and components
- gold plated input and speaker terminals
- standby function
- "Soft start" circuit for power transformer

Specifications:
- output power: 2 x 90Wrms music power for loads of 4 or 8 ohm
- power bandwidth: 15Hz - 40kHz (-3dB ref. 50W)
- frequency range: 8Hz - 80kHz (-3dB ref. 1W)
- harmonic distortion: 0.08% (1kHz / 1W) / 0.7% (1kHz / 90W)

- signal-to-noise ratio: > 105dB (A-weighted ref. 90W)
- channel separation: >75dB (ref. 90W)
- input impedance: 34Kohm
- input sensitivity: 1Vrms at 95W
- damping factor: >10 (100Hz)
- weight: 23.46Kg
- dimensions: 16.7 x 5.1 x 13.8"

Packaging | Carton /1
EAN code 54 10329 21706 8 | UPC code 8 36479 00927 1

GUITAR HEADPHONE AND PREAMPLIFIER
K4102

LEVEL 1 | 1 x 9V

An electric guitar cannot be connected to just any amplifier or audio installation. This pre-amplifier has been designed for this purpose and provides you with a headphone output, allowing you to practice without disturbing others. Moreover, it is fitted with a special device for tone adjustment, allowing anyone to create their personal sound.

Specifications:
- sound adjustment
- adjustable input sensitivity
- low noise
- headphones output: max. 2 x 50mW / 32ohm
- housing included
- power supply: 9V battery (not incl.)
- dimensions: 2.8 x 1.2 x 4.1"

Packaging | Carton /20
EAN code 54 10329 04102 1 | UPC code 8 36479 00959 2

PINK NOISE GENERATOR
K4301

LEVEL 1

To analyze the acoustic properties of a room (usually a living room), a good pink noise generator together with a spectrum analyzer is indispensable. Moreover, a microphone with as linear a frequency characteristic as possible (from 20Hz to 20kHz) is needed. If you have an equalizer available, then the response can not only be checked but also corrected. Easily adapted to produce "white noise"

Specifications:
- pseudo random digital noise
- regulator sliding length: 33 bit
- clock frequency: adjustable between 30 and 100kHz
- pink noise filter: 3dB / octave (20Hz to 20kHz)
- output voltage: 150mVrms
- output impedance: 1Kohm
- power supply: 9 - 12V AC or 12 - 15V DC / 5mA
- PCB dimensions: 2.8 x 1.7"

Packaging | Carton /20
EAN code 54 10329 04301 8 | UPC code 8 16353 01002 9

>> www.vellemanusa.com

POWER SUPPLY AND SWITCHING MODULE
K4303

LEVEL 3

This kit consists of 2 parts :
1. Power supply and connection module (on the back panel). This consists of : power supply for all models (transformer 2 x 12Vac / 1A not included ; equaliser connections : EQUALISER IN - EQUALISER OUT - TAPE OUT.
2. Switching module for all functions of the spectrum analyser and the equaliser. This consists of : mains switch ON / OFF + LED indicator ; Equaliser input PINK NOISE/LINE ; Tape output : LINE/EQUALISER ; Analyser input : LINE/EQUALISER ; Level control for the spectrum analyser.

Packaging | Carton /20
EAN code 54 10329 04303 2 | UPC code

MONO VU-METER 10 LEDS
K4304

LEVEL 2

VU meter with a scale consisting of 10 LEDs and an adjustable input. Dot or bar indicator. Supplied with 1 front panel suitable for horizontal or vertical mounting.
Specifications:
• range: -20dB to +3dB
• power supply: 10 - 15V DC / 250mA
• input sensitivity:
  - low input: 150mV to 6Vrms (47K)
  - high input: 1.5V to 60Vrms (470K)
• dimensions: 1.5 x 2.7"

Packaging | Carton /20
EAN code 54 10329 04304 9 | UPC code

STEREO VU-METER 2 x 10 LEDS
K4305

LEVEL 2

Stereo VU meter with 2 x 10 LEDs (dot or bar indicator) and an adjustable input. Included in package : 1 front panel suitable for horizontal or vertical mounting.
Specifications:
• range: -20dB to +3dB
• power supply: 10 - 15V DC / 250mA
• input sensitivity:
  - low input: 150mV to 6Vrms (47K)
  - high input: 1.5V to 60Vrms (470K)
• dimensions: 1.5 x 2.7" (x2)

Packaging | Carton /20
EAN code 54 10329 04305 6 | UPC code

PRECISION STEREO VU-METER 2 X 15 LEDS
K4306

LEVEL 2

Stereo VU meter with 2 x 15 LEDs (dot or bar indicator) and an adjustable input. Included in package : 1 front panel suitable for horizontal or vertical mounting.
Specifications:
• scale from: -23dB to +5dB (linear scale between -4 and +5dB)
• precision: ± 0.5dB (1kHz)
• input impedance:
  - low input: 150mV - 5Vrms
  - high input: 1.5V - 50Vrms
• frequency range: 20Hz - 30kHz (-3dB)
• power supply: 12 - 15V DC / 300mA
• dimensions: 5.9 x 2.2"

Packaging | Carton /20
EAN code 54 10329 04306 3 | UPC code 8 36479 00994 3

AUDIO POWER METER
K4307

LEVEL 2

10 LED scale, up to 2000Wrms power measurements. Does not need a special power supply, because it is supplied directly from the speaker output. Ideal for car audio systems and PA systems. Also usable for bridged amplifiers. The unit can be used both horizontal and vertical. The kit comes with a front panel and four attractive front stickers, for the different scales.
Specifications:
• four different scales:
  - at 4 ohm load in low power mode: 0.3 to 400Wrms
  - at 4 ohm load in high power mode: 10 to 2000Wrms
  - at 8 ohm load in low power mode: 0.15 to 200Wrms
  - at 8 ohm load in high power mode: 5 to 1000Wrms
• minimum input sensitivity: 1.1Vrms (low power mode)
• maximum input voltage: 130Vpeak (high power mode)
• current consumption: 25mA at full scale
• luminous intensity: 8 to 20mcd / LED
• dimensions: 4.7 x 1.6 x 1.1"

Packaging | Carton /20
EAN code 54 10329 04307 0 | UPC code 8 36479 00696 6

SOUND GENERATOR
K4401

LEVEL 1

The ideal device for DJ's, jingles for radio stations or just to attract attention. With one output for direct connection to a speaker and one line output for connecting to a mixer panel or amplifier. The following effects may be generated directly by means of a push button : Machine gun · European siren · Phasor gun · Racing car with motor howl · Screeching of car tires on a curve · Explosion · Mortar fire followed by explosion · Music : "Wild charge tune" or "Snake charmers tune" · US siren
Specifications:
• supply voltage: 8 - 10V DC / 100mA or 9V battery (not incl.)
• line output: 1Vrms
• speaker output: 1W
• PCB dimensions: 3 x 3"

Packaging | Carton /20
EAN code 54 10329 04401 5 | UPC code 8 16353 01107 1

2-CHANNEL LOUDSPEAKER PROTECTION
K4700

LEVEL 3

This stereo speaker protection prevents switch-on clicks and DC components on the output of the amplifier connected.
Specifications:
• switch-delay: ± 6 seconds
• DC protection: +1V/-1V
• max. input voltage: 200Vpp + DC
• max. switching current: 10A
• LED indication for: WAIT (switch-on delay) and ERROR (DC on speaker output)
• supply voltage: 220VAC
• PCB dimensions: 2.2 x 4.9"

Packaging | Carton /20
EAN code 54 10329 04700 9 | UPC code 8 16353 01041 8

TELEPHONE AMPLIFIER
K4900

LEVEL 2

This telephone amplifier may be used as a free-standing amplifier with speaker, e.g. to listen to a telephone conversation, or the output may be connected to an amplifier or mixing panel (e.g. radio stations).
Specifications:
• input: isolation transformer interface
• speaker output: 0.5W / 8ohm
• line output: 0dB (0.775Vrms)
• power supply: 7 - 9V AC or 9 - 12V DC / 150mA
• PCB dimensions: 2.5 x 2.1"

Packaging | Carton /20
EAN code 54 10329 04900 3 | UPC code

MONO 65W PURE CLASS A TUBE POWER AMPLIFIER WITH KT88 TUBES
K8010

LEVEL 5

Plenty of power, deep bass and low distortion, yet still affordable. This single channel tube amp delivers up to 65W of pure class A power, due to its KT88 output penthodes. A attractive chrome plated enclosure has been designed, to match this state-of-the-art design. It comes complete with chrome plated tube base cover rings and heavy duty cabinet feet.

Features:
- 4 quality KT88 tubes in push-pull combination
- gold plated heavy duty speaker and RCA connectors
- easy bias adjustment with LED readout
- standby mode stretches tube life
- soft start circuit prevents mains fuse tripping at power-up
- no-compromise quality components
- custom made oversized toroid output and power transformers
- one single PCB ensures hassle free assembly and wiring
- removable cabinet bottom for hassle free servicing

Specifications:
- tubes: 4 x KT88, 1 x ECC81, 1 x ECC82
- output power: 65Wrms class A in 4 or 8ohm
- bandwidth: 8Hz to 80kHz (-3dB/1W)
- harmonic distortion: 0,1% at 1W/1kHz
- signal/noise ratio: >110dB (A-weighted)
- input sensitivity: 1V rms minimum (adjustable)
- supply voltage: 100, 120, 230 or 245V AC
- max. power consumption: 300VA
- dimensions: 14.2 x 14.2 x 6.3"

Packaging	Carton	
	/1	

EAN code	UPC code
54 10329 08010 5	

TUBE CONTROL AMPLIFIER
K8020

LEVEL 5

Features:
- no compromise high-end design
- 4 inputs
- exclusive, high finish, solid aluminum enclosure
- high quality ALPS volume potentiometer
- full tube design
- auto muting (warm up) at power on
- highly reliable reed relay input selection
- separate left and right input section
- programmable level adjustment: +6dB for each input
- regulated DC filament supply
- output mute function
- switchable monitor output (for tape, CDR, MD,...)

Specifications:
- input sensitivity for 0dB (0.775Vrms) out: approx. 200mV / 50Kohm
- maximum output level: 35Vpp
- output load impedance: 10K or higher
- signal to noise ratio (A-weighted ref. 0dB out): 100dB
- total harmonic distortion: <0.04% @1kHz / 47K load
- gain: x2 or x4(+ 6dB on)
- frequency response:
  - 7Hz to 150kHz (-3dB) @ x2 gain
  - 18Hz to 55kHz within 0.3dB
- channel separation: 85dB @ 0dB in
- input cross talk: < -100dB @ 0dB in
- AC power: 115V AC (100V to 120V)
- consumption: 16W max.
- dimensions: 11.4 x 6.5 x 2.7"
- weight (net): 6lb

Packaging	Carton	
	/1	

EAN code	UPC code
54 10329 08020 4	

HIGH-END CONTROL AMPLIFIER
K8021

LEVEL 5

Features:
- no compromise high-end design
- 4 inputs
- exclusive, high finish, solid aluminum enclosure
- high quality ALPS volume potentiometer
- audio grade selected op-amps
- capacitor-less output coupling
- highly reliable reed relay input selection
- separate left and right input section
- programmable level adjustment: +6dB for each input
- headphones output
- output mute function (except phones)
- phono RIAA input section
- phono input can be configured as line input
- switchable monitor output (for tape, CDR, MD,...)

Specifications:
- input sensitivity for 0dB (0.775Vrms) out:
  - PHONO: 3mV / 47Kohm
  - LINE: 200mV / 50Kohm
- maximum output level: 26Vpp
- signal to noise ratio (A-weighted ref. 0dB out):
  - LINE: >105dB
  - PHONO: 83dB
- total harmonic distortion: 0.003% @1kHz
- gain: x2 or x4 (+ 6dB on)
- frequency response:
  - 4Hz to 500kHz (-3dB) @ x2 gain
  - 10Hz to 100kHz within 0.3dB
- channel separation: 90dB @ 0dB in
- input cross talk: < -100dB @ 0dB in
- headphones output: 250mW max. @ 32ohms
- AC power: 115V AC (100V to 120V) or 230V AC (220V to 240V)
- consumption: 6W max.
- dimensions: 11.4 x 6.5 x 2.7"
- weight (net): 4.8Lbs

Packaging	Carton	
	/1	

EAN code	UPC code
54 10329 08021 1	

>> www.vellemanusa.com

INTEGRATED MONO MOSFET AMPLIFIER
K8040

LEVEL 5

Features:
- no compromise high-end design
- ideal to place next to the speaker (short wires to the speaker)
- auto-power on possibility when input signal is sensed
- auto-standby function when no input signal is sensed
- exclusive, high finish, solid aluminum enclosure
- high quality D-MOS IC output stage
- total of 40.000µF power supply capacitors
- relay-less speaker DC protection
- Real Clipping distortion indication
- power output level indication with backlight
- bypass output to drive bi-wired speakers using separate amplifiers
- double overheating protection with LED indication
- high grade speaker and input connections
- overload protection

Specifications:
- input:
  - input sensitivity for maximum output: 0dBm (= 0.775Vrms)
  - input impedance: 15Kohm
  - minimum auto switch on voltage: 5mVrms
- output:
  - maximum RMS output power 4ohm: 90W
  - maximum RMS output power 8ohm: 70W
  - dynamic RMS output power in 4ohm: 125W
  - minimum load impedance: 4 ohm
  - damping factor (ref. 8ohm 100Hz): > 1000
- audio:
  - signal-to-noise ratio (A-weighted ref. max. out): >105dB
  - total harmonic distortion: 0.003% @ 1kHz ref 1W
  - frequency response: 9Hz to 120kHz (-3dB) in 50W
- power requirements:
  - AC power: 115V AC (110V to 120V) or 230V AC (220V to 240V)
  - consumption: 100W max.
- dimensions: 11.4 x 6.5 x 2.7"
- weight (net): 7.5 Lbs

Packaging	Carton	/1
EAN code 54 10329 08040 2	UPC code	
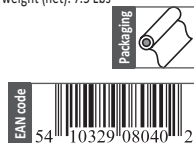
ALARMS AND AUTOMOTIVE APPLICATIONS

ELECTRONIC TRANSISTOR IGNITION FOR CARS
K2543

LEVEL 2

Gives your car the feel of an expensive luxury car. Better starting and smoother running, particularly at very high and very low RPM. Lower fuel consumption, less pollution, lower servicing costs. Drive economically, drive electronically. Only for petrol/gasoline engines. Only for cars with negative ground.
Specifications:
- max. current: 4A
- connection speed: up to 500kHz
- PCB dimensions: 2.8 x 1.4"

Packaging	Carton	/20
EAN code 54 10329 02543 4	UPC code 8 36479 00667 6	

WINDSHIELD WIPER ROBOT OR INTERVAL TIMER
K2599

LEVEL 2

Up to 3 different time intervals (2 - 10 - 15 seconds) can be selected for the windshield wipers of your car. It can also be used for automatic slide projection.
Specifications:
- relays on PCB: 2 inverters
- power supply: 12 - 15V DC
- PCB dimensions: 3.2 x 2.2"

Packaging	Carton	/20
EAN code 54 10329 02599 1	UPC code	

DIGITAL TACHOMETER
K2625

LEVEL 3

For cars or motorcycles with a petrol engine. May be used as a general purpose revolution counter.
Specifications:
- range: 100 - 9900 revolutions/minute
- 2 digit display
- easy calibration
- power supply: 10 - 15V DC / 200mA
- PCB dimensions:
  - PCB 1: 3.2 x 1.8"
  - PCB 2: 3.2 x 2.4"
- front panel dimensions: 2.8 x 3.5"

Packaging	Carton	/20
EAN code 54 10329 02625 7	UPC code	

FROST INDICATOR
K2644

LEVEL 1

Drive more safely in freezing weather. This kit uses a flashing LED to indicate a road temperature close to freezing point ; below that point the LED is on continuously. A reliable temperature sensor with mounting stud is included.
Specifications:
- power supply: 10 - 15V DC / 25mA
- PCB dimensions: 2.2 x 1.7"

Packaging	Carton	/20
EAN code 54 10329 02644 8	UPC code	

ELECTRONIC WATCHDOG
K2655

LEVEL 2

A circuit that produces a natural sounding barking dog with a sensitive "ear" to everything that comes near it. It is a faithful watchdog, which never sleeps and never has to be taken out for a walk.
Specifications:
- power supply: 2 x 8V AC or 9 - 12V DC / 500mA
- choice of two different "dog sounds"
- reacts to surrounding noise with adjustable sensitivity
- speaker output: 2W at 4ohm
- PCB dimensions: 5.6 x 3"

Packaging	Carton	/20
EAN code 54 10329 02655 4	UPC code 8 36479 00693 5	

MULTIFUNCTION CAR INTERIOR ILLUMINATION
K3500

LEVEL 1

If, like most of us, you do not have infrared eyesight, then at times you have probably found yourself fumbling for the ignition switch or seat belt in the dark. For people like you we have developed this solution. With extra push button and battery protection.
Specifications:
- switch-off delay: adjustable for 0 to 60 seconds
- power supply: 12-15Vdc
- power consumption: 13mA
- PCB dimensions: 1.8" x 2.8"

Packaging	Carton	
EAN code 54 10329 03500 6	UPC code 8 16353 01099 9	

PARKING RADAR
K3502

LEVEL 3

If you have problems parking then this kit is for you. Using (ultrasonic) sound waves, whose frequency is beyond our range of hearing, we can "measure" a distance. Consequently, a sensor mounted at the back of the car can give an indication of the distance between your car and the car parked behind you or other obstacles (only at the same height as the sensor). When the preset minimum distance is crossed, an audible signal is generated.
Specifications:
• detection range: 5cm - 1.5m (adjustable)
• detection angle: 5°
• supply voltage: 10 - 15V DC / 16mA
• PCB dimensions:
  - sensor: 1.1 x 3.7"
  - base: 1.9 x 4.9"

Packaging | Carton /20
EAN code 54 10329 03502 0 | UPC code 8 16353 01068 5

CAR ALARM
K3504

LEVEL 2

The alarm detects sudden voltage drops of the battery when the interior, trunk, or hood lights are switched on. To ensure correct operation, a number of control indications have been included, such as : flashing LED to indicate that the alarm is in standby mode after a set time (after you have left the car). Pre-alarm (built-in buzzer) to indicate that the alarm is activated, so that you will not forget to switch it off. The alarm is easy to switch on and off, either automatically or by means of the ignition switch or a remote control unit, such as the K8059/K8057 or mk161/mk162
Specifications:
• detects voltage drops of the battery
• entry delay time: 2 to 30 seconds with buzzer indication
• exit delay time: 2 to 180 seconds with LED indication
• alarm period: 60 seconds with automatic reset
• power supply: 12V
• standby current: 25mA
• relay output: 5A
• PCB dimensions: 2.4 x 3.9"

Packaging | Carton /20
EAN code 54 10329 03504 4 | UPC code

CAR LIGHT WARNING ALARM
K3505

LEVEL 2

This head light indicator may be set for one or two functions. To indicate that the head lights (or the side lights) should be switched off after switching off the ignition contact (battery protection). Or to indicate that the head lights should be on once ignition contact is switched on (obligatory in some countries).
Specifications:
• continuously repeated alarm tone for lights ON (may be disabled)
• repeated alarm tone for lights OUT
• only 3 wires are required for hook-up
• supply voltage: 12V DC
• PCB dimensions: 1.9 x 2.2"

Packaging | Carton /20
EAN code 54 10329 03505 1 | UPC code

CODE LOCK
K6400

LEVEL 2

This code lock may be used to switch an alarm (e.g. car alarm K3504) on and off, or to open a door lock. An LED on the operating panel indicates the position of the 'lock'. The code is easy to define. Because the operation panel is completely enclosed, it may be used inside and outside the house.
Specifications:
• more than 3000 codes (4 digits)
• relay output: 5A / 110V
• time limit for code entry: ± 5 seconds
• power supply: 9 - 15V DC or 8 - 12V AC
• power consumption:
  - output on: 40mA
  - output off: 0.3µA
• dimensions:
  - front panel: 3.15 x 3.15"
  - depth: 1.6"

Packaging | Carton /20
EAN code 54 10329 06400 6 | UPC code

"SAFE"-STYLE CODE LOCK
K8082

LEVEL 4

Innovating and impressive code lock.
Impossible to determine the pressed keys due to the use of digital rotary encoder.

Features:
• codelock with rotary encoder and 7-segment display
• 4-digit code
• several operating modes
• adjustable pulse duration
• application examples:
  - open a door, gate, fence...
  - arm / disarm your alarm system
  - prevent unauthorized use (mode 3) of car, entertainment systems, computers, machinery...
Specifications:
• relay output NO/NC: 3A / 24VDC max.
• power supply: 12VDC / 100mA max.
• Dimensions:
  - front: 85 x 85mm / 3,35 x 3,35"
  - mounting depht: 45mm / 1,77"

Packaging | Carton
EAN code 54 10329 35989 8 | UPC code

ONE CHANNEL DUAL OUTPUT RF RECEIVER
K8070

LEVEL 3

A single transmitter key press activates two independent outputs. Each output can be configured as toggle, pulse or pulse with timer. This allows you to e.g. start two different timers, have a pulsed and a timed output, have two galvanically separated outputs etc.
For use with K8058, VM118R, K8074 RF transmitters

Features:
• easy setup and transmitter 'learning', no jumper settings
• toggle or pulse function selectable per output
• pulse function can have turn-off timer
• up to 31 different transmitters or transmitter buttons can be stored
• 'All clear' function
• LED indicators for outputs and functions
• easy fixation
• onboard antenna or external antenna
Specifications:
• power supply: 9 to 12V AC or DC / 100mA max.
• relay contact NO/NC: 3A
• 433MHz
• selectable timers per output: 0.5s, 5s, 30s, 1min, 5min, 15min, 30min and 60min
• open field range of up to ±100ft. possible
• dimensions: 3.15 x 2.75 x 0.98"

Packaging | Carton /20
EAN code 54 10329 35984 3 | UPC code

REMOTE CONTROL UNITS & DOMOTICS

OPTICAL PROXIMITY SWITCH
K8092

NEW

LEVEL 3

Features:
• small and compact unit
• operate output relay by waving hand or object in front of unit
• no touching required
• adjustable sensitivity
• status led indicators
• momentary (pulse) or toggle (ON/OFF) mode
• Perfectly suited for our Velbus system and our K8006 home bus system
• Use for detection in DIY projects (not suited for very dark object detection)
• Comes complete with snap-in enclosure. Type VMBFBI
• fits Velleman VMBFDG and VMBFLG frames
Specifications:
• power supply: max. 12VDC/100mA
• output relay rating: 3A/24VDC
• LED indication
• dimensions (wxhxd): 21x47x41mm / 0.8x1.85x1.6"

Packaging | Carton
EAN code 54 10329 41409 2 | UPC code

REMOTE CONTROL BY TELEPHONE
K6501

LEVEL 3

This kit makes it possible to turn up to three devices on or off over the telephone. It is also possible to check the condition of a switch (open or closed). Example : when you are away on holiday, you may switch the lights on and off from time to time, check the alarm or turn on the heating before returning home. A major advantage of this circuit lies in the fact that audio signals are used to tell whether a specific output has been turned on or off. Operation is protected by a user defined code, which is simply keyed in from the telephone keypad.

Specifications:
- a relay is included for one output: 10A / 250V AC
- automatic pick-up can be selected for ± 8 or ± 3 rings
- automatic hang-up if no code is entered within 20 seconds
- supply voltage: 12V AC / 300mA
- dimensions: 4.1 x 5.1"

Packaging	Carton
	/20

EAN code	UPC code
54 10329 06501 0	

THERMOSTAT WITH REMOTE CONTROL VIA THE TELEPHONE
K6502

LEVEL 3

The thermostat is used as any other one, but with the added facility of choosing the day or night temperature setting by means of a telephone. The remote control facility is operated via the telephone keypad, thus a DTMF type phone is required. From audio signals sent down the line, the user receives a report back on how the thermostat is set. Switching is protected by a security code, set by the user, which is keyed into the telephone in a simple manner.

Specifications:
- separate settings for day and night temperature with LED indication
- relay output with LED indication: 5A / 240V AC (1200W)
- telephone pick-up after ± 3 or 8 rings
- report when the temperature has fallen below 37.4°F
- automatic hang-up if no code is received within 40 seconds
- possible security codes: from 000 to 999
- day temperature: from 57°F to 79°F
- night temperature setting: from 43°F to 64°F
- hysteresis (allowed temperature swing): 0.1°F
- local manual control
- supply voltage: 220VAC

Packaging	Carton
	/1

EAN code	UPC code
54 10329 06502 7	
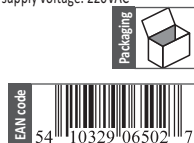
IR REMOTE CONTROLLED DIMMER
K6712

LEVEL 4

This one channel IR receiver/dimmer works together with the 15 channel IR transmitter (K6710 & K8049). The receiver code can be set to 1 of the 15 transmitter codes so that 15 receivers can be operated (K6712 and/or K6713) independently of each other. Thanks to its compact design this kit fits into a standard light switch housing.

Specifications:
- max. load: 2A (4A with heatsink)
- supply voltage: 110V AC / 60Hz
- transmitter / receiver distance: max. 23'
- not suitable for halogen lights

Packaging	Carton
	/20

EAN code	UPC code
54 10329 06712 0	

UNIVERSAL RELAY CARD WITH 16 RELAYS
K6714-16

LEVEL 3

16 relays and screw connectors included ! Power supply transformer is included. Output 12V CC can be used as a power supply for other kits: K6714, K8023,... Every output of the print can be equipped with a noise suppressor network.

Specifications:
- the relays can be controlled in different ways: direct control from open-collector outputs, TTL or CMOS level
- DIP switches are included to allow manual activation of the relays in case of maintenance work
- 16 relay outputs
- contact: 10A / 28V DC or 125V AC, max. 5A at 230V AC
- power supply: 125V AC max. 12VA
- output voltage: 12V / 250mA
- PCB dimensions: 5.9 x 8.4"

Packaging	Carton
	/1

EAN code	UPC code
54 10329 16714 1	8 16353 01071 5

UNIVERSAL RELAY CARD
K6714

LEVEL 3

If you want to switch large electric currents using an electronic control and require control isolation at the same time, then this card is a valuable asset.

Features:
- also available with 16 relays: K6714-16

Specifications:
- 8 relays included (extendible to 16)
- the relays can be piloted directly of through open-collector outputs
- contact: 1 x inverter: 10A / 28V DC or 125V AC, max. 5A at 230V AC
- relay switch-over contact: max. 5A at 220V
- output voltage: 12V / 250mA for power supply
- power supply: 220 or 115V AC / 12VA
- PCB dimensions: 5.9 x 8.4"

Packaging	Carton
	/1

EAN code	UPC code
54 10329 06714 4	

10-CHANNEL, 2-WIRE REMOTE CONTROL
K8023
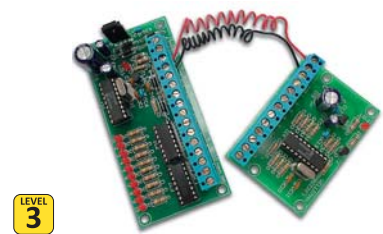
LEVEL 3

This kit allows you to control up to 10 devices using only 2 wires at a long distance. Microprocessor controlled. Inputs can be push-buttons, switches or open collector outputs from another device. The receiver section provides 10 open collector outputs that allow you to control relays directly. Terminal block connectors for all input and output connections are included. All outputs are provided with LED indication. Can be used with our kits : K8000RS, K8006,... Can be connected to our standard relay card : K6714 or K6714-16.

Specifications:
- 10 open collector outputs: 50V / 100mA
- tested to a distance of up to 50m (55 yards) between control- and receiver section
- operating voltage: single 12-15V AC or DC, 300mA
- dimensions:
  - control pcb: 2.7 x 2 x 0.6"
  - receiver pcb: 4 x 2 x 1"

Packaging	Carton
	/20

EAN code	UPC code
54 10329 08023 5	
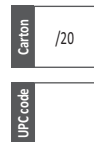
USER-DEFINABLE 8-CHANNEL TOUCH PANEL
K8046
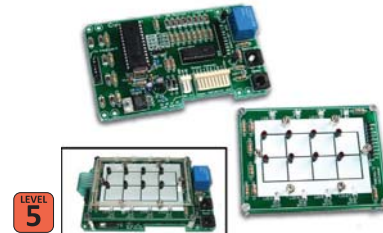
LEVEL 5

Ever wanted your own keyboard with your personal layout and symbols ? Here is the solution : Now simply print YOUR keyboard layout on a transparent foil and make your own keyboard ! The function of each key can be selected (momentary or toggle) and each key is backlit. It is even possible to simulate classic "radio keys" (only one output can be ON, just like a rotary switch). One key can be defined as a preset memory or serve as an "all clear" key. Completing the features of this unique keyboard is a "click" sound when the keys are operated. The output can easily be connected to your own applications or to several of our kits : the K8045 LCD message board, the K6714 relay card, the K8006 light system bus unit, the K8000RS computer interface, the K2633 or the K2634 power cards, the K8023 two wire remote, ...

Features:
- max. 8 self-definable keys
- LED status indication for each key/output
- each key can be set up as a toggle key or momentary key
- soft-touch see-through panel with 8 keys
- key layout examples are included
- backlight with dimming function
- unique key-click feedback
- optional IR receiver module: IR38DM
- optional blue backlight: LED3BL (8 pcs required)
- "design" mounting frame (bezel) is included
- easy board-to-wire connectors
- 4 different functions (jumper selectable):
  - 8 independent keys (toggle or momentary selectable)
  - 8 radio keys (simulation of rotary switch)
  - 4 radio keys and 4 independent keys
  - 1 key is reserved as a memory key or an "all clear"-key

Specifications:
- 8 open-collector switches: max. 50V / 100mA
- board to wire connectors: 7.9" wire
- dimensions (frame included): 6.5" x 3.5" x 1.4"

- keyboard operating force: 1.4 oz. (with R0.8mm test point)
- keyboard life: 1000000 operations with R3mm rubber
- power supply: 9V AC or 12V DC / max. 250mA
- dimensions: 6.5 x 3.5 x 1.4"

Packaging	Carton	/1

EAN code	54 10329 22354 0	UPC code	

15 CHANNEL IR REMOTE CONTROL RECEIVER
K8050

LEVEL 3

Features:
- works together with K6710, K8049, K8051, K8055, K8056, K6714, K6714-16, K2633, ...
- 15 open collector contacts: max. 50V/50mA
- LED indication for each output
- multiple IR sensors possible (type : IR38DM)
- transmitter - receiver range: up to 20m
- 4 different modes:
  - 15 independent outputs
  - 15 rotary outputs
  - 7 independent outputs & 8 rotary outputs
  - 7 rotary outputs & 8 rotary outputs (independent from each other)
- 3 addresses allow the use of multiple receivers in one room
- optional board-to-wire connectors-female: BTWF5 & BTWF20

Specifications:
- power supply: 8 ~ 14VDC or 2x6 ~ 2x12VAC (150mA)
- current consumption:
  - all outputs off: 10mA
  - all output on: 150mA
- dimensions: 2.8 x 4.5"

Packaging	Carton	/20

EAN code	54 10329 24181 0	UPC code	

15-CHANNEL IR TRANSMITTER
K8049

LEVEL 3 — 3 x AAA

Features:
- compatible with: K6711, K6712, K6713, K8046, K8050, K4100, K4500, MK161, MK163, MK164
- 4 addresses allow the use of multiple receivers in one room

Specifications:
- power supply: 3 x 1.5V AAA batteries
- up to 15 channels can be operated
- rubber keypad
- LED function indication
- compatible with most Velleman IR receiver kits

Packaging	Carton	/1

EAN code	54 10329 23919 0	UPC code	

15-CHANNEL IR REMOTE STICK
K8051

LEVEL 3 — 2 x AAA

The K8051 15-channel IR Remote Stick features a sleek designer enclosure with just 2 buttons, yet it provides access to a stunning 45 channels (3 addresses with 15 channels each). The built-in 'all clear'-function allows the user to turn-off all channels of the current address at the same time. Channel and address selection is straightforward and easy. Even in total darkness you can select the correct channel and operate the remote.

Features:
- compatible with most current and upcoming Velleman IR kits: K6712 IR dimmer, K6713 1-channel IR receiver, K8046 8-channel touch screen, K6711 / K8050 addressable 15-channel IR receiver
- single button channel selection and operation
- code is recognized by most learning remotes

Specifications:
- range: up to 20m (K8050 / indoors)
- power supply: power supply
- low power consumption
- dimensions: 6.3 x 1.1 x 0.9"

Packaging	Carton	/20

EAN code	54 10329 24182 7	UPC code	

8-CHANNEL RELAY CARD
K8056

LEVEL 4

This relay card can be used in several ways : stand alone card, addressed by switches or open collector outputs or remote controlled through RS232. In option remote controlled using RF (radio frequency) signals (K8058 remote control + RX433N module). Since the card can be addressed using RS232 commands, you may write custom applications in any programming language on any platform. Test software can be downloaded from our web site. Recommended housing : B8006

Features:
- DIAGNOSTIC / TEST SOFTWARE:
  - separate relay on/off test with moment or toggle function
  - clear all / set all relays function
  - address selection: up to 255 cards can be selected
  - emergency stop for all cards
- minimum system for test software:
  - Pentium class CPU
  - Windows 95 or higher
  - mouse and free RS232 port

Specifications:
- 8 high quality relay contacts: 5A/230Vac max.
- relay outputs are transient suppressed using VDRs
- LED confirmation on each relay contact
- 8 drive inputs to use with open collectors or regular switches
- RS232 input to drive the card with computer or terminal: baud rate: 2400, no parity, 8 data bits, 1 stop bit, high or low impedance selection (10K or 1K)
- optional RF driving possibility using RX433 type module (not simultaneous with RS232) together with K8058 eight channel RF remote control
- power output: unregulated 12Vdc / 200mA
- power supply: 12Vac / 500mA (including 12V output)
- diagnostic software downloadable from our site
- dimensions: 6.3 x 4.2 x 1.2"

Packaging	Carton	/1

EAN code	54 10329 28304 9	UPC code	8 16353 01093 7

8-CHANNEL RF REMOTE CONTROL
K8058

LEVEL 3 — 3 x AAA

Features:
- works together with the K8056 / K8070 / "VM119"
- 8 addresses allow the use of multiple receivers
- 'all clear'- function
- toggle or momentary mode for each key
- open-field range up to 165ft.
- rubber keypad

Specifications:
- operate up to 8 channels
- 433MHz operation
- LED function/mode indication
- power supply: 3 AAA batteries
- dimensions: 5.9 x 2.3 x 0.8"

Packaging	Carton	/1

EAN code	54 10329 31521 4	UPC code	8 36479 00996 7

INTERFACE SYSTEMS & PROGRAMMERS

RELAY CARD
K2633
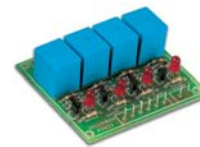
LEVEL 2

Connecting a number of relays to the outputs of an electronic network may seem very simple, but in reality it might possibly create some problems regarding the cabling. This kit provides an attractive and compact alternative. Moreover, it can be assembled and connected very rapidly.

Specifications:
- 4 x 3A relay outputs
- power supply: 9V DC / 300mA
- pcb dimensions: 3 x 2.7"

Packaging	Carton	/20

EAN code	54 10329 02633 2	UPC code	8 16353 01037 1

QUAD TRIAC SWITCH CARD
K2634
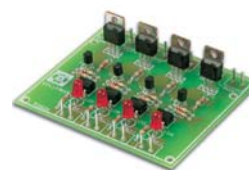
LEVEL 2

Relays are usually used to switch AC voltages by means of an electronic control because of their simplicity. However, when switching occurs too frequently or too quickly the life time of the contact points is shortened considerably. This can be solved perfectly by replacing the relays with a triac. Using optocouplers, the entire interface network remains electrically isolated from the voltage that has to be switched.

Specifications:
- 4 triac outputs: 4 triac outputs of 1.5A (uncooled, 4A cooled)
- power supply: 9V DC, 200mA
- PCB dimensions: 3.1 x 3.5"

Packaging	Carton	/20

EAN code	54 10329 02634 9	UPC code	

DC TO PULSE WIDTH MODULATOR
K8004

LEVEL 3

This control circuit is ideal for the accurate control of DC motors, lighting levels, small heaters as well as other applications. The circuit converts a DC voltage into a series of pulses, such that the pulse duration is directly proportional to the value of the DC voltage. The great advantage of such a circuit is that almost no power is lost in the control circuit. Protected against overload and short circuit.
Specifications:
• power supply: 8 to 35V DC
• maximum output current: 6.5A
• input voltage: between 2.5 and 35V DC
• dimensions: 3.4 x 1.9 x 1.8"

Packaging | Carton /20
EAN code 54 10329 08004 4 | UPC code 8 36479 00934 9

PIC PROGRAMMER & EXPERIMENT BOARD
K8048

LEVEL 5

Suitable for programming Microchip® FLASH PIC™ microcontrollers

Features:
• supports 4 different 300 mil. PICs: 8p, 14p, 18p and 28p
• test buttons and LED indicators to carry out educational experiments, such as the enclosed programming examples
• easy connection to a PC through the serial port
• enclosed is a Flash Microcontroller (PIC16F627) that can be reprogrammed up to 1000 times for experimenting at will
• software to compile and program your source code is available on our website
• minimum system requirements:
  - IBM Compatible PC, Pentium or better
  - Windows™ 95/98/ME/NT/2000/XP
  - CDROM
  - free serial RS232 port
  - cable not included: e.g. CW014
• also available in mounted version: VM111

Specifications:
• power supply: 12Vdc unregulated or 15Vdc regulated / 300mA
• dimensions: 5.75 x 4"

Packaging | Carton /20
EAN code 54 10329 23862 9 | UPC code 8 36479 00970 7

USB EXPERIMENT INTERFACE BOARD
K8055

LEVEL 4

The K8055 interface board has 5 digital input channels and 8 digital output channels. In addition, there are two analogue inputs and two analogue outputs with 8 bit resolution. The number of inputs/outputs can be further expanded by connecting more (up to a maximum of four) cards to the PC's USB connectors. All communication routines are contained in a Dynamic Link Library (DLL). You may write custom Windows (98SE, 2000, Me, XP) applications in Delphi, Visual Basic, C++ Builder or any other 32-bit Windows application development tool that supports calls to a DLL.

Features:
• DIAGNOSTIC / TEST SOFTWARE:
  - separate output / input test
  - clear all / set all function
  - counter function on inputs 1 and 2 with adjustable debounce (max 2kHz depends on total I/O load)
  - analog output set sliders
  - analog input bar-graph indication
• minimum system requirements:
  - Pentium class CPU
  - USB1.0 or higher connection
  - Windows 98SE or higher (Win NT excluded)
  - CD ROM player and mouse
• also available in mounted version: VM110
Specifications:
• 5 digital inputs (0= ground, 1= open) (on board test buttons provided)
• 2 analog inputs with attenuation and amplification option (internal test +5V provided)
• 8 digital open collector output switches (max. 50V/100mA) (on board LED indication)
• 2 analog outputs:
  - 0 to 5V, output resistance 1K5
  - PWM 0 to 100% open collector outputs max 100mA / 40V (on board LED indication)
• general conversion time: 20ms per command
• power supply through USB: approx. 70mA
• dimensions: 5.7 x 3 x 0.8"

Packaging | Carton /20
EAN code 54 10329 28225 7 | UPC code 8 36479 00971 4

USB EXPERIMENT INTERFACE BOARD
K8055N   **NEW**

USB **LEVEL 5**

The K8055N interface board has 5 digital input channels and 8 digital output channels. In addition, there are two analogue inputs and two analogue outputs with 8 bit resolution. The number of inputs/outputs can be further expanded by connecting more (up to a maximum of four) cards to the PC's USB connectors. All communication routines are contained in a Dynamic Link Library (DLL). You may write custom Windows (XP, Vista, Windows7) applications in Delphi, Visual Basic, C++ Builder or any other 32-bit Windows application development tool that supports calls to a DLL. Source code examples for Visual Basic, Visual C++, Visual C#, Excel, Delphi and Borland C++ builder are available.
Hard- and software are downwards compatible with our previous K8055/VM110 board.
Features:
• DIAGNOSTIC / TEST SOFTWARE:
  - separate output / input test
  - clear all / set all function
  - counter function on inputs 1 and 2 with adjustable debounce (max 20kHz

depends on total I/O load)
  - analog output set sliders
  - analog input bar-graph indication
• minimum system requirements:
  - 1 GHz or faster 32-bit (x86) or 64-bit (x64) processor
  - USB1.1 or higher connection
  - Windows XP or later
• also available in mounted version: VM110N
Specifications:
• 5 digital inputs (0= ground, 1= open) (on board test buttons provided)
• 2 analog inputs with attenuation and amplification option (internal test +5V provided)
• 8 digital open collector output switches (max. 50V/100mA) (on board LED indication)
• 2 analog outputs:
  - 0 to 5V, output resistance 1K5
  - PWM 0 to 100% open collector outputs max 100mA / 40V (on board LED indication)
• up to 4 cards can be connected to PC
• general conversion time: 2ms per command
• uses Microsoft® human interface device (HID) driver, no external driver required.
• diagnostic software, examples and DLL are downloadable via our website
• power supply through USB: approx. 70mA
• dimensions: 5.7 x 3.5 x 0.8"

Packaging | Carton
EAN code 54 10329 45333 6 | UPC code 8 16353 01100 2

EXTENDED USB INTERFACE BOARD
K8061

LEVEL 5

This interface board has a total of 33 input/outputs: including analogue / digital and + 1PWM output.
Connection to the computer is galvanically-optically isolated, so that damage to the computer is not possible thus providing a high level of secure implementation.
All communication routines are contained in a Dynamic Link Library (DLL). You may write custom Windows*. Applications in Delphi, Visual Basic, C++ Builder or most other 32-bit Windows application development tool that supports calls to a DLL.
For first time interfacing and tutoring, check also our K8055 USB experimentation interface board
* WinXp recommended for optimum compatibility
* Are registered trademarks of MICROSOFT CORP.
Features:
• 8 analogue 10 bit resolution inputs: 0...5 or 10VDC / 20kohm
• 8 analogue 8 bit resolution outputs: 0...5V or 10VDC / 47ohm
• 8 digital inputs: open collector compatible (connection to GND=0) with on board LED indication
• 8 digital open collector outputs (max. 50V/100mA) with on board LED indication
• one 10 bit PWM output: 0 to 100% open collector output (max 100mA / 40V) with on board LED indication.
• general response time: 4ms per command
• USB Port: 2.0 and 1.1 compatible (USB cable included)
• also available as completely mounted module VM140
Specifications:
• power consumption through USB port: approx. 60mA
• up to 8 cards can be connected to PC
• power supply through adaptor: 12Vdc / 300 mA (PS1205)
• PWM Frequency: 15,6 KHz
• standard execution time: 48mS (use Microchip and K8061D.DLL drivers)
• enhanced execution time: 21mS (use K8061_C.DLL)
• dimensions: 7.7 x 5.6 x 0.8"
• minimum system:
  - pentium class CPU with free USB port (1.1 or higher)
  - windows 98SE or higher (Win NT excluded) *
  - CD ROM player and Mouse
• (*): Windows XP recommended!
• (*): Are registered trademarks of MICROSOFT CORP.

Packaging | Carton /1
EAN code 54 10329 35559 3 | UPC code

PIC PROGRAMMER BOARD
K8076

LEVEL 5

This board can program a wide range of Microchip® PIC™ microcontrollers
Suitable for the programming of the "VM142" mini PLC microcontroller
Features:
• onboard configurable 40 pin. ZIF socket
• Microcontroller selection using patch jumper
• SUBD connector set included
• minimum system requirements:
  - IBM Compatible PC, Pentium or better
  - Windows™ NT/2000/XP
  - free serial RS232 port required
• also available as completely mounted module VM134
Specifications:
• power supply: 15V DC, min. 300mA adapter (Ex. PS1508)
• serial port connector: 9 p. SUBD
• dimensions: 5.23 x 2.57 x 0.8"

Packaging	Carton
	/20

EAN code	UPC code
54 10329 35332 2	

8-CHANNEL USB RELAY CARD
K8090

NEW

LEVEL 5

Eight relay channels controlled by your computer!
Use your computer USB port to connect to the outside world
Connect up to 16A to each of the high power relays.
Board space for extra VDR noise suppressors is provided and on board push buttons can be used to test/operate all the relays.
A dll for own software development can be downloaded from our web site.
Test software completes the package.

Features:
• USB-controlled relay card
• manual operation for toggle, momentary or timer operation (selectable through software)
• timer settings up to 18 hours (DLL function)
• optional open collector connectivity (push button simulation)
• DLL for own software development (download only)
• event-driven and open protocol
• two way PC communication (USB Event return)
• optional VDR (type VDR300) transient suppression for use with inductive loads
• LED indication for power and relay action
• minimum system requirements:
  - PC running USB compatible Windows version
  - USB1.1 and USB2.0 full speed compatible
  - internet connection for software download
• optional DIN rail enclosure: B8006 (Note: cut out the USB connector)
Specifications:
• power supply for relays: 9-10Vac or 12 to 14Vdc (500mA), example: PS1205
• 8 high-power relays: 16A each (resistive load)
• dimensions: 160 x 107 x 30mm / 6.3 x 4.2 x 1.2"

Packaging	Carton

EAN code	UPC code
54 10329 41132 9	8 36479 00928 8

8 INPUT PROGRAMMABLE MESSAGEBOARD WITH LCD & SERIAL INTERFACE
K8045

LEVEL 5

Features:
• add an LCD display to any low-tech application and make it look high-tech !
• replace up to 9 indicators or lamps by one single backlit LCD
• recall messages simply by pressing a button
• inputs accept dry contacts, open collectors and logic levels
• no programming skills required !
• store up to 9 sixteen-character messages in non-volatile EEPROM memory
• 4 operating modes:
  - 1): display the status of all inputs simultaneously
  - 2): display all active inputs
  - 3): display active input with highest priority
  - 4): display text messages in a 'tickertape'-fashion
• a default message can be entered which is displayed when no inputs are active
• messages can be transferred to the K8045 from any PC or terminal
• message transfer software is available from www.velleman.be
• wireless data transfer between PC/terminal and K8045 is possible with optional RX/TX433 modules
• 1 on-board pushbutton available for your application
• options:
  - RF wireless link: RX433N + TX433N
  - supertwist HQ display: LCD1601ASL
  - bezel enclosure: B8045
Specifications:
• inputs: 8 inputs (24Vmax)
• display: 16 character 1 line supertwist backlit LCD
• communication: RS232 serial 2400/N/8/1 no handshaking
• power supply: 9-12V DC / 150mA adapter or 2 x 9V AC / 150mA transformer
• dimensions: 4.9 x 2.9 x 1.2"

Packaging	Carton
	/20

EAN code	UPC code
54 10329 08045 7	

LIGHT APPLICATIONS & DOMOTICS

DIMMER MODULE
K8007

LEVEL 3

Easy pushbutton up/down control of light sources. A brief push toggles on/off, while continued pushing engages dimming action. Memory function maintains preferred level. Soft start function. Suitable for low voltage halogen lighting. For use with K8006 Base unit for home modular light system.
Specifications:
• operating voltages: 110-125 or 220-240V AC 50/60Hz
• max. load: 2.5A (550W/220V; 275W/110V)
• transient suppressor to avoid radio/TV interference according to EN55015
• dimming speed: approx. 3.5s
• PCB dimensions: 2.6 x 2.2 x 1"

Packaging	Carton

EAN code	UPC code
54 10329 08007 5	

MULTIFUNCTIONAL DIMMER
K8028

LEVEL 4

Features:
• microcontroller technology
• 13 different functions: impulse switch, staircase light control, slow ON/OFF dimmer, interval timer, speed adjustment for fans, etc...
• suitable for both resistive and inductive loads (light bulbs, high-voltage halogen lighting and low-voltage halogen lighting with ferromagnetic transformer)
• "Soft Start" prolongs the life of the bulbs
• an advanced security system with fault indication automatically deactivates the module if the load or no-load behaves too inductively
• can be operated from several locations, simply by the parallel connection of push buttons
• 2 delay times (anywhere between 5 sec. to 2 hours each) can be programmed through the learning mode
• memory is protected against power failures
• equipped with fuse and key for function selection
• equipped with a mains suppressor according to EN55015 norms
Specifications:
• supply voltage: 110-125V or 220-240V AC, 50 or 60Hz
• automatic detection of mains frequency: 50 or 60Hz
• max. load: 2.5A (300W / 120V ; 600W / 230V)
• dimensions: 3.9 x 3.2 x 1.4"

Packaging	Carton
	/20

EAN code	UPC code
54 10329 08028 0	8 16353 01042 5

4 CHANNEL RUNNING LIGHT
K8032

LEVEL 3

The running light module is the perfect addition to your existing system if you are looking to create the kind of effects used in a disco. The speed of this module can be adjusted manually. All the outputs are equipped with LED indication.
Specifications:
• suppressed according to EN55015
• adjustable speed for the switching of the charge
• led indication
• AC power: 110 to 240VAC
• max. load per channel: 450W (240VAC) / 230W (115VAC)
• speed adjustable between: 0.2 and 3Hz
• dimensions: 3.9 x 3.2 x 1.4"

Packaging	Carton
	/20

EAN code	UPC code
54 10329 08032 7	

POWER DIMMER, PUSH-BUTTON CONTROLLED (1KW@230V)
K8038

LEVEL 4

Features:
• powerful high-quality dimmer, suitable for incandescent lamps, mains voltage halogen lighting and low voltage halogen lighting in combination with a conventional (wire wound) transformer
• easy push-button operation for dimming of light sources.
• phase control can be disabled
• non-volatile memory for last set light intensity
• lots of safety features to make lamps last as long as possible, such as "oftstart" and automatic turn-off after 12h or after 20min at too low intensity
• transformer protection in case of defective light sources
• LED status indication
Specifications:
• suppression of radio & TV interference according to EN55015
• operating voltages: 110-125V or 220-240V AC (50/60Hz)
• max. load: 1000W/230V or 500W/115V (5A)
• max. phase shift with inductive load: 30°
• dimming speed: ± 5 sec.
• PCB dimensions: 3.5 x 2.9 x 1.6"
• ambient temperature: 50°F to 104°F

Packaging | Carton /20
EAN code 54 10329 32178 9 | UPC code 8 16353 01043 2

1 CHANNEL DMX CONTROLLED POWER DIMMER
K8039

LEVEL 4

This kit allows you to control a lamp or group of lamps through a DMX signal. The DMX protocol was developed by USITT in 1986 with the purpose of controlling dimmers, scanners, moving heads and other lighting devices with simple wiring. It is mainly being used in theatres and discos, but you can use it in any place where a central or automated lighting is needed.
Use our "USB controlled DMX interface" K8062 (kit version), VM116 (built version) or any other control console compliant with the DMX-512 protocol as a controller
Features:
• suitable for resistive loads like incandescent lamps and mains voltage halogen lighting
• system addressability: 512 unique addresses, selectable with DIP switch
• status LED for power and error detection
• toroidal filtering for low noise (according to EN55015)
• stand alone "test" mode
• control source: DMX-512, 3 pin XLR socket included
Specifications:
• load capacity: max. 1000 W @ 230V (5A) or 500W @ 115V
• power Input: 115/230 VAC
• dimensions: 5.9 x 2.36 x 1.8"

Packaging | Carton /20
EAN code 54 10329 34602 7 | UPC code 8 16353 01086 9

STROBOSCOPE
K2601

LEVEL 2

Flashing light effects for discos. Make your own snapshots and "lightning" light effects. Flash frequency adjustable from 2 to 20Hz.
Specifications:
• power supply: 220V - 240 VAC
• PCB dimensions: 3.4 x 2.6"

Packaging | Carton /20
EAN code 54 10329 02601 1 | UPC code

STROBOSCOPE
K5300

LEVEL 2

Flashing light effects for discos. Make your own snapshots and "lightning" light effects. Flash frequency adjustable from 2 to 20Hz.
Specifications:
• power supply: 110V - 120V AC
• PCB dimensions: 3.4 x 2.6"

Packaging | Carton /20
EAN code 54 10329 05300 0 | UPC code 8 36479 00991 2
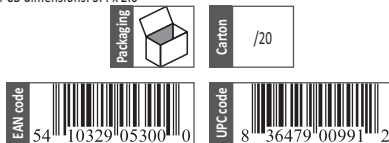
LIGHT COMPUTER
K5201

LEVEL 3

Sixteen different programs and seven outputs make this light computer a unique showpiece. This kit can find applications in party lighting, discotheques, advertisement lighting, signaling, etc. To be able to view the programs directly, each output is provided with a LED. The complete circuit can be installed so that all operations and LEDs are available from the front panel. To enhance the spectacle further, an unlimited number of circuits can be connected together to work synchronously. Moreover, two programs are provided which are specially adapted to operate two light computers in cascade.
Specifications:
• 7 triac outputs: 1.5A max.
• supply voltage for the lights: 24VAC to 240VAC
• supply voltage of the circuit: 7.5 - 9VAC / 250mA
• 16 programs
• speed controllable
• input for external clock
• PCB dimensions: 5.3 x 3.1"

Packaging | Carton /20
EAN code 54 10329 05201 0 | UPC code

3.5A DIMMER WITH POTENTIIOMETER
K8026

LEVEL 2

Due to its small size, this small dimmer easily replaces an existing switch, permitting you to vary the brightness of a light or group of lights. The dimmer may also be used to adjust the speed of a motor, vacuum cleaner, or any other motor with carbon brushes. A mains suppresser is provided eliminating undesirable RFI. It is not suitable for halogen lamps.
Specifications:
• protected against induction voltage peaks
• load: 3.5A (380W / 110V)
• suppressed according to EN55015
• PCB dimensions: 2.4 x 2.4"

Packaging | Carton /20
EAN code 54 10329 08026 6 | UPC code 8 16353 01085 2
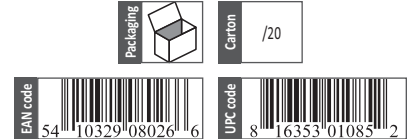
ADVERTISEMENT LED DISPLAY WITH RED LEDS
K5600R

NOT PROGRAMMABLE !

LEVEL 4

Create your own message for personal advertisements. Can be used for home, shop, car or truck... 12 self definable characters, which are made by de customer. 150 bright LEDs supplied with the kit. Many spectacular light effects on the message, (scrolling, blinking, rolling, panning...). Adjustable effect speed. Vertical or horizontal position possible. Fixed displaying is possible (no effects). Different displays can be synchronized, to create longer messages, or to create giant advertisements. Special housing available : B5600.
Extra LEDs available : K/LEDHR (red) and K/LEDHG (green).
Specifications:
• 12 character positions
• 5 x 7 LED matrix for each character
• bright LEDs: 60 to 80mcd (max.)
• microprocessor technology
• oscillator output for synchronization with other display(s) (master / slave configuration)
• voltage supply: 12 to 28V DC
• reverse polarity protected
• consumption: 760mA
• dimensions: 3.2 x 18.6"

Packaging | Carton /1
EAN code 54 10329 05600 1 | UPC code

PACK OF 50 GREEN LEDS
K/LEDHG

For use with K5600G Advertisement LED display with red LEDs.
Specifications:
• luminous intensity: 60mcd max.
• 50pcs

Packaging | Carton /1
EAN code 54 10329 30507 9 | UPC code 8 36479 00343 9

PACK OF 50 RED LEDS
K/LEDHR

For use with K5600R Advertisement LED display with red LEDs.
Specifications:
• luminous intensity: 80mcd max.
• 50pcs

Packaging		Carton	/1

EAN code	54 10329 30508 6	UPC code	8 36479 00344 6

DOMOTICA LIGHT SYSTEM - BUSPRINT
K8006
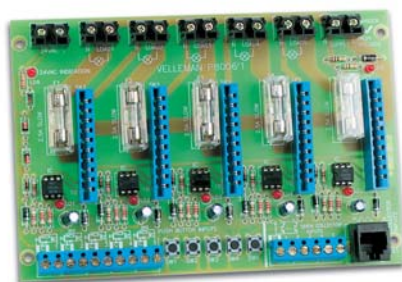
LEVEL 5

Create your own domestic modular light control system. For use with optional plug-in module K8007 / K8037, plug-in timer module K8008 or plug-in slow-on/slow-off module K8029. Bus system holds up to five plug-in units. Optically insulated push button inputs. Can be controlled with open collector circuits (ex. K8000 / K8055 / K8061 computer interface card, with IR remote control receiver K8050 or with K8023). Local control pushbuttons included. LED power and mains indicator. LED operation indicator for each channel. Low-voltage (24VAC) control circuit for extra safety. Each plug-in slot is fused. Includes 10 LEDs for pushbutton illumination. A custom enclosure for rail mounting is available (B8006).

Features:
• *** SEE ALSO OUR VELBUS HOME AUTOMATION SYSTEM *** WWW.VELBUS.EU
Specifications:
• five separated channels
• maximum output: 2.5A per channel (fuse protected)
• push button control current: 150mA
• open collector control current: 35mA DC
• power supply: 24V AC / 300mA
• supply voltage for modules: 110V to 240V AC
• PCB dimensions: 4.2 x 6.3 x 2.8"
• recommended housing: -

Packaging		Carton	/1

EAN code	54 10329 08006 8	UPC code	8 16353 01078 4

BUS DIMMER FOR HOME MODULAR LIGHT SYSTEM
K8037

LEVEL 5

Features:
• dimmer to be used in our K8006 home light system
• suitable for incandescent lamps, mains voltage halogen lighting and low voltage halogen lighting in combination with a conventional (wire wound) transformer
• easy pushbutton operation
• a brief push toggles on/off, while continued pushing engages dimming action
• non volatile memory for last set light intensity
• lots of safety features to make lamps last longer, such as "soft-start" and automatic deactivation after 12 hours or after 20 min at insufficient intensity ...
• transformer protection in case of defective light sources
• LED status indication
• replaces K8007
Specifications:
• suppression of radio & TV interference according to EN55015
• operating voltages: AC 110-125V or 220-240V (50/60Hz)
• max. load: 350W/230V or 170W/115V
• max. phase shift with inductive load: 30°
• dimming speed: ± 5 sec.
• PCB dimensions: 2.6 x 2.3 x 1"

Packaging		Carton	/20

EAN code	54 10329 30928 2	UPC code	

MULTIFUNCTION RELAY MODULE
K8008

LEVEL 3

14 different functions including timers, switching, flashing, interval, random switching, ... Two pre-programmed delays. Learning mode for delays of 2 sec. up to 12 days. Pushbutton control (with home modular light system K8006). EEPROM for delay time storage in case of power failure. On-board transient filter for relay contacts or load (selectable). Suitable for control of incandescent lighting, halogen lighting, fluorescent lighting, fans, valves, buzzers, ...
Features:
• also available as stand-alone version: K8015
Specifications:
• operational voltages: 110-125 or 220-240V AC 50/60Hz
• max. load: 2.5A (275W / 110V)
• PCB dimensions: 2.6 x 2.2 x 1"

Packaging		Carton	/20

EAN code	54 10329 08008 2	UPC code	8 16353 01084 5

DIMMER FOR ELECTRONIC TRANSFORMERS
K8068

LEVEL 5

For use with K8006 bus system.
Features:
• 'PLUG-IN' module for use with our home modular light system K8006
• suitable for incandescent lamps, mains voltage halogen lighting and low voltage halogen lighting in combination with an electronic transformer (Velleman transformer types: HET60N (60W), HET105N (105W), HET150N (150W))
• inductor- and filter free, phase control technology with coolMOS™ FET-transistor
• a brief push toggles on/off, while continued pushing engages dimming action
• 'soft-start' feature to make lamps last as long as possible
• non volatile memory for last set light intensity
• interference suppressor for reduced EMI, according to EN55015

• LED status and error indication
Specifications:
• operating voltages: 110-125V or 220-240V AC (50/60Hz)
• max. load: 300W/230V or 150W/115V, 0-98% adjustable
• dimming cycle speed: +/- 5 sec
• PCB dimensions: 2.5 x 2.2 x 0.8"

Packaging		Carton	/20

EAN code	54 10329 32871 9	UPC code	

RELAY OUTPUT MODULE FOR K8006RS
K8027

LEVEL 2

This switching module can be plugged into our K8006 base unit. Can be used to switch lamps or other domestic loads. To be controlled via push buttons, switches or one of our control modules or kits such as the K8046, K8055, K8061, K8000 PC interface, etc...
Features:
• for use with K8006 Base unit for home modular light system
• suited for both resistive and inductive loads
• can be operated from an external push button & open collector through: K6711/K8050 - K8023 - K8000 - K8046
Specifications:
• operating voltage: 110 to 240V AC (50/60Hz)
• max. load: 2.5A (275W/110V - 575W/230V)
• dimensions: 2.6 x 2.2 x 1"

Packaging		Carton	/20

EAN code	54 10329 21664 1	UPC code	

SLOW ON-OFF DIMMER
K8029

LEVEL 5

Microprocessor controlled. Dual mode operation :
* Slow on / Slow off dimmer with two independent and programmable delays. Dimming direction changes with each key press. Manual level control is possible. This mode also simulates a 'regular' dimmer.
* Light is turned on at full power for a programmable time, after which it slowly fades to zero, also during a programmable time.
Specifications:
• for use with the Velleman home modular light system K8006
• two programmable delays ranging from 1s to 1h
• no memory loss in case of power failure
• 'soft-start' function that prolong the life of the bulbs
• AC power: 110-125 or 220-240V AC 50/60Hz
• max. load: 1.3A (150W / 120V - 300W / 230V)
• dimensions: 2.7 x 2.3 x 1.4"
• not suited for use with low voltage halogen lighting or electronic transformers

Packaging		Carton	/20

EAN code	54 10329 08029 7	UPC code	8 36479 00997 4

3-CHANNEL SOUND LIGHT WITH MICROPHONE
K8017

LEVEL 3

Low, mid and high channels. Sensitivity adjustment per channel. LED indication per channel. Attractive transparent enclosure. Microphone included. Noise suppressed according to EN55015.

Specifications:
- operating voltages: 110-125 or 220-240V AC (50/60Hz)
- max. load: 200W per channel (100W @ 110-125V AC)
- only suited for incandescent light bulbs
- dimensions: 6.1 x 1.8 x 6.3"

Packaging	Carton
	/1

EAN code	UPC code
54 10329 08017 4	8 36479 00995 0

10-CHANNEL LIGHT EFFECT GENERATOR
K8044

LEVEL 3

Features:
- this kit has 10, 12V/400mA outputs to control cold-cathode fluorescent lamps, light bulbs, LED's and "solid state" relays, ...
- for use as advertisement lighting, party lights, discos, eye-catcher, ...
- 10 pre-programmed selectable light patterns with a push button
- number of used channels is adjustable
- adjustable speed
- LED indication for every output
- 12V operation possible for use in cars
- the last used lighting effect is saved in non-volatile memory
- options:
  - adapter (90 - 260V AC input to 12V DC output/ 5.8A): PSS1255
  - -:-
  - -:-
  - -:-
- also available in mounted version: VM120

Specifications:
- power supply: 12V DC
- consumption: max. 4A
- outputs: 12V DC / 400mA per channel (total : max 4A)
- dimensions: 5.5 x 3.9 x 1.1"

Packaging	Carton
	/20

EAN code	UPC code
54 10329 08044 0	8 16353 01003 6
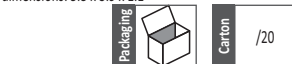
USB CONTROLLED DMX INTERFACE
K8062

LEVEL 4

Features:
- this unit can control DMX fixtures using a PC and USB interface
- test software and "DMX Light Player" software is included, a DLL is provided to write your own software
- furthermore there is a stand-alone test function that outputs all 512 channels at a time, with adjustable levels
- kit includes:
  - nice enclosure
  - USB cable
  - CD with: test software, DLL for own developments, free DMX light player
- exists also in mounted version: VM116
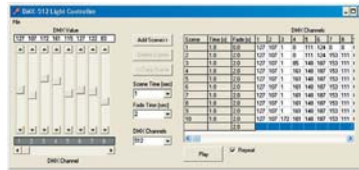
Specifications:
- connected and powered through USB
- 512 DMX channels with 256 levels each
- 3 pin XLR-DMX output connector
- Windows 98SE or higher compatible
- DLL included to write your own software
- optional 9V battery needed for stand alone test mode
- solid state - fuse protection on DMX output
- dimensions: 4.2 x 4 x 1.75"

Packaging	Carton
	/1

EAN code	UPC code
54 10329 31906 9	8 16353 01094 4

DC CONTROLLED DIMMER
K8064

LEVEL 4

also available as completely mounted module VM165

Features:
- simple brightness adjustment by means of a DC voltage
- optically isolated adjustment input
- pre-set adjustment for full brightness
- suitable for incandescent lamps, mains voltage halogen lighting and low voltage halogen lighting in combination with a conventional transformer
- "Soft start" feature to ensure lamp longevity
- transformer protection in case of defective light sources
- LED status indication
- compatible with our computer interface cards: K8000, K8055

Specifications:
- adjustment voltage of: 0 to 12Vdc max.
- max. adjustment current: 2.25mA at adjustment voltage of 12V
- suppression of radio & TV interference according to EN55015
- operating voltage: 110-125V or 230-240V AC (50/60Hz)
- max. load: 750W/230V or 375W/110V, adjustable from 0-98%
- max. phase shift with inductive load: 30°
- PCB dimensions: 3.5 x 3 x 1.6"

Packaging	Carton
	/20

EAN code	UPC code
54 10329 32453 7	8 16353 01004 3

DMX-CONTROLLED RELAY SWITCH
K8072

LEVEL 3

This Kit allows you to control a relay by means of the well-known DMX512 protocol. This protocol was developed by USITT in 1986 to control dimmers, scanners, moving-head spots and other lighting devices with a simple wiring. In some cases, a simple ON/OFF selection is desired. This is where this K8072 comes in. It is actually a bus-controlled power driver. The relay will be activated when the DMX value of the set channel equals 140 or more and turns off when the value is 120 or less.
Together with our K8062/VM116, a computer-controlled automation will be very easy to build.

Features:
- system addresses: 512 unique addresses, DIP switch settable
- LED indication for power supply, relay output status and error situation
- "Safe DMX data stream" mode reducing interference to a minimum
- "Relay hold" function in case of DMX signal loss
- control: DMX-512, 3-pin XLR plug (incl.)
- also available as completely mounted module VM138

Specifications:
- switching capacity: 8A
- supply voltage: 12VDC non-regulated
- power consumption: max. 100mA
- dimensions: 4.1 x 2.4 x 1.2"

Packaging	Carton
	/20

EAN code	UPC code
54 10329 36527 1	

RGB CONTROLLER
K8088

LEVEL 5

ideal for use with flexible LED light lights strips, ex. LDB1-HS3027AC, CHLS4RGB

Features:
- suited for both incandescent bulbs and LEDs
- up-down level adjust for each output
- hard transition effects: running light, Strobo, Colour loops, etc...
- smooth fade effects: colour change, flame effect, random colours, slow off etc...
- wide-range effect speed adjust
- Hi power MOSFET outputs
- memory for last selected effect & speed
- easy up/down effect select
- suited for common anode RGB strips
- also available as completely mounted module VM146

Specifications:
- 256 intensity levels/ch.
- voltage output: same as input voltage
- current limit possible (on-board resistor needed)
- LED PWM freq: 82Hz
- power supply: 10-15VDC/9A max. OR 24VDC regulated /3A max. (e.g. PSIN06024)*
- dimensions: ± 3.15 x 2.75 x 0.9"

Packaging	Carton
	/20

EAN code	UPC code
54 10329 39275 8	

MEASURING INSTRUMENTS

7.9" LED DISPLAY
K2567

LEVEL 3

This kit contains a 7-segment display consisting of 12 LEDs per segment and 4 LEDs for the decimal point. Using an additional power supply, which does not have to satisfy any strict standards, it may be easily connected to existing circuit .
Specifications:
- power supply: 22-26V DC non-regulated
- segment current: static : 40mA, multiplex : 75mA
- total current in static mode: max. 400mA
- PCB dimensions: 5.9 x 9.9"

Packaging	Carton /1

EAN code 54 10329 02567 0	UPC code

7.9" LED DISPLAY "COMMON CATHODE"
K2568

LEVEL 3

This kit contains a 7-segment display consisting of 12 LEDs per segment and 4 LEDs for the decimal point. Using an additional power supply, which does not have to satisfy any strict standards, it may be easily connected to existing circuit .
Specifications:
- power supply: 22-26V DC non-regulated
- segment current: static : 40mA, multiplex : 75mA
- total current in static mode: max. 400mA
- PCB dimensions: 5.9 x 9.9"

Packaging	Carton /1

EAN code 54 10329 02568 7	UPC code

GEIGER-MULLER COUNTER
K2645

LEVEL 2   **1 x 9V**
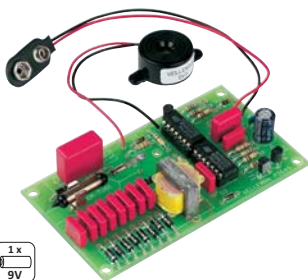
This kit provides an acoustic measurement of radiation levels. The sensitivity is at its highest for gamma rays and high energy beta rays. The assembly is compact and may be mounted into a small box, together with the 9V-battery.
Specifications:
- power supply: 9V battery (not incl.)
- life of 9V battery: approx 2 months at continuous use and normal radiation levels
- dimensions: 3.9" x 2.1" x 1.0"
- recommended housing: G416

Packaging	Carton /20

EAN code 54 10329 02645 5	UPC code 8 16353 01067 8

SIGNAL TRACER/INJECTOR
K7000

LEVEL 2

This signal tracer /injector has been designed to inject or detect a specific signal into an audio circuit in need of repair (such as amplifiers, radios, tone controls, ...) so as to detect the fault. In this way problems can be traced more easily. The signal tracer may also be used as a simple monitor or amplifier.
Specifications:
- signal injector:
  - 0-2.5Vrms output (adjustable)
  - output impedance: 1.5Kohm
  - frequency: ± 1kHz
- signal tracer:
  - 3.5mV to 10Vrms sensitivity (adjustable)
  - gain: 40dB
  - input impedance: 50Kohm
- output power: 0.5W / 8ohm
- power supply: 7-9V AC or 9-12V DC / 150mA
- dimensions: 2.4 x 2.1"

Packaging	Carton /20

EAN code 54 10329 07000 7	UPC code 8 16353 01038 8

MAINS VOLTAGE DETECTOR
K7101

LEVEL 1

With this device wires can be very easily checked for mains voltage. It can be used to search for wires installed in or behind walls or to trace interruptions in wiring. A flashing LED indicates whether or not voltage is present. The flashing speed indicates how close by the wire is. If an audible signal is also desired, space has been provided on the PCB for buzzer SV4/12-S to be connected. The PCB has been specially constructed to fit entirely into the separately available box type G407.
Specifications:
- detection of mains conducting cables
- LED indication (buzzer optional)
- adjustable detection distance: max. 3.9"
- distance indication
- supply voltage: 9V battery (not incl.)
- dimensions: 2.2 x 2.5"

Packaging	Carton /20

EAN code 54 10329 07101 1	UPC code 8 36479 00698 0

METAL DETECTOR
K7102

LEVEL 3   **1 x 9V**

To come up against an electric cable while drilling a hole in a wall can have catastrophic consequences. Likewise, drilling into gas, water pipes or central heating pipes can be extremely hazardous. With a handy metal detector it can now be determined beforehand whether there are metal objects to be found in a wall, ceiling or floor. An LED indicates if a metal object is in the vicinity. If an audio signal is also desired, space has been provided on the PCB for buzzer type

SV4/12-S to be connected. The PCB has been specially constructed to fit entirely into to the separately available box type G407.
Features:
- avoid disasters when drilling holes in walls
- locate pipes, cables, metal studs, ...
- great project for novices
- your own unique application
- push button operation
Specifications:
- metal detecting distance adjustable: up to 3.15"
- power supply: 9V battery (not incl.)
- LED indication
- 12VDC-buzzer connection (buzzer not included)
- dimensions: 2.2" x 2.5"

Packaging	Carton /20

EAN code 54 10329 07102 8	UPC code 8 36479 00969 1

ONE CHANNEL DIGITAL PC SCOPE
K8031

LEVEL 5

The K8031 is a digital storage oscilloscope, using a computer and its monitor to display waveforms. All standard oscilloscope functions are available in the Windows program supplied. Its operation is just like a normal oscilloscope. Connection is through the computer's parallel port, the scope is completely optically isolated from the computer port.

Features:
- general:
  - 1 channel
  - input impedance: 1Mohm / 30pF
  - frequency response: 0Hz to 12MHz (± 3dB)
  - step markers for voltage, time and frequency
  - vertical resolution: 8 bit
  - auto setup function
  - optically isolated from computer
  - record and display of screens & data
  - supply voltage: 9 - 10V DC / 500mA
  - dimensions: 9" x 6.5" x 1.8"
  - weight: 14oz
- minimum system requirements:
  - IBM compatible PC
  - Windows 98, ME, (Win2000 or NT possible), XP
  - SVGA display card (min. 800x600)
  - mouse
  - free printer port LPT1, LPT2 or LPT3
  - CD Rom player
- options:
  - insulated measurement probe x1 / x10: PROBE60S
  - non-regulated single voltage adapter: AC input DC output 9V DC/850mA
- also available in mounted version: PCS100 / PCS100A
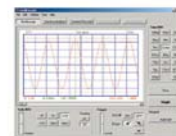
Oscilloscope

Specifications:
- oscilloscope:
  - timebase: 0.1μs to 100ms per division
  - trigger source: CH1 or free run
  - trigger level: adjustable per ½ division
  - input sensitivity: 10mV to 3V per division
  - record length: 4079 samples
  - sampling frequency: 800Hz to 32MHz (Real time)
  - true RMS readout (only AC component)
- transient recorder:

- timescale: 20ms/div to 2000s/div
- max record time: 9.4hour/screen
- automatic storage of data
- automatic recording for more than 1 year
- markers for time and amplitude
- zoom function
• spectrum analyzer:
  - frequency range: 0 .. 400Hz to 16MHz
  - linear or logarithmic timescale
  - zoom function

Packaging	Carton /1
EAN code 54 10329 08031 0	UPC code

4 CHANNEL RECORDER / LOGGER
K8047

LEVEL 4

Features:
• record DC signals or slow moving signals over very long period
• the measurements are automatically stored on your hard disk for further processing
• through the use of USB connection, there is no need for power supply and installation is easy and straight forward
• signals are instantly displayed on the PC screen using analog or DVM display
• USB cable included
• PC-LAB2000 Software included
• comes with enclosure
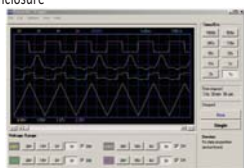
Specifications:
• hardware:
  - USB connected and powered
  - four DC coupled input channels
  - input resistance: 1Mohm
  - maximum samples per second: 100
  - four input ranges: 3V / 6V / 15V and 30V
  - sensitivity: 10mV
  - accuracy: ± 3% of full scale
  - maximum input: 30V DC
  - power and recording/diagnostic LED
• software:
  - analogue trace or digital DVM readout
  - 4 simultaneous channels recording
  - minimum / maximum sample hold function for DVM
  - from 1 sec to 1000 sec per division
  - storage and recall of screens (full color) or data
  - automatic recording option for long time recordings
  - on screen markers for time and voltage
  - DLL included for own development
• system requirements:
  - PC, running Win98SE or higher (does not work on WinNT or Win95)
  - free USB port
  - mouse
  - CD-rom player

Packaging	Carton /1
EAN code 54 10329 21720 4	UPC code 8 16353 01103 3

POCKET AUDIO GENERATOR
K8065

LEVEL 4

Great little gadget for service, repair, testing, education, etc...
Features:
• microprocessor technology
• digital waveform generation
• also available as completely mounted module VM156
Specifications:
• sine wave: 50Hz, 100Hz, 1KHz, 10KHz, 20KHz
• burst: 50Hz, 100Hz, 1KHz
• burst mode: 20ms ON, 500ms OFF
• noise: 32-bit digital noise
• output level (10Kohm): 0 to 775mV (0dB)
• outputs: 2 x RCA (cinch)
• power supply: 2 x CR2016 or CR2025 battery (excl.)
• dimensions: 3.4 x 2 x 1"

Packaging	Carton /20
EAN code 54 10329 32327 1	UPC code 8 36479 00823 6

GENERAL PURPOSE TEMPERATURE SENSOR
K8067

LEVEL 3

Applications : measure indoor and outdoor temperatures, control heating and/or cooling of rooms, equipment, etc... Monitor temperatures in processes, put a temperature readout on your website, check your pools temperature, ...
Specifications:
• range: -20° ~ +70°C
• output: 0 ~ 20mA current loop
• output voltage compliance: 10V
• accuracy: 2° full range
• one single adjustment
• 3-wire system: GND, +V and OUT
• power supply: 12VDC for 0 ~ 5V OUT / 15VDC for 0 ~ 10V OUT
• current consumption: 30mA max.
• dimensions: 2.2 x 1.4 x 0.6"

Packaging	Carton /20
EAN code 54 10329 32593 0	UPC code 8 16353 01079 1

TIMERS & CONTROLLERS

UNIVERSAL START/STOP TIMER
K2579

LEVEL 1

Miniature timer for all applications requiring a delay of up to 60 minutes. The control range may be adjusted.
Specifications:
• power supply: 12VDC / 55mA
• relay: 3A / 220V switchable
• time interval (without modifications): adjustable from 0 to 15 minutes
• PCB dimensions: 1.5 x 2.7"

Packaging	Carton /20
EAN code 54 10329 02579 3	UPC code 8 36479 00968 4

SPEED CONTROLLER
K2636

LEVEL 3

Designed to control AC motors with carbon brushes (drilling machine, vacuum cleaner, saw, ...). High torque, even at low r.p.m. May also be used for low voltage loads (24V). Supply and load circuit electrically isolated from one another.
Specifications:
• voltage supply: 110-240V
• load voltage: 24-240V AC / 5.5A max.
• adjustable minimum r.p.m.
• low interference level
• range: 5-95%
• PCB dimensions: 5.1 x 3"

Packaging	Carton /20
EAN code 54 10329 02636 3	UPC code 8 36479 00977 6

TEMPERATURE SENSOR
K6001

LEVEL 3

This kit has been developed especially to be combined with the K6000RS or K6002 to build a temperature regulation and control system. The advantage of a separate sensor lies in the fact that the distance between the actual controller and the sensor is of no importance.
Specifications:
• sensor temperature range: -40°F to 302°F
• pulse width modulation: 200µsec/°F
• linearity from -10°C(14°F) to 50°C(122°F): better than 0.5%
• tested up to 164' (distance between sensor PCB and controller)
• supply voltage: 12V DC (± 2V) non-regulated
• current: 20mA max.
• PCB dimensions: 1.8 x 1.9"

Packaging	Carton /20
EAN code 54 10329 06001 5	UPC code

TEMPERATURE CONTROLLER
K6002
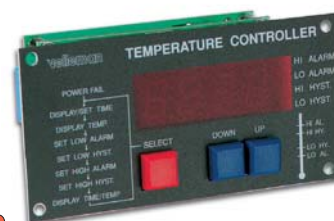
LEVEL 5

Unlike a normal thermostat, this kit has two outputs, one for "high" alarm, e.g. to switch on the air conditioning, and one for "low" alarm, e.g. to switch on the central heating. Both alarms are adjustable independently, each with their own hysteresis. Sensor K6001 included.

Specifications:
• relay outputs: 5A / 220V AC switch-over contact
• resolution: ± 0.1°C
• display from -40°C to +150°C
• 24-hour clock (50Hz mains frequency)
• alarm setting: from -50°C to +154°C
• separate optocoupled sensor input (for K6001)
• power supply: 9V AC / 300mA
• front panel dimensions: 2.4 x 4.6", depth 3.2"

Packaging	Carton	/1

EAN code	54 10329 06002 2	UPC code	8 36479 00992 9
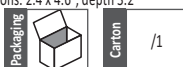
0 TO 60 HOURS START/STOP TIMER
K6200
NEW

LEVEL 2

If a device has to be switched off after a specified amount of time, then this timer is the ideal solution. Because of the large range of the timer, it may be used in almost any applications, such as switching off television and hifi-equipment, lights (staircase lighting), safety timer for coffee machine, darkroom timer, providing a short ringing signal, etc. Push buttons are provided for starting and early stopping, but it is also possible to control the circuit by means of a relay or an open collector (e.g. our 15 channel remote control receiver K8050)
Specifications:
• relay output: 5A / 220V
• range: from ± 3 seconds to ± 60 hours
• power supply: 24VAC / 50mA, 220VAC or 110VAC

Packaging	Carton	

EAN code	54 10329 06200 2	UPC code	8 36479 00978 3
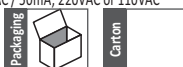
MULTIFUNCTION RELAY SWITCH
K8015

LEVEL 3

14 different functions including timers, switching, flashing, interval, random switching, ... Two pre-programmed delays. Learning mode for delays of 2s up to 12 days. Pushbutton control. EEPROM for delay time storage in case of power failure. On-board transient filter for the relay contacts. Suitable for control of incandescent lighting, halogen lighting, fluorescent lighting, fans, valves, buzzers,...
Features:
• also available as plug-in module: k8008 for K8006 base unit for modular light system
Specifications:
• operating voltages: 9-12V AC or 12V DC
• max. load: 5A (1100W/230V)
• dimensions pcb: 3.4 x 1.5 x 1"

Packaging	Carton	/20

EAN code	54 10329 08015 0	UPC code	8 16353 01091 3

MULTIFUNCTIONAL UP/DOWN COUNTER
K8035

LEVEL 4

Features:
• comes in handy for people counting, part counting, score keeping, ...
• counts up or down
• count input through on-board pushbuttons or by external pulses
• display modes: normal or time (hh:mm and mm:ss)
• an internal oscillator allows time measurement
• programmable pre-set value with equal output
• self diagnostic at power up
• comes with easy board-to-wire connector (20cm wire)
• optional bezel enclosure: B8035
Specifications:
• counter input voltage: 3...12V DC (normal dry contact also possible)
• EQUAL output: 5V DC / max. 50mA
• max. counting speed: 200 / sec. (2 / sec. with long debounce delay)
• max. count: 4 digits (9999 / 23h59m / 59m59s)
• power supply: 9 - 12V DC or transformer 2 x 9V AC / 300mA
• power consumption: 150mA max.
• dimensions: 4.9 x 3"

Packaging	Carton	/20

EAN code	54 10329 08035 8	UPC code	

FAN TIMER
K8041

LEVEL 3

Using this kit it is possible to switch on a fan (ventilator) together with the light. The fan will continue to run for a period of up to 5min (adjustable) after the light has been turned off. Very well suited for toilet or kitchen ventilation.
Features:
• suitable for most types of ventilators
• solid state switching with noise suppression
• can be connected to existing installation
• LED function indication
• an also be used without light as fan delay timer
Specifications:
• power supply: 110 to 240V AC (50/60Hz)
• maximum load: 200W
• delay range: from 10sec. to 5min.
• dimensions: 3.2 x 2.4"

Packaging	Carton	/20

EAN code	54 10329 21611 5	UPC code	

2 MODULAR DIGITS WITH SERIAL INTERFACE
K8063

LEVEL 4

Features:
• bright, red, jumbo-sized 7-segment displays (57mm).
• complete with snap-in enclosure
• multiple units can be linked in an easy way to create larger readouts for e.g. score-keeping, timing, counting, ...
• easy platform-independent control via RS232 three-wire interface
• up to 255 units can be separately addressed
• tested with distances of up to 50m between PC and displays
• for USB connection use our optional PCUSB6

Specifications:
• power supply: 9 to 12Vdc / 120mA per display
• RS232 interface: 2400baud / 8 data bits / no parity / 1 stop bit
• dimensions: 2.9 x 2.3 x 1.3"

Packaging	Carton	/20

EAN code	54 10329 31877 2	UPC code	

POWER SAVER / TIMER
K8075

LEVEL 3

The power saver turns off your equipment after a preset time. It helps you save money and it increases safety.
Features:
• single button operation with LED mode indicator
  - continuous: 24h turn-off timer
  - slow flashing: long timers
  - fast flashing: short timers
  - dim: off
• choose short or long-running timers (one-time jumper setting)
• 10A suppressed relay output
• easy to add to existing equipment
• applications:
  - automatically turn off heating, cooling, lighting, entertainment systems, fans, pumps, sprinklers, etc...
Specifications:
• available timers: 1h / 2h / 4h / 8h / 24h
• relay output: 10A / 240VAC max
• power supply: 100 - 240VAC
• dimensions: 2.56 x 1.97 x 1"

Packaging	Carton	/20

EAN code	54 10329 34828 1	UPC code	

2 1/4" 7-SEGMENT DIGITAL CLOCK
K8089

LEVEL 5

Features:
• 12/24h clock system
• min temp readout:
  - celsius: -20°C
  - fahrenheit: -4°F
• max temp readout:
  - celsius: 70°C
  - fahrenheit: 158°F
• auto toggle function
• easy time setting
• easy wall mounting
• back-up battery
• automatic frequency detection
• unique extra feature: auto toggle between time/temp and scrolling sign 'OPEN' or 'CLOSED'

Specifications:
• power supply: 12VAC (e.g. PS1205AC)
• power consumption: 250mA max. (incl. temp. sensor*)
• backup battery: 3V (CR2032)
• power consumption on backup battery: +/-1mA
• dimensions: 9 x 2.9 x 1.26"

Packaging | Carton

EAN code 54 10329 40315 7 | UPC code

NIXIE CLOCK
K8099

12h / 24h

Grab your chance NOW, build your own nixie clock. Limited edition!
What are 'nixie'-tubes ?
Nixie tubes are the 'LED indicators' of the past. In the 50's, 60's and early 70's there were no LED's or LCD's. Neon gas filled tubes were used to display numerical data. They were part of scientific equipment, counters, voltmeters, control panels etc... Nixies feature a characteristic warm orange glow. They are no longer in production, which explains their price.

Features:
• High Quality nixie tubes
• Microprocessor controlled
• Neon HH:MM separator
• Accurate timekeeping
• Economy "tube blank" option

Specifications:
• Display tubes: NOS ZM1336K
• Anode HT: +180VDC
• 12h/24h displaying (selectable)
• 50/60Hz AC power sync (auto-detect)
• Power supply: 9-12VAC / 300mA (option : PS1205AC)
• Dimensions (lxwxh): 110x55x60mm / 4.33x2.16x2.36"
• Optional enclosure (undrilled):
  - Black: TKOK19
  - White: TKOK17
• optional pre-drilled plexiglass panels: CKB8099

Packaging | Carton

EAN code 54 10329 42168 7 | UPC code

POWER SUPPLIES & CHARGERS

1A POWER SUPPLY KIT
K1823

LEVEL 1

This small power supply provides a regulated voltage, adjustable between 1.5 and 35 volts at 1 Amp. With the LM317 regulator remarkably better ripple and regulation characteristics are given than with conventional regulators. Current limiter and thermal overload protection are included in the IC. Supplied without heatsink.

Specifications:
• output current: 1.5A max.
• max. dissipation: 15W (cooled)
• max. input voltage: 40V DC
• PCB dimensions: 2.1 x 1.2"

Packaging | Carton /20

EAN code 54 10329 01823 8 | UPC code 8 36479 00690 4

UNIVERSAL POWER SUPPLY 5-14V DC / 1A
K2570

LEVEL 1

Suits all Velleman kits requiring a regulated power supply between 5 and 12V DC, and no more than 1A.

Specifications:
• input voltage: 7-16V DC / 1A
• output voltage: 5-14V DC, regulated
• output current: max. 1A
• power limitation and thermal overload protection
• max. dissipation: 7W
• PCB dimensions: 3 x 2.4"

Packaging | Carton /20

EAN code 54 10329 02570 0 | UPC code 8 16353 01040 1

3 TO 30V / 3A POWER SUPPLY
K7203

LEVEL 3

This kit is meant as an auxiliary or as a permanent power supply for all common Velleman kits based on a stabilized DC voltage between 3 and 30V provided that the consumption does not exceed 3A. Of course this power supply unit can also be used for other purposes. Be replacing the trimmer by a potentiometer, it may even be used as an adjustable power supply unit. Supplied with heatsink.

Specifications:
• output voltage: adjustable from 3 to 30V, stabilized
• output current: max. 3A
• output ripple voltage: 0.5mV
• short-circuit stable
• overload protected
• input voltage: 9 to 30V AC (depending on the desired output voltage)
• transformer not supplied
• dimensions: 5.1 x 3.6 x 2"

Packaging | Carton /1

EAN code 54 10329 07203 2 | UPC code 8 16353 01072 2

UNIVERSAL BATTERY CHARGER/ DISCHARGER
K7300

LEVEL 2

Many battery chargers are available on the market, but few of them are universal chargers. Using our kit, NiCd and NiMH batteries or different can be charged both quickly (52 minutes) and normally (14 hours). In order to ensure that the battery is fully discharged prior to charging and thus has a longer life cycle, an automatic discharger is also fitted.

Specifications:
• charge current: from 15mA to 750mA (selectable)
• charges both NiCd and NiMH batteries
• usable battery voltages: 1.2V, 2.8V, 3.6V, 4.6V, 6V, 7.2V, 8.4V and 9.6V
• quick charge in 52 minutes / normal charge in 14 hours
• automatic discharge and charge cycle
• dimensions: 3.4 x 3.1"

Packaging | Carton /20

EAN code 54 10329 07300 8 | UPC code

LOW COST UNIVERSAL BATTERY CHARGER
K7302

LEVEL 1

Charges NiCd or NiMH batteries. Ideal for car use. Transforms a mains adapter in to a charger (adapter socket included). Charge cellular phone, toys, portables, video batteries, ... Selectable charge current. LED charge indication.

Specifications:
• charge current: 50mA, 100mA, 200mA, 300mA, 400mA (selectable)
• supply voltage: from 6.5V to 21V (depending on used battery)
• supply current: same as charge current
• power supply polarity protected
• LED function indication
• dimensions: 1.6 x 2.4"

Packaging | Carton /20

EAN code 54 10329 07302 2 | UPC code

LEAD-ACID BATTERY CHARGER/ CONDITIONER
K8012

LEVEL 4

This lead-acid battery charger/conditioner is suitable for charging and maintaining both open and sealed type 6 or 12V lead-acid batteries. Charging current : 0.3 or 1A. The battery can be hooked-up to the unit for an indefinite time, and will be kept in optimal condition. Battery type and charge current are selectable, while the charging process is fully automatic.

Features:
• suitable for 6 and 12V open and sealed type lead-acid batteries
• status indicators for charge, float and end-of-charge
• can continuously remain hooked-up to the battery
• inverse polarity protection provided
• needs an 18V/25VA transformer (not included)

Specifications:
• charge current: 0.3 or 1A (selectable)
• PCB dimensions: 3.8 x 5.5 x 1.6"

Packaging | Carton /1

EAN code 54 10329 08012 9 | UPC code

SYMMETRIC 1A POWER SUPPLY
K8042

LEVEL 3

Features:
• low cost universal symmetric power supply
• just add a suitable transformer and a heatsink
• ideal for e.g. op-amp applications, amplifiers, ...
• trimmers can be replaced by potmeters to allow continuous adjustment of output voltage
• LED output indicators
• compact size

Specifications:
• positive and negative output adjustable between 1.2 and 24VDC
• output current: up to 2 x 1A continuous (with suitable heatsink)
• max. input voltage: 2 x 24VAC
• very good line and load regulation
• low ripple
• short circuit protection
• thermal protection
• optional heat sink: HS4003 (for maximum 20W dissipation)
• dimensions: 3.1 x 2 x 0.9"

Packaging	Carton	/20
EAN code 54 10329 32021 8	UPC code	

1W/3W HIGH-POWER LED DRIVER
K8071

LEVEL 3

Power up to four 1W or two 3W high-power LEDs (not incl.).

Features:
• delivers accurate constant current required by most high-power LEDs
• high efficiency due to switch mode principle
• built-in rectifier for easy connection to AC source
• compact size
• short-circuit protected
• no heatsink required
• also suited as fixed current NiCd/NiMH battery charge circuit
• for home, disco, stage, education, architectural lighting, science projects, ...
• also available as completely mounted module VM143/1W and VM143/3W

Specifications:
• 350mA or 700mA constant current source
• input voltage: 6..12VAC/9-18VDC
• power consumption: 650mA max.
• dimensions: 1.8x1.2x0.64"

Packaging	Carton	/20
EAN code 54 10329 36314 7	UPC code 8 36479 00965 3	

STARTER KITS

SOLDERLESS EDUCATIVE STARTERKIT
EDU01   NEW

The EDU01 basic experiment kit is the first step into the world of modern electronics. Build your own circuits in a fun, safe and educative way.
The kit contains a breadboard and all necessary components to get started right away. You will finish assembling your first circuit in just a few minutes...
,
Getting started
what is in the box?
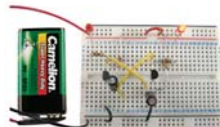
Features:
• part of our EDUKIT range
• 10 exciting projects to build
• no soldering required
• high-quality breadboard with 456 contact terminals
• extended manual
• projects include: blinking LEDs, burglar alarm, light sensor, polarity tester, start-stop circuit, timer, running light, water alarm and more...

Specifications:
• breadboard dimensions: 80 x 60mm / 3.15" x 2.36"

Packaging	Carton	
EAN code 54 10329 43330 7	UPC code 8 36479 00987 5	

SOLAR ENERGY EXPERIMENT KIT
EDU02   NEW
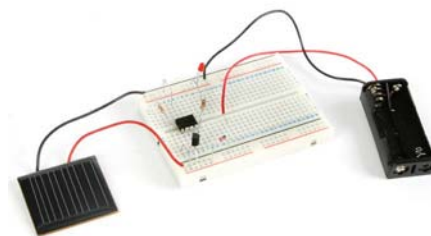
LEVEL 2

Solar Edukit: Fun solar powered projects. Learn all about solar energy.

Features:
• part of our EDUKIT range
• clear instructions
• 10 exciting projects
• with micro controller
• HQ breadboard
• no soldering required!
• projects include: solar led, solar attention grabber, solar cricket, solar battery charger, solar musical instrument, IR remote tester, solar garden light, solar motion detector, solar alarm simulator, ...

Specifications:
• breadboard dimensions: 80 x 60mm / 3.15" x 2.36"

Packaging	Carton	
EAN code 54 10329 43810 4	UPC code 8 36479 00986 8	

USB tutor module
EDU05   NEW

Make your first steps into the PC- USB world!
Using this tutor module, learning how to master USB communication with the outside world becomes simple.
Examples and tutorial in Microsoft Visual Basic, C++ & C# editions
EDU05 USB Tutor board demo

Features:
• part of our EDUKIT range
• starting form an already made example program, this module will teach you how to:
  - read up to 8 push buttons and activate a PC event
  - light up to 8 LEDs using your PC
  - read the value of 2 different potentiometers (analog value)
  - read and display the temperature on the PC
  - read the value of a temperature dependent resistor (NTC)
  - read the value of a light dependant resistor (LDR)
  - Dim a white LED using your PC
  - learn how to display text on an LCD using your PC
  - learn how to combine the above and use the LCD to display push button press, display values..

Specifications:
• USB 1.1 - 2.0 compatible
• USB powered + LED indicator
• PC with windows XP or higher (internet needed for software download)
• digital input/output:
  - 8 definable push buttons
  - 8 definable LEDs
  - 1 White LED
• analog input:
  - temperature sensor
  - NTC resistor
  - LDR resistor
  - 2 potentiometers
• display:
  - 16 character 1 line LCD
• included: USB cable
• board dimensions: 75 x 75mm / 3x3"

Packaging	Carton	
EAN code 54 10329 45552 1	UPC code 8 16353 01092 0	

KITS - OTHER BRANDS

MECHANICAL MOTORIZED WOODEN KITS

TYRANNOMECH
KNS1

Features:
• transmission: gear drive operation

Specifications:
• dimensions: 16.14 x 6.9 x 2.9"
• powered by: 2 x AA batteries (not included)

Packaging	Carton	/40
EAN code 54 10329 20470 9	UPC code 8 36479 00579 2	

ROBOMECH
KNS3

Features:
• transmission: gear drive operation
Specifications:
• dimensions: 3.5 x 8.3 x 3.15"
• powered by: 2 x AA batteries (not included)

Packaging | Carton /40
EAN code 54 10329 20472 3 | UPC code 8 36479 00581 5
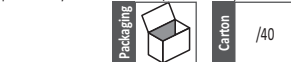
COPTERMECH
KNS4

Features:
• transmission: pulley drive operation
Specifications:
• dimensions: 14 x 10.4 x 4.9"
• powered by: 2 x AA batteries (not included)

Packaging | Carton /40
EAN code 54 10329 20473 0 | UPC code 8 36479 00582 2

AUTOMECH
KNS5

Features:
• transmission: pulley drive operation
Specifications:
• dimensions: 9.4 x 3.3 x 3.7"
• powered by: 2 x AA batteries (not included)

Packaging | Carton /40
EAN code 54 10329 20474 7 | UPC code 8 36479 00583 9
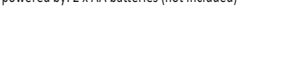
TRAINMECH
KNS6

Features:
• transmission: gear drive & pulley drive operation
Specifications:
• dimensions: 8.6 x 3.7 x 5.9"
• powered by: 2 x AA batteries (not included)

Packaging | Carton /40
EAN code 54 10329 20475 4 | UPC code 8 36479 00584 6

OPTIONAL PARTS

2 IN 1 GEARBOX FOR WOODEN KITS
KNS7
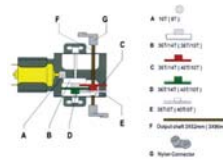
Features:
• use the contents of this set to change the speed of your existing sets
Specifications:
• contains: motor, 2 set gears, metal shafts, gearbox and other accessories
• powered by: 2 x AA batteries (not included)

Packaging | Carton /48
EAN code 54 10329 20476 1 | UPC code 8 36479 00585 3

ELECTRONIC LAB KITS

30 IN 1 ELECTRONIC LAB KIT
EL301

2 x AA

Features:
• educational and fun projects, safe and solderless
• practical and illustrated lab-style manual included
• complete 30 exciting electronics experiments
Specifications:
• a great introduction into the world of advanced electronics
• everything you need to build a radio, a burglar alarm, a water detector, a Morse code practice circuit, simple computer circuits and much more
• power supply: 2 1.5V AA-batteries (not incl.)

Packaging | Carton /24
EAN code 54 10329 21982 6 | UPC code 8 36479 00249 4

130 IN 1 ELECTRONIC LAB KIT
EL1301

6 x AA

Features:
• the fun way of learning about electronics and of studying the wonders of science
• remark: comes with English and French manual only
Specifications:
• a great introduction into electronics
• no experience required
• coil-spring connections make this kit safe and easy for anyone to use
• includes illustrated step-by-step manual for easy project construction
• build a radio, an AM broadcasting station, an electronic organ, a kitchen timer, logic circuits and much more
• comes with built-in speaker, 7-segment LED display, two fully integrated circuits and rotary controls
• power supply: 6 1.5V AA-batteries (not incl.)

Packaging | Carton /12
EAN code 54 10329 21981 9 | UPC code 8 36479 00246 3

300 IN 1 ELECTRONIC LAB KIT
EL3001

6 x AA

Features:
• educational and fun projects, safe and solderless
• build 300 exciting circuits - safely and easily
• practical and illustrated lab-style manual included
• 300 electronics experiments in 1 package
• remark: comes with English and French manual only
Specifications:
• a great introduction into the world of advanced electronics
• easy, quick and step-by-step learning of the basics of electronics / no tools or soldering required
• everything you need to build 300 exciting electronic projects: a transistor radio, an IC organ, a burglar alarm, a battery checker, a delayed timer, an electronic game, a voltage-controlled amplifier, multiplier, a multiple counter, a digital light dimmer, a tone burst generator, an audio signal tracer, an electronic candle, a voice level meter, a metal detector, a rain detector, a voltage drop alarm, a logic checker, a function generator and much more
• power supply: 6 1.5V AA-batteries (not incl.)

Packaging | Carton /12
EAN code 54 10329 21530 9 | UPC code 8 36479 00248 7

2 IN 1 ELECTRONIC LAB KIT
EL21

1 x 9V

Features:
• educational and fun projects, safe and solderless
• learn to build your own AM / FM radio
• with earphone included
Specifications:
• frequency range: 520-1650kHz (AM) and 88-108MHz (FM)
• power supply: 1 9V battery (not incl.)

Packaging	Carton
	/48

EAN code	UPC code
54 10329 21529 3	8 36479 00247 0

ELECTRONIC ROBOT KITS

CAR ROBOT KIT
KSR1

2 x AA

A sensor-activated robot car. The car changes directions when the sensor detects noise or when the car hits an object.

Specifications:
• uses a microphone as sound sensor
• dimensions: 4.3 x 3.5 x 2.4"
• power supply: 2 1.5V AA batteries (not included)

Packaging	Carton
	/42

EAN code	UPC code
54 10329 20478 5	8 36479 00586 0

FROG ROBOT KIT
KSR2

The robot frog moves forward when it detects sound and repeats the following movements sequentially : start (move forward) -> stop -> left turn -> stop -> right turn -> stop. Two sets of gear motors (unassembled).

Specifications:
• dimensions: 3.5 x 4.9 x 3.9"
• power supply:
  - mechanical: 2 1.5V AA batteries (not included)
  - electronic: 9V-battery (not included)

Packaging	Carton
	/42

EAN code	UPC code
54 10329 20479 2	8 36479 00587 7

"ESCAPE" ROBOT KIT
KSR4

The Escape Robot Kit works just like an A.I. robot. It never fails to find its way out of a maze. The Escape Robot uses 3 IR emitting diodes and 1 IR receiving module to send and receive signals and detect obstacles.

The Escape Robot's built-in microprocessor enables it to "think" on its own: it gathers and processes information on its environment so it can avoid any obstacle. The Escape Robot moves about on 6 legs.

This kit comes complete with 2 sets of differently designed legs that move in their own distinct way. Fun and excitement are guaranteed!

Specifications:
• dimensions: 5.5 x 5.9 x 3.9"

Packaging	Carton
	/24

EAN code	UPC code
54 10329 32928 0	
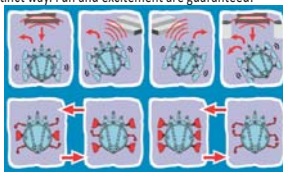
"SCARAB" ROBOT KIT
KSR5

Scarab is a robot that uses 2 touch sensors to detect obstacles. When its antennas (touch sensor) detect an obstacle, Scarab will first step back and then automatically execute a two-step manoeuvre to avoid the obstacle. The manoeuvre is a combination of "left turn", "right turn", "reverse" or "stop". The Scarab Robot can be configured with different sets of movements.

The Kit comes complete with 2 sets of differently designed legs, which move in their own distinct way. Let the fun begin!
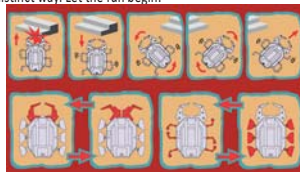
Specifications:
• dimensions: 6.9 x 5.7 x 3.3"

Packaging	Carton
	/24

EAN code	UPC code
54 10329 32933 4	

"LADYBUG" ROBOT KIT
KSR6

The Ladybug Robot walks on 6 legs and uses infrared emitting diodes for "eyes" in order to avoid obstacles. Ladybug walks straight ahead but automatically makes a left turn the moment an obstacle is detected.

The Kit comes complete with 2 sets of differently designed legs, which move in their own distinct way. Let the fun begin!
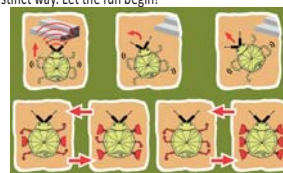
Specifications:
• dimensions: 4.7 x 5.9 x 3.3" (lenght feelers: 1.6")

Packaging	Carton
	/24

EAN code	UPC code
54 10329 32942 6	

SCIENCE KITS

Horizon
Fuel Cell Technologies

FUEL CELL CAR SCIENCE KIT
KNS10   **NEW**

This Fuel Cell Car Science Kit uses a reversible PEM fuel cell that combines electrolysis and power conversion into one single device. Watch as oxygen and hydrogen gases are formed in two transparent water containers. The car steers independently of the user once in operation: when the car hits a barrier, it will automatically find its way by reversing away 90 degrees. This fun science kit combines cutting-edge science, education and fun for all!

Features:
• recommended age: 14 years and up
• this kit contains:
  - PEM reversible fuel cell module
  - car chassis & wheels
  - electric motor
  - flashing LED lights
  - water vessels
  - gas collectors
  - connector cables
  - syringe
  - battery pack for 2x 1.5V AA batteries (LR6C, not incl.)
  - user manual on CD

Packaging	Carton

EAN code	UPC code
54 10329 42900 3	

H-RACER 2.0 (IR) & HYDROGEN STATION KIT - THE NEXT GENERATION
KNS11

NEW

This futuristic hydrogen car science kit is an amazing way to demonstrate the use of cutting-edge alternative energy and automotive technologies. Its partly transparent body displays the inner mechanics of the car. The car's assembly instructions make it easy and fun to build, and also provides interesting education on real-world challenges.
Features:
• recommended age: 12 years and up
• this kit contains:
  - H-racer chassis & body
  - fuel cell system components
  - hydrogen refuelling station (2 x 1.5V AA, LR6C, not incl.)
  - solar panel & connectors
  - infrared remote control (3 x LR44, not incl.)
  - assembly & operation manual

Packaging	Carton

EAN code	UPC code
54 10329 42901 0	

BIO-ENERGY DISCOVERY KIT
KNS13

NEW

This kit demonstrates the latest in fuel cell technology using ethanol as its fuel source. Current fuel cells use hydrogen or methanol as fuel. This fuel cell kit directly converts ethanol (alcohol) to electricity silently and without any combustion. The device runs non-stop for days, providing an amazing demonstration of next-generation fuel cell technology. Ethanol not included.
Features:
• recommended age: 12 years and up
• this kit contains:
  - ethanol storage tank
  - tube
  - purge valve
  - housing
  - electric motor and propeller
  - direct ethanol PEM fuel cell module
  - connection cables
  - ethanol mixing container
  - pH strips
  - storage tank cover

Packaging	Carton

EAN code	UPC code
54 10329 42903 4	

SOLAR HYDROGEN EDUCATION SET
KNS9

NEW

Discover how to produce, store and use the clean energy of the future! Using a process called electrolysis, water can be converted to hydrogen which is then transformed by fuel cells into electrical energy to power anything from vehicles to electronic devices.
Features:
• recommended age: 12 years and up
• this kit contains:
  - PEM reversible fuel cell module
  - water/gas storage tanks module
  - mini electric motor and propeller
  - solar panel
  - tubes and accessories
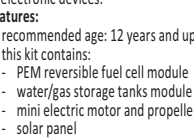
  - battery pack for 2x 1.5V AA batteries (LR6C, not incl.)
  - user manual and experiment guide on CD
Specifications:
• colour: blue
• fuel cell:
  - type: reversible PEM (Polymer Electrolyte Membrane)
  - hydrogen production rate: 7ml/min
  - oxygen production rate: 3.5ml/min
  - input voltage: 1.8 - 2.6VDC
  - output voltage: 0.6VDC
  - input current: 0.7A @ 2V
  - output current: 360mA
  - output power: 210mW
  - dimensions: 2.13" x 2.13" x 0.67"
  - weight: 2.46oz.

Packaging	Carton

EAN code	UPC code
54 10329 42899 0	

MINIKITS

SOLDERING STARTER KIT WITH LEAD-FREE SOLDER - 110V
K/STARTULF

LEVEL 1

Ideal for beginners.
Features:
• contains:
  - soldering iron: VTS20U (20W / 110V AC)
  - solder: lead-free solder
  - soldering iron holder: STANDLC
  - pair of wire-cutters: VT057
  - flashing LEDs: MK102
  - LED light organ: MK103

Packaging	Carton

EAN code	UPC code
	8 36479 00660 7

ANIMATED GHOST
MK166

LEVEL 2

Features:
• great Halloween gadget
• greets your visitors
• for shops, parties, events or just for fun

Specifications:
• ghost responds to sudden noises
• adjustable sensitivity
• battery operation: 2xAAA battery
• dimensions: 5.39 x 2.68 x 1.97"

Packaging	Carton /50

EAN code	UPC code
54 10329 32892 4	

FLICKERING ELECTRONIC CANDLE KIT
MK167

LEVEL 2 **1 x CR2032**
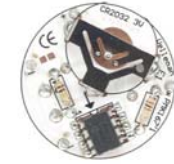
Features:
• cannot be blown out by the wind
• safe for kids and pets
• great at home, for parties, Xmas, Halloween, etc.
• choose between 3 different modes:
  - realistically flickering flame
  - steady flame
  - fade in - fade out
• fits standard 38mm cup
• safe: no flame or heat
• 5h turn-off timer saves batteries
• yellow high-intensity LED

Specifications:
• power supply: 1x CR2032 3V battery (not incl.)
• autonomy: +/- 15 days (5h/day, flickering candle mode)
• power-off timer: +/- 5h
• current consumption: 4mA max
• dimensions: 1.50 x 0.98"

Packaging	Carton /120

EAN code	UPC code
54 10329 33957 9	8 36479 00937 0

ALARM SENSOR SIMULATOR
MK168

LEVEL 2 **1 x AA**

Scare off possible intruders with this low-cost alarm simulator.
Features:
• 'Realistic'- looking flash sequence
• runs for months on a single AA battery
• complete with enclosure and fixation strip
• wall mounted or desk-top operation
• applications: protect homes, shops,cars, cabins, trailers, boats, equipment,...
Specifications:
• power supply: 1.5V AA battery (not incl.)
• power consumption: 20µA idle, 3mA when flashing
• dimensions: 3.15 x 2.2 x 1.3"

Packaging	Carton

EAN code	UPC code
54 10329 34304 0	8 36479 00920 2

FLASHING RED LED STAR
MK169R

LEVEL 2 | 1 x 9V

Features:
• great seasonal gadget !
• safe battery operation
• select: flashing or static operation
• application: desktop or hanging from the ceiling
• multiple kits enhance the effect
• in-car (12V) operation possible

Specifications:
• 35 LEDs
• power supply: 1x 9V battery (not incl.)
• current consumption: 40mA (static mode)
• flash duty cycle: 1:2
• dimensions: 3.54 x 3.54"

Packaging | Carton /50
EAN code 54 10329 34191 6 | UPC code 8 36479 00957 8

FLASHING YELLOW LED STAR
MK169Y
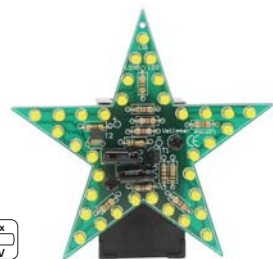
LEVEL 2 | 1 x 9V

Features:
• great seasonal gadget !
• safe battery operation
• select: flashing or static operation
• application: desktop or hanging from the ceiling
• multiple kits enhance the effect
• in-car (12V) operation possible

Specifications:
• 35 LEDs
• power supply: 1x 9V battery (not incl.)
• current consumption: 40mA (static mode)
• flash duty cycle: 1:2
• dimensions: 3.54 x 3.54"

Packaging | Carton /50
EAN code 54 10329 34271 5 | UPC code

60-LED MULTI-EFFECT STAR
MK170

LEVEL 3 | 1 x 9V

Features:
• processor-controlled LED star creating multiple dazzling effects
• extra LEDs included, allowing different colour combinations: make your own mix of red and yellow LED's or make the star fully red or yellow
• on-board effect selection push button
• 24 effects
  - 3 static
  - 15 blinking
  - 6 animations with fading
• "All effects" sequencing is possible (standard setting)

Specifications:
• 60 LEDs on board
• power supply: 9 to 12Vdc adapter or battery (not incl.)
• current consumption: 20mA (static mode 9V battery)
• dimensions: 4.13 x 4.33 x 1.38"

Packaging | Carton /60
EAN code 54 10329 34255 5 | UPC code 8 36479 00956 1

VOICE CHANGER
MK171

LEVEL 2

Features:
• make your voice sound like a robot
• add vibrato effect
• use the 'pitch'-buttons and make your voice sound lower or higher
• built-in microphone and power amplifier with volume control, just add a speaker
• hours of fun!
• for parties, plays, recordings, games, etc.
Specifications:
• speaker / line output
• on/off switch
• max. output power: 1.5 W (4 ohm)
• power supply: 9Vdc / 300mA
• dimensions: 3 x 1.8"

Packaging | Carton /60
EAN code 54 10329 34381 1 | UPC code 8 36479 00933 2

SOUND STAR
MK172

LEVEL 2

Traditional LED VU-meters are boring!
This star-shaped VU-meter will brighten up your party!

Features:
• 60-LEDs sound star
• responds to sound and music in a 'VU-meter'-fashion
• built-in microphone
• adjustable sensivity
• multiple units enhance the effect
• great for parties, events, trade-shows, as eye-catcher etc.

Specifications:
• power supply: 9 - 12VDC / 200mA
• dimensions: 4.2 x 4.4 x 1.4"

Packaging | Carton /50
EAN code 54 10329 35990 4 | UPC code 8 36479 00881 6

MINI-6-LED CHASER
MK173

LEVEL 2
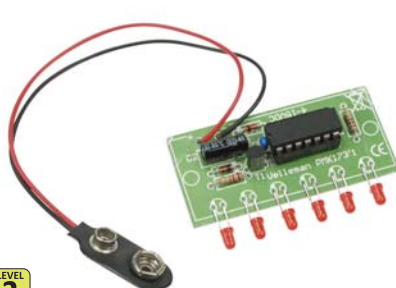
Features:
• 1 LED scans from side to side or in 1 direction (selectable)
• as attention grabber in stores, at exibitions, etc...
• as seen in classic TV series...
• applications:
  - toys
  - scale and RC models
  - as gadget
  - for stage, plays, movies, etc...
• 6 high-intensity 3mm red leds
Specifications:
• power supply: 4-15VDC (20mA at 12VDC)
• fixed scan speed (side to side): 0.5s
• dimensions: 2.18 x 0.99 x 0.39"

Packaging | Carton /50
EAN code 54 10329 36235 5 | UPC code 8 36479 00882 3

SINGLE-MESSAGE RECORD/PLAYBACK PROJECT
MK174

LEVEL 2 | 3 x AA

Features:
• record time between 10 and 35 sec. (adjust the sample rate)
• onboard microphone
• speaker Ø 57mm included
• line-out to drive external amplifier, e.g. for
  - K8066: 3W mono amplifier
  - K4001: 7W mono audio amplifier
  - ...
• external trigger input to play message
• 3 x AA battery holder included
• using the speed adjust a " funny voice" can be created
Specifications:
• power supply: 4.5V battery (3 x AA not incl.), ex.LR6BL
• power consumption:
  - max. 150mA during playback
  - less than 1µA during standby!
• adjustable sampling rate: 5...12 KHz.
• speaker output: 500mW max., 8 ohm
• signal/Noise ratio: 34dB
• PCB dimensions: 2.6 x 2 x 0.8"

Packaging	Carton /50
EAN code 54 10329 38558 3	UPC code 8 16353 01055 5

3RD BRAKE LIGHT FLASHER
MK178

LEVEL 2

>>> INCREASES SAFETY <<<
Works on every car with a third brake light, with either LEDs or incandescent bulbs.
Check with local authorities if the use of this device is allowed in your country.
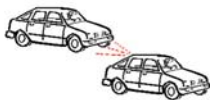
flashing brakelight

Features:
• Easy two-step install
• makes your 3rd brake light flash
• selectable number of flashes: 5 or 10 times
• selectable flash repeat interval: always or not within 5-7sec between two brakes
• includes shrink tube to cover complete unit
• flash frequency: 7 times per second
Specifications:
• power supply: 12VDC
• max load: 4A
• dimensions: +/- 2.4 x 1.2 x 0.78"

Packaging	Carton
EAN code 54 10329 41280 7	UPC code

PROXIMITY CARD READER
MK179

LEVEL 2

Features:
• store up to 25 tags
• excellent security: 64-bit coded
• Unlimited # of tags in low-security mode
• two tags supplied (card-type)
• Easy addition and removal of tags
• Output activation: 0.5s to 4min or toggle (ON/OFF)
• Coil can be mounted away from the board (up to 5m) for higher security
• applications:
  - open doors, fences, gates, etc...
  - arm/disarm security systems in homes / offices / vehicles etc...
  - Prevent unauthorised use of equipment, machinery, computer systems etc...
  - automate cat doors...
• options:
  - HAA86C/TAG: optional acces card
  - HAA86C/TAG2: optional acces badge
• also available as completely mounted module VM179
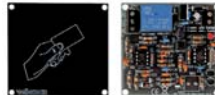
Specifications:
• EM4100 compatible
• relay output: max. 3A/24V
• power supply: 12VDC/100mA
• dimensions: 66x62x20mm / 2.6x2.4x0.8"

Packaging	Carton
EAN code 54 10329 41700 0	UPC code 8 36479 00919 6

TWO-CHANNEL HI-POWER LED FLASHER
MK180 **NEW**

LEVEL 2

Use the unit with any kind of LEDs: low current, hi-power, LED strips, clusters, etc.
Features:
• two channels
• 7 flash effects
• adjustable speed
• detachable LED PCBs
• high-power MOSFET outputs: (3A/channel)
• memory for last selected effect
• supplied with 20.000mcd white LEDs
• single-button selection
• applications: alarm systems, hazard flasher, attention grabber, disco effect, etc.
Specifications:
• supply voltage: 12VDC
• outputs: 3A/Channel max.
• dimensions:
  - main board:
    · l x w: 65x33mm / 2.56x1.3"
    · height: 20mm / 0.78"
  - LED board:
    · l x w: 18x33mm / 0.71x1.3"
    · height: 12mm / 0.47"

Packaging	Carton
EAN code 54 10329 41833 5	UPC code 8 36479 00949 3

AC POWER VOLTAGE LED
MK181 **NEW**

LEVEL 2

Note: only for use inside a cabinet
Features:
• blue LED operated on mains voltage
• suited for mains indicator or other pilot lamps
• for safety guidance, stairs, corridors...
• small in size!
• special X2 safety capacitor
Specifications:
• supply from: 100Vac to 240Vac 50Hz or 60Hz
• dimensions: 28x18mm / 1.10 x 0.71"

Packaging	Carton
EAN code 54 10329 41827 4	UPC code 8 36479 00922 6

DIGITAL ECHO CHAMBER
MK182

LEVEL 1

Great effect tool - tool - tool - tool!!
Can be used for various audio systems, karaoke, P.A. toys, or just for fun,...
Features:
• 4 Adjustments for MIC or input level, volume or output level, echo delay time, and feedback.
• 40 Kb SRAM for low distortion and good sound quality
• onboard microphone and audio amplifier
• line-In & Line-out connection
• 9V battery snap included
Specifications:
• power supply: 9V battery (6LR61 not incl.) or 9...12V DC regulated
• power consumption: 150mA max.
• delay time: 80...200ms
• speaker output: 500mW (8 ohm, 10% THD)
• dimensions: 3.35 x 2.76 x 0.78"

Packaging	Carton
EAN code 54 10329 42625 5	UPC code 8 36479 00947 9

USB SMD X-MAS TREE
MK183

NEW

LEVEL 2

The perfect SMD kit for the Christmas holidays. Easy to mount. The ideal introduction to the SMD technology.
PC- or battery-powered.

Features:
• miniature size gadget
• great as attention grabber
• some extra parts are supplied, in case some get lost or damaged
• tree can be operated pending
• ON/OFF slide switch
Specifications:
• power consumption:
  - battery: 7mA
• power supply:
  - battery: CR2032 (e.g. Velleman CR2032C)
  - USB: 5V
• dimensions: 2.48 x 2.24"

Packaging | Carton

EAN code 54 10329 43632 2 | UPC code 8 36479 00979 0

COUNTER DISPLAY WITH 40X MK183
MK183DISP

NEW

Assembled demo unit included.
Demo needs 2x AA battery for 3 weeks of operation.
Box can be reused for future actions.

Packaging | Carton

EAN code 54 10329 44052 7 | UPC code

USB SMD X-MAS TREE
MK183PROM

NEW

The perfect SMD kit for the Christmas holidays. Easy to mount. The ideal introduction to the SMD technology.
PC- or battery-powered.
The MK183PROM is only available as complementary supply for the MK183DISP.
Assembly instructions on YouTube: "MK183 assembly instructions"
Features:
• miniature size gadget
• great as attention grabber
• some extra parts are supplied, in case some get lost or damaged
• tree can be operated pending
• ON/OFF slide switch
Specifications:
• power consumption:
  - battery: 7mA
• power supply:
  - battery: CR2032 (e.g. Velleman CR2032C)
  - USB: 5V
• dimensions: 2.48 x 2.24"

Packaging | Carton

EAN code 54 10329 43670 4 | UPC code
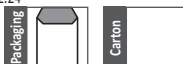
ELECTRONIC RGB CANDLE
MK184

NEW

LEVEL 1

Realistic flickering flame effect, as opposed to similar import items.
Safe for pets, children and furniture.
Features:
• colours: Yellow / Red / Blue / Green / Cyan / Magenta
• fixed colour or automatic colour change mode
• Hi-power RGB led
Specifications:
• battery: 6V/165mAh (4LR44 not incl.)
• power consumption: 3-10mA (depends on selected colour)
• dimensions: diameter: 38mm/1.5" - h: 36mm/1.4"

Packaging | Carton

EAN code 54 10329 42951 5 | UPC code 8 36479 00974 5

SOLAR BUG
MK185

NEW

LEVEL 2
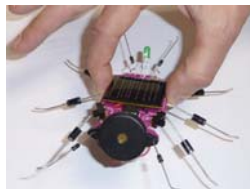
Bring that mediterranean atmosphere to your garden
Chirps or glows as long as the sun shines.*
Features:
• realistic cricket chirp
• slow fading green led simulates glow-worm
Specifications:
• solar cell: 4.5V/ 35mA
• optional rechargeable batteries: 2x AAA NiCd or NiMH
• dimensions: 140x150x50mm / 5.6 x 5.9 x 1.97"

Packaging | Carton

EAN code 54 10329 43569 1 | UPC code 8 36479 00990 5

LOW VOLTAGE LED LIGHT ORGAN
MK186

NEW

LEVEL 1 | 24V

Also available as completely mounted module VM186
Features:
• panel-mount concept: easy to build in
• Hi-power output
• built-in microphone
• adjustable sensitivity
• blue indicator led
• ideal for:
  - 12/24V RGB led strips
  - 12/24V single colour led strips
  - 12V halogen lamps
  - incandescent lamps
  - 12V led lamps
  - etc...
• suited for in-car use

Specifications:
• power supply: 12-24VDC
• output: 5a max.
• dimensions: 100 x 40 x 35mm / 3.93 x 1.57 x 1.37"

Packaging | Carton

EAN code 54 10329 43992 7 | UPC code 8 36479 00931 8

LOW VOLTAGE LED DIMMER
MK187

NEW

LEVEL 1 | 24V | 12V

Also available as completely mounted module VM187
Features:
• panel-mount concept: easy to build in
• Hi-power output
• Adjustable level
• blue indicator led
• ideal for:
  - 12/24V RGB led strips
  - 12/24V single colour led strips
  - 12V halogen lamps
  - incandescent lamps
  - 12V led lamps
  - etc...
• suited for in-car use
Specifications:
• power supply: 12-24VDC
• output: 5a max.
• dimensions: 100 x 40 x 35mm / 3.93 x 1.57 x 1.37"

Packaging | Carton

EAN code 54 10329 40945 6 | UPC code 8 36479 00932 5

12V CAR BATTERY MONITOR
MK189

NEW

LEVEL 1

This small circuit is of great value to check you car battery status.
(enclosure not included!)

Features:
• easy to build in
• only 2 wires to connect (connect after ignition)
• uses multi colour 3mm LED
  - green: battery OK
  - Slow pulsing (green): battery OK or charging
  - red: battery voltage is low
  - red blinking: battery is being overcharged
• includes: board to wire connector
Specifications:
• dimensions: 30x20mm / 1.18 x 0.78" (board)

Packaging | Carton

EAN code 54 10329 44825 7 | UPC code 8 16353 01066 1

2X5W AMPLIFIER FOR MP3 PLAYER
MK190

NEW

LEVEL 1

Features:
- big sound from a small unit
- low distortion
- input: stereo 3.5mm jack
- volume adjust complete with attractive knob
- slide on/off switch
- blue indicator led

Specifications:
- 2 x 5Wrms (10% THD @ 4ohm / supply 14V)
- sensitivity: 400mVrms for full output
- freq. response: 30Hz - 100kHz (-3dB / 8 ohm)
- power supply: 6-14VDC / 1A max. (example Velleman PSSE1210)
- speaker impedance: 4-32 ohm
- dimensions (wxdxh): 66x53x25mm / 2.59x2.08x0.98"

Packaging	Carton

EAN code	UPC code
54 10329 45016 8	8 16353 01063 0

ELECTRONIC CHRISTMAS TREE
MK100

LEVEL 1 / 1 x 9V

Christmas was never so congenial ! 16 blinking LEDs.

Features:
- also available in mounted version: MMK100

Specifications:
- very low power consumption: max. 4mA
- power supply: 9V battery (not incl.)
- dimensions: 2.4 x 4.0 x 1.0"

Packaging	Carton /100

EAN code	UPC code
54 10329 00100 1	8 36479 00833 5

RIDING SANTA
MK116

LEVEL 3 / 1 x 9V

126 LED multicolor animated Xmas gadget. No need to remove battery when using external supply. 12V operation possible for use in cars, trucks. On/off switch included.

Features:
- also available in mounted version: MMK116

Specifications:
- power supply: 9 to 12V DC or 9V alkaline battery (not incl.)
- dimensions: 3.2 x 5.7"
- recommended adapter: PS905USA

Packaging	Carton /100

EAN code	UPC code
54 10329 00116 2	8 36479 00955 4

DE LUXE XMAS TREE
MK117

LEVEL 3 / 1 x 9V

Beautiful tree consisting of 134 LEDs. 18 randomly blinking candles. No need to remove battery when using external supply. 12V operation possible for use in cars, vans, trucks. On/off switch included.

Features:
- also available in mounted version: MMK117

Specifications:
- power supply: 9 to 12V DC or 9V alkaline battery (not incl.)
- recommended adapter: PS905USA
- dimensions: 5.6 x 3.2"

Packaging	Carton /100

EAN code	UPC code
54 10329 00117 9	8 16353 01051 7

3D XMAS TREE
MK130

LEVEL 1 / 1 x 9V

The ultimate Xmas gadget.
Features:
- 16 flashing red LEDs
- extra green and yellow LEDs provided to customize your tree

- can be hung and supplied through the wires
Specifications:
- low power consumption: 8mA
- power supply: 9V battery operation (not incl.)
- will operate on 12V DC (e.g. in cars, ...)
- dimensions: 3.1 x 3.5 x 4"

Packaging	Carton /100

EAN code	UPC code
54 10329 32481 0	8 36479 00836 6

SMD X-MAS TREE
MK142

LEVEL 2

Features:
- miniature Xmas gadget
- 6 LEDs flash alternately
- tree can be operated pending (e.g. from the ceiling or Xmas tree) or can be worn as a badge (pin supplied)
- great attention grabber
- ideal introduction to SMD (Surface Mounted Device) technology
- some extra parts are supplied, in case some get lost or damaged

Specifications:
- power supply: 3V Li button cell (e.g. CR2025 or CR2032)
- power consumption: 5mA approx.
- dimensions: 1.75 x 1.6 x 0.3"

Packaging	Carton /100

EAN code	UPC code
54 10329 00142 1	8 36479 00521 1

FLASHING LED SWEETHEART
MK101

LEVEL 1 / 1 x 9V

Show your love in an original way that your heart still beats faster for him or her. 28 LEDs form 2 blinking hearts.
Specifications:
- consumption: ± 8mA
- power supply: 9V battery (not incl.)
- dimensions: 2.5 x 2.75 x 1.2"

Packaging	Carton /100

EAN code	UPC code
54 10329 00101 8	8 36479 00834 2

FLASHING LED's
MK102

LEVEL 1 / 1 x 9V

For different applications (such as model construction), and recreational. Adjustable flashing speed with two potentiometers.
Specifications:
- consumption: ± 8mA
- power supply: 9V battery (not incl.)
- dimensions: 1.3 x 1.25 x 0.6"

Packaging	Carton /100

EAN code	UPC code
54 10329 00102 5	8 36479 00701 7

SOUND-TO-LIGHT UNIT
MK103

LEVEL 2 | 1 x 9V

Four high-intensity LEDs light up and react simultaneously on every sound. For different funny and practical applications, such as : sound indicator, simple sound-to-light unit for music, for the hearing impaired : can be used to indicate the telephone, door bell. Adjustable sensitivity with potentiometer. Built-in microphone.
Specifications:
• consumption: 0.5mA min. / 12mA max.
• power supply: 9V battery (not incl.)
• dimensions: 1.6 x 2.2 x 1.4"

Packaging | Carton /100
EAN code 54 10329 00103 2 | UPC code 8 36479 00702 4

ELECTRONIC CRICKET
MK104

LEVEL 2 | 1 x 9V

Can be used for fun or to simulate a hot summer night. Automatically comes on when it gets dark. Cricket repetition (time between two crickets), effect and tone adjustable. Adjustable light sensitivity.
Specifications:
• consumption: ± 5mA
• power supply: 9V battery (not incl.)
• dimensions: 1.6 x 2.2 x 0.98"

Packaging | Carton /100
EAN code 54 10329 00104 9 | UPC code 8 36479 00948 6

SIGNAL GENERATOR
MK105

LEVEL 2 | 1 x 9V

Features:
• signal output: sine wave, triangle, square wave and integrator (selectable through jumper)
• signal frequency: about 1kHz (fixed)
• output level: adjustable from 0 to 100mVrms (LEVEL potentiometer)
Specifications:
• power supply: 9V battery (not incl.)
• dimensions: 2.2 x 1.6"

Packaging | Carton /100
EAN code 54 10329 00105 6 | UPC code 8 36479 00703 1

METRONOME
MK106

LEVEL 2 | 1 x 9V

Speaker included. LED beat indication. Adjustable volume and beats / minute with potentiometers. On / off switch on board.
Specifications:
• power supply: 9V battery (not incl.)
• dimensions: 2.4 x 1.7"

Packaging | Carton /100
EAN code 54 10329 00106 3 | UPC code 8 36479 00704 8

LED RUNNING LIGHT
MK107

LEVEL 1 | 1 x 9V

8 LEDs. Different LED running effects are selectable (PROG push button). Adjustable effect speed (SPEED potentiometer). Power stand-by push button (OFF push button).
Specifications:
• power supply: 9V battery (not incl.)
• dimensions: 3.5 x 1.6"

Packaging | Carton /100
EAN code 54 10329 00107 0 | UPC code 8 36479 00935 6

WATER ALARM
MK108

LEVEL 1 | 1 x 9V

Gives alarm sound when water is detected. Incorporated alarm buzzer. Water sensor can be placed at a distance by cutting the board and using wires to connect the sensor.
Specifications:
• power supply: 9V battery (not incl.)
• dimensions: 1.8 x 2.8"

Packaging | Carton /100
EAN code 54 10329 00108 7 | UPC code 8 36479 00705 5

ELECTRONIC DICE
MK109

LEVEL 1 | 1 x 9V

Electronic die with LED indication. Rolls slowly out when the push button is released.
Specifications:
• power supply: 9V battery (not incl.)
• dimensions: 1.7 x 2.4"

Packaging | Carton /100
EAN code 54 10329 00109 4 | UPC code 8 16353 01000 5

SIMPLE ONE CHANNEL LIGHT ORGAN
MK110

LEVEL 2

With loudspeaker input. Modulates a lamp according to the music signal at the input. Optical isolated loudspeaker input. Adjustable sensitivity.
Specifications:
• input sensitivity: 2W to 60W
• maximum load: 120W at 120V AC and 230W at 230V AC
• dimensions: 2.4 x 1.6"

Packaging | Carton /100
EAN code 54 10329 00110 0 | UPC code 8 36479 00706 2

INTERVAL TIMER
MK111

LEVEL 1

For intermittent operation of circuits and equipment. Blinking light, video/photo single frame shooting, slide projector control, miniature models.
Features:
• also available as completely mounted module VM136
Specifications:
• output relay with dry switch-over contact: 3A/24V
• pulse time adjustable: between 0.5 and 5 sec.
• pause time adjustable: between 2.5 and 60 sec.
• power supply: 12V DC / 100mA
• dimensions: 1.6 x 3.4"

Packaging | Carton /100
EAN code 54 10329 00111 7 | UPC code 8 36479 00835 9

BRAIN GAME
MK112

LEVEL 1 | 3 x AA

Just 4 LEDs and 4 push buttons provide hours of fun. The aim-of-the-game is to repeat a pattern, which is generated at random. The pattern is played both visually and audible or visually only (selectable). It features 4 difficulty levels, which can be selected at start-up. The replay speed gradually increases during the game, to make it even more challenging. Low power consumption. Microprocessor controlled. Auto power off.
Specifications:
• power supply: 3 1.5V AA batteries (not incl.)
• dimensions: 2.0 x 2.6"

Packaging | Carton /100
EAN code 54 10329 00112 4 | UPC code 8 36479 00707 9

BRAIN GAME
MK159

LEVEL 1 | 3 x AA

Just 4 LEDs and 4 push buttons provide hours of fun. The aim-of-the-game is to repeat a pattern, which is generated at random. The pattern is played both visually and audible or visually only (selectable). It features 4 difficulty levels, which can be selected at start-up. The replay speed gradually increases during the game, to make it even more challenging. Low power consumption. Microprocessor controlled. Auto power off.
Features:
• enclosure included
Specifications:
• power supply: 3 1.5V AA batteries (not incl.)
• dimensions: 3.3 x 2.6 x 1.6"

Packaging	Carton /50
EAN code 54 10329 32639 5	UPC code 8 36479 00958 5

SIREN SOUND GENERATOR
MK113

LEVEL 1 | 1 x 9V

Generates 4 different sounds : police siren, fire brigade, emergency vehicle and laser gun. RV1 adjusts sound pitch. On/off switch and PCB speaker included.
Specifications:
• power supply: 9V battery (not incl.)
• dimensions: 2.4 x 1.6"

Packaging	Carton /100
EAN code 54 10329 00113 1	UPC code 8 36479 00708 6

LOW VOLTAGE LIGHT ORGAN
MK114

LEVEL 1

Operates at safe voltage level. Makes lamps flash to the rhythm of the music. Usable for halogen bulbs. Optically isolated speaker input. Adjustable sensitivity. Can be used in the car, if the lamps are isolated from the chassis.
Specifications:
• input sensitivity: 2W to 60W
• maximum load: 50W / 12V or 100W / 24V
• power supply: 12V to 24V DC or AC
• dimensions: 1.8 x 3.5"

Packaging	Carton /100
EAN code 54 10329 00114 8	UPC code 8 16353 01095 1

POCKET VU METER
MK115

LEVEL 1 | 1 x CR2032

Surprise your friends in the disco. 5 red LEDs. Incorporated microphone. Adjustable sensitivity.
Specifications:
• power supply: 3V type CR2032 battery (not incl.)

Packaging	Carton /100
EAN code 54 10329 00115 5	UPC code

POCKET VU METER IN ENCLOSURE
MK146

LEVEL 2 | 1 x CR2032

Features:
• LEDs move to the rhythm of the music
• surprise your friends in the disco
• incorporated microphone
• adjustable sensitivity
Specifications:
• power supply: 3V type CR2032 battery (not incl.)
• on/off switch
• 5 LEDs
• designer enclosure
• dimensions: 3.4 x 1.97 x 0.99"

Packaging	Carton /100
EAN code 54 10329 31288 6	UPC code 8 16353 01073 9

FM RADIO
MK118

LEVEL 2

Features:
• double fun: building and listening !
• easy to assemble: no coils to wind
• one single adjustment
• pre-assembled and tested FM front end
• receives the complete FM band: 88-108 MHz
• with ON/OFF switch, volume control and LED indicator
Specifications:
• power supply: 12V DC / 100mA (adaptor jack provided)
• dimensions: 4.8" x 3.3"

Packaging	Carton /100
EAN code 54 10329 00118 6	UPC code 8 36479 00651 5

ROULETTE
MK119

LEVEL 1 | 3 x AA

37 LEDs. Spinning sound. 'Winner'-tune for each color. Spins LEDs between games. Pushbutton operation. Microprocessor technology.
Specifications:
• auto power-off
• low power consumption
• power supply: 3 AA battery operation (not incl.)
• dimensions: Ø3.6 x 1.3"

Packaging	Carton /100
EAN code 54 10329 32067 6	UPC code 8 36479 00658 4

IR LIGHT BARRIER
MK120

LEVEL 2

Applications : announce visitors, warn against burglars, set boundaries, for science projects,...
Specifications:
• audible (85dB) and visible (LED) alert
• range: 3.3ft to 13ft
• on/off switch provided
• power supply:
  - transmitter: 9V DC / 50mA max.
  - receiver: 9V DC / 20mA max.
  - 9V battery holder and adapter jack included
• dimensions:
  - transmitter: 2.2 x 1.6"
  - receiver: 3.9 x 2.0"
• not recommended for outdoor use

Packaging	Carton /100
EAN code 54 10329 33301 0	UPC code 8 36479 00709 3

CLASSIC TV GAME
MK121NTSC

LEVEL 2 | 3 x AA

One player mode : four difficulty levels, to select a level hold one of the move buttons then press RESTART. Two player mode : press RESTART. Press both move buttons to "smash" or to start serve. Only the server can score points.

Features:
• video and audio output
• adjustable brightness
• auto power off
Specifications:
• power supply: 3 1.5V AA batteries (not incl.)
• dimensions: 2.9 x 5.5"

Packaging | Carton /100

EAN code	UPC code
54 10329 30800 1	8 36479 00710 9

83 LED ANIMATED BELL
MK122

LEVEL 1 | 1 x 9V

No need to remove battery when using external supply. 12V operation possible for use in cars, trucks. On/off switch included.
Specifications:
• power supply: 9 to 12V DC adapter or 9V alkaline battery (not incl.)
• recommended adapter: -
• dimensions: 3.4 x 3.3"

Packaging | Carton /100

EAN code	UPC code
54 10329 00122 3	8 16353 01001 2

ROLLING CLOCK
MK123

LEVEL 2

Nicely animated rolling time and date display. Graphic display with 35 LEDs. Select hours, minutes, month or day with SELECT and enter the values with SET. Time display in 12h-mode (24h-mode when setting clock). Fine-tune the clock by turning CV1.
Specifications:
• power supply: 9-12V DC adapter or car battery
• current consumption: 20mA max.
• backup battery: 9V block type 6LR61 / 6F22
• dimensions: 1.8/3.5 x 2.6"

Packaging | Carton /100

EAN code	UPC code
54 10329 33302 7	8 36479 00712 3

ROLLING MESSAGE
MK124

LEVEL 2

Create your own moving message. 35-LED graphic display. Max. 16 characters. Adjustable scrolling speed. Press "SET" to change a particular character. Press the up or down-key to select a character and end with the "<"-sign. Display standby function: press "Stby" (press RUN to restart)

scrolling direction
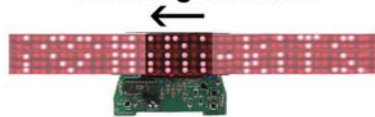
Specifications:
• power supply: 9-12V DC adapter or car battery
• current consumption: 20mA max. / 4mA standby
• backup battery: 9V block type 6LR61/ 6F22
• dimensions: 1.8/3.5 x 2.6"

Packaging | Carton /100

EAN code	UPC code
54 10329 33303 4	8 36479 00878 6

LIGHT SENSITIVE SWITCH
MK125

LEVEL 2

Switch-on at dusk, turn off at dawn, fully automatic.
Features:
• wide-range adjustable sensitivity
• delay circuit avoids cycling
Specifications:
• relay output: NO/NC 24V/5A max.
• power supply: 12V DC
• with adapter-connector
• dimensions: 2.6 x 2.0"

Packaging | Carton /100

EAN code	UPC code
54 10329 00125 4	8 36479 00713 0

CAR ALARM SIMULATOR
MK126

LEVEL 2

LED with 'realistic-appearing' flash sequence simulates active car alarm system.
Features:
• activates automatically when the engine is turned off
• easy to install, just two wires to connect
• adjustable sensitivity
Specifications:
• low current consumption: 12mA max. (12V only)
• comes complete with pre-wired LED-holder and two warning labels
• dimensions: 2.3 x 1.8"

Packaging | Carton /100

EAN code	UPC code
54 10329 00126 1	8 36479 00998 1

RUNNING MICROBUG
MK127

LEVEL 2 | 2 x AAA

Attractive bright colored bug-shaped miniature robot. The microbug is always hungry for light, it drives towards it !
Features:
• two open chassis sub-miniature motors
• adjustable light-sensitivity suits almost any light condition and allows to control it's 'bug-like' behavior
• LED 'eyes' indicate driving direction
• stops in total darkness
Specifications:
• power supply: 2 1.5V AAA batteries (not incl.)
• dimensions: 4.0 x 2.4"

Packaging | Carton /100

EAN code	UPC code
54 10329 00127 8	8 36479 00714 7

CRAWLING MICROBUG
MK129

LEVEL 2 | 2 x AAA

Attractive bright colored bug-shaped miniature robot. The microbug is always hungry for light, it drives towards it.
Features:
• two open chassis sub-miniature motors
• adjustable light-sensitivity suits almost any light condition and allows to control it's 'bug-like' behavior
• adjustable speed
• choose between two different walks
• LED 'eyes' indicate driving direction
• stops in total darkness
Specifications:
• power supply: 2 1.5V AAA battery operation (not incl.)
• dimensions: 4.3 x 3.5"

Packaging | Carton /100

EAN code	UPC code
54 10329 00129 2	8 36479 00715 4

CRAWLING MICROBUG
MK165

LEVEL 2 | 2 x AAA

Attractive bug-shaped miniature robot. The microbug is always hungry for light, it drives towards it.
Features:
• two open chassis sub-miniature motors
• adjustable light-sensitivity suits almost any light condition and allows to control it's 'bug-like' behavior
• adjustable speed
• choose between two different walks
• LED 'eyes' indicate driving direction
• stops in total darkness
Specifications:
• power supply: 2 1.5V AAA battery operation (not incl.)
• dimensions: 5.2 x 3.5 x 2.0"

Packaging | Carton /78

EAN code	UPC code
54 10329 32640 1	8 36479 00975 2

KITCHEN TIMER
MK128

LEVEL 3 | 3 x AAA

1 minute to 1 hour timing. Single button, straightforward operation. Clear 16-led readout. Audible and visible alarm with discrete pre-alarm. Auto power-off. Attractive designer enclosure.
Specifications:
- μcontroller technology
- settings:
  - 1-10': one minute steps
  - 10-30': five minute steps
  - 30-60': 15 minute steps
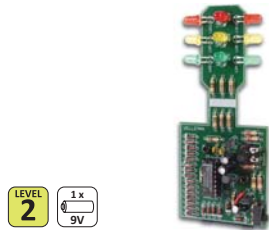- basic accuracy: better than 5%
- power supply: 3 AAA 1.5V batteries (not incl.)
- power consumption: 10mA typ.
- dimensions: 3.1 x 3.0 x 1.3"

Packaging | Carton /100

EAN code 54 10329 00128 5 | UPC code 8 16353 01054 8

TRAFFIC LIGHT
MK131

LEVEL 2 | 1 x 9V

Miniature traffic light as used on four-way junctions. Realistic operation with adjustable delay. 12 LEDs. Great for model railroads, exhibitions, as a toy, ...
Specifications:
- low power consumption: 15mA
- power supply: 9V battery (not incl.)
- ON/OFF switch
- dimensions: 2 x 1.4 x 4.5"

Packaging | Carton /100

EAN code 54 10329 32518 3 | UPC code 8 36479 00716 1

CABLE POLARITY CHECKER
MK132
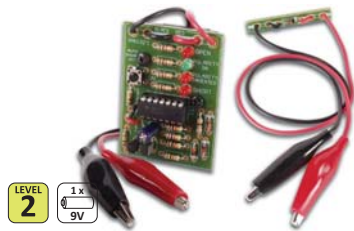
LEVEL 2 | 1 x 9V

Check cables for continuity and identify individual wires. Ideal for speaker cable polarity checking. LED indication for open circuit, shorts and correct or wrong polarity. Pushbutton operation with auto power off.
Specifications:
- low power consumption: 10mA max.
- power supply: 9V battery operated (not incl.)
- dimensions:
  - main board: 2.2 x 1.6 x 1.3"
  - remote board: 1.6" x 0.3"

Packaging | Carton /100

EAN code 54 10329 00132 2 | UPC code 8 36479 00973 8

QUIZ TABLE
MK133
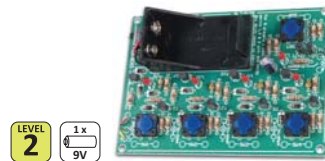
LEVEL 2 | 1 x 9V

Up to four players can compete. LED indicates first button pushed. Quizmaster 'RESET' -button with 'button pushed'-indication. Two units can be daisy-chained for eight-player-fun !
Specifications:
- with on-off switch
- power supply: 9V battery (not included)
- dimensions: 4.3 x 3.1 x 1.1"

Packaging | Carton /100

EAN code 54 10329 00133 9 | UPC code 8 36479 00988 2

STEAM ENGINE SOUND GENERATOR WITH WHISTLE
MK134

LEVEL 2 | 1 x 9V

Generates sound of a vintage steam engine. Adjustable 'speed' and volume. Great for model railroads, radio plays, stage, as gadget. With 'steam whistle'-push button.
Specifications:
- power supply: 9V battery (not incl.)
- comes with 8 ohm/0.5W miniature speaker
- dimensions: 3.9 x 3.3"

Packaging | Carton /100

EAN code 54 10329 00134 6 | UPC code 8 36479 00938 7

ELECTRONIC DECISION MAKER
MK135

LEVEL 2 | 1 x 9V

Helps making difficult YES or NO decisions. Ideal for the indecisive. Simply push the button to start flashing of YES/NO LEDs. Flashing speed gradually decreases and finally one LED remains lit.
Specifications:
- low power consumption: 1μA idle / 8mA in-use
- auto power-off
- power supply: 9V battery operated (not incl.)
- dimensions: 2.2 x 1.2 x 1.4"

Packaging | Carton /100

EAN code 54 10329 32831 3 | UPC code 8 36479 00879 3

SUPER STEREO EAR
MK136

LEVEL 2 | 3 x AA

Stereo audio amplifier boosts sound 50 times. Great for the-hearing impaired (e.g. when watching TV), as a gadget, science project, ... With volume control and on/off switch.
Specifications:
- power supply: 3 1.5V AA battery (not included)
- dimensions: 2.4 x 2.1 x 1.7"

Packaging | Carton /100

EAN code 54 10329 00136 0 | UPC code 8 36479 00717 8

IR REMOTE CHECKER
MK137
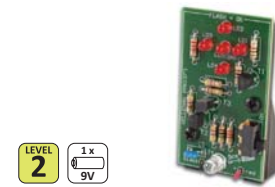
LEVEL 2 | 1 x 9V

The easy way to check your IR remote for proper operation. Simple operation : point the remote at the sensor and push any button. 4 flashing LEDs indicate remote operation.
Specifications:
- low power consumption
- power supply: 9V battery (not incl.)
- dimensions: 2.2 x 1.2 x 1.3"

Packaging | Carton /100

EAN code 54 10329 00137 7 | UPC code 8 16353 01025 8

THERMOSTAT
MK138

LEVEL 2

General purpose low-cost thermostat with NTC temperature sensor. Output relay with LED-indicator.
Features:
- also available as completely mounted module VM137
Specifications:
- temperature range: 41°F to 86°F approx.
- relay power rating: 24V DC/AC 3A
- power supply: 12V DC / 100mA
- dimensions: 2.1 x 2.4 x 1.1"

Packaging | Carton /100

EAN code 54 10329 00138 4 | UPC code 8 16353 01052 4

CLAP ON/OFF SWITCH
MK139

LEVEL 2

Features:
• operate your lighting with a simple handclap
• ideal for disabled or elderly people
• good immunity against surrounding noises
• '1-clap' or '2-clap'-mode selection
• '2-clap'-mode features built-in safety turn-off timer (5h approx.)
• output relay 'pulse' or 'toggle' selection
• microprocessor controlled
• output relay with LED-indicator
Specifications:
• relay power rating: 24V DC/AC 3A
• power supply: 12V DC / 150mA
• with DC adapter socket
• dimensions: 3.1 x 2.9 x 0.9"

Packaging | Carton /100
EAN code 54 10329 00139 1 | UPC code 8 16353 01053 1

KARAOKE
MK140

LEVEL 2 | 1 x 9V

Features:
• sing along with your favorite music
• hook-up the unit between your CD-player, MD-player or any other line-level source and your amplifier
• RCA (cinch) input and output sockets
• with 1/4" microphone jack, fits most microphones
• adjustable microphone level
• "vocal reduction"-switch reduces original vocals on most stereo recordings
• on/off switch and LED power indicator
Specifications:
• power supply: 9V battery (not incl.)
• low power consumption: 16mA typ.
• dimensions: 3.9 x 3.3 x 1.0"

Packaging | Carton /100
EAN code 54 10329 00140 7 | UPC code

HALLOWEEN PUMPKIN
MK145

LEVEL 2 | 1 x 9V

Features:
• 25-LED bright-colored pumpkin-shape Halloween gadget
• random flash effect simulates flickering candle
• 1 extra high intensity yellow LED illuminates the pumpkin
• on/off switch
Specifications:
• power supply: 9V battery (not incl.) / 20mA
• dimensions: 4.0 x 3.2 x 1.3"

Packaging | Carton /100
EAN code 54 10329 00145 2 | UPC code 8 36479 00999 8

DUAL WHITE LED STROBOSCOPE
MK147

LEVEL 1 | 1 x 9V

Features:
• two super bright white LEDs
• powerful flash effect
• great for party's, in scale models, as attention grabber, to observe moving parts, etc...
• slow/fast selector and speed adjust trimmer
• speed adjustable between approx. 1 and 60 flashes/second
• on/off switch
Specifications:
• power supply: 9V battery (not incl.)
• power consumption: 40mA max.
• dimensions: 2.2 x 1.3 x 1.6"

Packaging | Carton /100
EAN code 54 10329 00147 6 | UPC code 8 36479 00719 2

DUAL SUPER BRIGHT FLASHING RED LIGHTS
MK148

LEVEL 1 | 1 x 9V

Features:
• two super bright red LEDs
• very powerful flash effect
• for emergencies, warning signs, as eye-catcher, 'alarm-active' - simulation, etc ...
• 'Auto turn-on at dark' - mode with adjustable sensitivity
• on/off switch
Specifications:
• power supply: 9V battery (not incl.) (12V possible)
• dimensions: 2.2 x 1.3 x 1.6"

Packaging | Carton /100
EAN code 54 10329 00148 3 | UPC code 8 36479 00720 8

WHITE LED FLASHLIGHT
MK143

LEVEL 2

Features:
• white LED technology
• 2 high-power LEDs (4500mcd)
• LED life: > 100.000h (more than 11 years at a stretch !)
• low power consumption
• runs up to 10 hours on a single battery (test conditions : 15s ON, 60s OFF continuous for 7 hours/day)
• automatic battery management for efficient use of battery power
• built-in strobo effect for emergencies. Can also be used as an attention grabber, ...
Specifications:
• power supply: 12V e.g. V23GA, GP23GA, etc... (battery not included)
• dimensions: 2.4 x 1.6 x 0.6"
• weight: 1.1oz. (with battery)

Packaging | Carton /100
EAN code 54 10329 23394 5 | UPC code 8 16353 01077 7

LOVE TESTER
MK149

LEVEL 2 | 1 x 9V

Features:
• check your love life !
• each partners holds one end of the PCB, then they join hands, watch the meter go ...
• great fun at parties, among friends, etc...
• 10-LED readout plus audible 'love-level'-indication
• flashing LEDs indicate you're a red-hot lover
• wide sensitivity range covers the entire spectrum, from the cool to a steaming Latin lover!
• power switch included
Specifications:
• power supply: 9V battery (not included)
• dimensions: 4.1 x 3.1 x 0.98"

Packaging | Carton /100
EAN code 54 10329 00149 0 | UPC code 8 36479 00525 9

SMD FLASHING HEART
MK144

LEVEL 2

Features:
• miniature size gadget
• 6 LEDs flash alternately
• can be operated pending (e.g. around the neck) or can be worn as a badge (pin supplied)
• great attention grabber
• ideal introduction to SMD (Surface Mounted Device) technology
• some extra parts are supplied, in case some get lost or damaged
Specifications:
• power supply: 3V Li button cell (e.g. CR2025 or CR2032) (not included)
• power consumption: 5mA approx.
• dimensions: 1.9 x 1.7 x 0.3"

Packaging | Carton /100
EAN code 54 10329 21627 6 | UPC code 8 36479 00524 2

SMD HAPPY FACE
MK141

LEVEL 2

Features:
• miniature size gadget
• 2 LEDs flash alternately
• great as attention grabber
• ideal introduction into SMD (Surface Mounted Device) technology
• some extra parts are supplied, in case some get lost or damaged
Specifications:
• power supply: 3V Li button cell (e.g. CR2025 or CR2032)
• power consumption: 5mA approx.
• dimensions: Ø1.1 x 0.3"

Packaging | Carton /100
EAN code 54 10329 23392 1 | UPC code 8 36479 00718 5

SHAKING DICE
MK150

LEVEL 1

Features:
- no push buttons required, just give it a shake
- rolls out slowly and flashes last combination
- microprocessor-controlled
- auto power-off

Specifications:
- power supply: 3V-battery (CR2025 or CR2032) (not incl.)
- dimensions: 1.4 x 1.4 x 1.3"

Packaging	Carton	/100
EAN code 54 10329 00150 6	UPC code 8 36479 00989 9	

DIGITAL LED CLOCK
MK151

LEVEL 2

Features:
- clock with red 7-segment displays in an attractive enclosure
- automatic time base selection (internal or net-frequency controlled 50/60Hz) Internal time base with fine-tuning adjustment
- internal time base with fine-tuning adjustment
- select 12h- or 24h-mode for the time display
- equipped with backup battery (3 x AA) in case of power failure
- clock still displays the time in case of power failure

Specifications:
- power supply: 9V AC/DC
- dimensions: 3.6 x 1.8 x 4"
- recommended adapter: -

Packaging	Carton	/100
EAN code 54 10329 23447 8	UPC code 8 36479 00961 5	

SPINNING LED WHEEL
MK152

LEVEL 1 — 1 x 9V

Features:
- 10-LED spinning wheel
- push the button to start spinning action
- spinning speed gradually decreases
- finally it stops and one LED remains lit
- auto power-off
- low power consumption

Specifications:
- power supply: 9V battery (not included)
- dimensions: Ø2.6 x 1.3"

Packaging	Carton	/100
EAN code 54 10329 21628 3	UPC code 8 36479 00880 9	

JUMBO SINGLE DIGIT CLOCK
MK153

LEVEL 1

Features:
- gadget clock
- time is displayed as a sequence of digits
- bright 57mm jumbo red 7-segment display
- complete with attractive enclosure
- single button operation
- 'blank display' function

Specifications:
- 12h system
- accuracy: 30ppm
- power supply: DC 9-12V / 150mA max.
- dimensions: 2.9 x 2.3 x 1.3"

Packaging	Carton	/50
EAN code 54 10329 31869 7	UPC code	

MAGIC MESSAGE
MK155

LEVEL 1 — 2 x AAA

Features:
- amaze your friends: wave the wand to make the message appear
- the message seems to be floating in the air...
- lots of built-in messages + enter your own 7-character message
- applications: novelty gadget, in emergencies, at concerts or TV-shows, to welcome people, etc...
- excellent visibility due to high intensity red LEDs
- low power consumption
- auto power-off

Specifications:
- power supply: 2 x AAA batteries (not incl.)
- dimensions: 6.4 x 1 x 0.9"

Packaging	Carton	/100
EAN code 54 10329 00155 1	UPC code 8 36479 00721 5	

LCD MINI MESSAGE BOARD
MK157

LEVEL 2 — 2 x AAA

Features:
- miniature message board with 16 character 1 line LCD display
- message scrolls from right to left with adjustable speed
- applications: at exhibitions, for advertising, to greet visitors at the front door, as name tag, ...
- 46 character message memory
- possibility to add pauses during scrolling

Specifications:
- power supply: 2 AAA battery (not incl.)
- dimensions: 3.9 x 1.5 x 1.3"

Packaging	Carton	/100
EAN code 54 10329 21704 4	UPC code 8 16353 01089 0	

REMOTE CONTROL VIA GSM MOBILE PHONE
MK160

comes without gsm

LEVEL 2

Features:
- turn equipment on and off at any location via GSM mobile phone
- applications: turn on lighting, heating, open your gate, simulate presence, control animal feeders, activate car alarm, etc...
- ring detection circuit avoids phone charges
- no need to open or modify phone, no physical connection to mobile phone
- works with most GSM mobile phones

Specifications:
- dual operation mode: on/off toggle or on with auto turn-off timer
- timer settings: 0.5s, 2s, 30s, 1 min, 5 min, 15 min, 30min and 1 hour
- NO/NC 3A relay output
- power supply: 12Vdc / 100mA
- dimensions: 4 x 1.7 x 0.9"

Packaging	Carton	/100
EAN code 54 10329 23400 3	UPC code 8 36479 00936 3	

2-CHANNEL IR REMOTE RECEIVER
MK161

LEVEL 2

Features:
- two channels with relay output (24VAC/DC 1A max.)
- ultracompact mode
- channel and reception indication through LEDs
- toggle / pulse selection for each channel
- learn mode for channel ID
- all settings are stored in EEPROM
- compatible with most Velleman Kit IR remotes: MK162, K6710, K8051, K8049

Specifications:
- power supply: 12V DC
- power consumption: 75mA max.
- dimensions: 1.7 x 1.9 x 0.6"

Packaging	Carton	/100
EAN code 54 10329 25094 2	UPC code 8 36479 00972 1	

2-CHANNEL IR REMOTE TRANSMITTER
MK162

LEVEL 2

Features:
• compact 2-button IR keychain remote
• compatible with most Velleman IR receivers
• 2 powerful IR LEDs for a range of up to 15m (indoors)
• 16 channels (allow use of multiple transmitters in one room)
• easy channel configuration, no jumpers required
• 'Transmit'-LED
Specifications:
• power supply: 12V (e.g. V23GA / GP23GAC, etc...) (not incl.)
• dimensions: 2.3 x 1.6 x 0.5"

Packaging	Carton /100
EAN code 54 10329 25097 3	UPC code

ANIMATED LED SMILEY
MK175

LEVEL 2 | 3 x AAA |

Features:
• choice of expressions to suit every mood!
• choose between static or animated expressions
• great as desktop mood indicator or attention grabber
• complete with enclosure
• On/off/expression select button at the back
• Auto power-off: ± 1 hour
Specifications:
• power supply: 3x AAA battery, ex. LR03
• power consumption: 15mA
• dimensions: 3 x 3 x 1.28"

Packaging	Carton /50
EAN code 54 10329 38769 3	UPC code 8 36479 00918 9

LED CHEVRON ARROW
MK176

LEVEL 2 | 1 x 9V |

This chevron type arrow features different animations. Rolling, scrolling, inverse scrolling, blinking, partial blinking etc... Great for indication purposes or advertisement and attention grabber.

Features:
• 28 LED's are used for the animation
• adjustable animation speed
• supply: external supply or battery operation
• optimised circuit for long battery life
• front panel included for easy fixation
• speed and animation are selectable though the front panel
• on board on / off switch
• 10 different animation effects
• memory for the last set animation
Specifications:

• 28 bright 3mm RED LED's
• power supply: 9 to15Vdc or 9V battery (not included)
• current consumption: 10 to 40mA @ 9V
• dimensions: 2.5 x 5.12 x 0.63"

Packaging	Carton /50
EAN code 54 10329 39177 5	UPC code

DING DONG
MK177

LEVEL 2

Features:
• classic 'ding dong'-sound
• plays 'dingdong'-sequence twice when triggered
• early retrigger prevention
• attractive, compact design
• speaker included
• on-board pushbutton
• input for external pushbutton
• low power consumption
Specifications:
• 8 ohmspeaker
• power supply: 9VDC bat.
• current consumption:
  - idle: <1μA
  - active: 55mA
• dimensions: 2.75 x 3.8 x 1.2"

Packaging	Carton /50
EAN code 54 10329 39545 2	UPC code

MODULES

0 ... 10VDC CONTROLLED DIMMER
VM165 **NEW**

Features:
• brightness control using DC voltage
• galvanic isolated input
• suitable for incandescent lamps, mains voltage halogen lighting and low voltage halogen lighting in combination with a conventional trans-former.
• transformer protection in case of defective light sources.
• LED status indicators
• can be used with our computer interfaces: K8061 (kit) or VM140 (assembled)
Specifications:
• adjustment voltage of 0 to 10Vdc or 1 to 10Vdc (max 2mA)
• suppression of radio & TV interference according to EN55015
• power supply: 115 or 230VAC- 50/60Hz
• max. load: 500W@ 230V or 250W@115V
• max. phase shift with inductive load: 30°
• standard DIN-rail housing: 4 modules
• dimensions: 3.5 x 2.8 x 2.3"
• weight: 7.76 oz

Packaging	Carton
EAN code 54 10329 42758 0	UPC code

PROXIMITY CARD READER
VM179 **NEW**

Features:
• store up to 25 tags
• excellent security: 64-bit coded
• Unlimited # of tags in low-security mode
• two tags supplied (card-type)
• Easy addition and removal of tags
• Output activation: 0.5s to 4min or toggle (ON/OFF)
• detection board can be mounted away from the main board (up to 5m) for higher security
• applications:
  - open doors, fences, gates, etc...
  - arm/disarm security systems in homes / offices / vehicles etc...
  - Prevent unauthorised use of equipment, machinery, computer systems etc...
  - automate cat doors...
• options:
  - HAA86C/TAG: optional acces card
  - HAA86C/TAG2: optional acces badge
Specifications:
• EM4100 compatible
• relay output: max. 3A/24V
• power supply: 12VDC/100mA
• dimensions: 66x62x20mm / 2.6x2.4x0.8"

Packaging	Carton
EAN code 54 10329 42866 2	UPC code 8 16353 01050 0

1S - 60H PULSE-PAUSE TIMER
VM188

NEW

Features:
• wide timing range
• easy time setting
• start with:
  - 'pulse'
  - 'pause'
• single shot
• loop
• applications:
  - blinking of lights
  - pulsed operation of buzzers
  - automatic irrigation
  - lawn sprinklers
  - toilet flushing or ventilation
  - battery charging time control
  - cyclic operation of equipment
Specifications:
• power supply: 12-24VDC
• relay output: 16A/230VAC max.
• dimensions: 80x45x22 mm / 3.15 x 1.78 x 0.86"

Packaging | Carton

EAN code 54 10329 44395 5   UPC code 8 16353 01064 7

8-CHANNEL USB RELAY CARD
VM8090

NEW

LEVEL 5

Eight relay channels controlled by your computer!
Use your computer USB port to connect to the outside world
Connect up to 16A to each of the high power relays.
Comes complete with VDR noise suppressors, on-board push buttons can be used to test/operate all the relays. A DLL for own software development can be downloaded from our web site.
Test software completes the package.

Features:
• manual operation for toggle, momentary or timer operation (selectable through software)
• timer settings up to 18 hours (DLL function)
• optional open collector connectivity (push button simulation
• DLL for own software development (download only)
• event-driven and open protocol
• two way PC communication (USB Event return)
• transient suppression VDR (type VDR300) for use with inductive loads
• LED indication for power and relay action
• minimum system requirements:
  - PC running USB compatible Windows version
  - USB1.1 and USB2.0 full speed compatible
  - internet connection for software download
• optional DIN rail enclosure: B8006 (Note: cut out the USB connector)
Specifications:
• power supply for relays: 9-10Vac or 12 to 14Vdc (500mA), example: PS1205
• 8 high-power relays: 16A each (resistive load)
• dimensions: 160 x 107 x 30mm / 6.3 x 4.2 x 1.2"

Packaging | Carton

EAN code 54 10329 43099 3   UPC code

MP3 PLAYER BOARD
VM8095

NEW

Create your own home audio system, jukebox, jingle player, audio messages, sound effects, ... MP3, where you want and how you want it!

Features:
• SD card operation (SD card not included)
• high-quality VLSI decoder
• 7 user definable preset buttons with external connection
• play-pause, next, previous, search
• volume control
• random and shuffle
• 8 different preset sound modes
• 6 play modes: All, Folder, At power-on...
• on-board infrared receiver
• on-board power amplifier
• line or phones output: 3.5mm jack
• direct stereo speaker output: 3.5mm jack
• mono operation is possible
• optional:
  - RF receiver module: RX433N
  - power adaptor: PSS1215
  - RF remotes: for EU and US
    · 8-Channel RF remote transmitter: VM118R (mounted)
    · 8-channel RF remote control: K8058 (Kit-version)
  - RF remotes: only for EU
    · 4-channel desktop transmitter: VM160DT
    · 4-channel transmitter: VM160T
  - IR remotes:
    · 15-channel IR transmitter: K8049 (Kit-version)
Specifications:
• suitable for SD and SDHC cards
• tested up to 32GB cards
• supports ID3 TAG information: Title, Artist Name, Album Name and Year are displayed on the 2-line 16 char. LCD
• supports folders to one level deep
• up to 1024 folders, each containing up to 16384 songs
• equalizer settings: Flat , Loudness, Heavy, Clear, Soft, Disco, Live and Hall
• decodes MP3 (MPEG 1.0 & 2.0 audio layer III (CBR, VBR, ABR), Till 320kbit/s. Fraunhofer IIS and Thomson licensed
• amplifier: 2x 5Wrms @ 4ohm
• power supply: 12Vdc/1A
• dimensions: 132 x 62mm / 5.2 x 2.45"

Packaging | Carton

EAN code 54 10329 45318 3   UPC code 8 16353 01102 6

200W POWER AMPLIFIER MODULE
VM100

Features:
• excellent value for money
• fully discrete design using Epitaxial Darlington transistors
• DC supply circuit on board with LED indication
• ideal for active speaker system or subwoofer, guitar amp, home theatre systems, instrument amp, etc.
• comes fully adjusted and tested
• overload and short-circuit protection

Specifications:
• 200W music power @ 4 ohm load
• 100Wrms power @ 4 ohm load
• 70Wrms power @ 8 ohm load
• distortion: 0.02% @ 1KHz/10W
• damping factor: >800
• frequency response: 3Hz to 200KHz (-3dB)
• sensitivity: 0.6Vrms
• signal to noise ratio: 115dB
• power supply: 25-30Vac 120VA
• PCB dimensions: 4.2 x 2.44" (approx.)
• recommended power transformer:
  - 230VAC input, 2 x 30VAC output: 12030
  - 115 / 230VAC input, 2 x 25VAC output: TR8040 (output power reduced by ±15%)

Packaging | Carton /25

EAN code 54 10329 33585 4   UPC code 8 16353 01106 4

USB INTERFACE CARD MODULE
VM110N

NEW

The VM110N interface board has 5 digital input channels and 8 digital output channels. In addition, there are two analogue inputs and two analogue outputs with 8 bit resolution. The number of inputs/outputs can be further expanded by connecting more (up to a maximum of four) cards to the PC's USB connectors. All communication routines are contained in a Dynamic Link Library (DLL) K8055D.DLL. You may write custom Windows (2000, XP, Vista, Windows 7) applications in Delphi, Visual Basic, C++ Builder or any other 32-bit Windows application development tool that supports calls to a DLL. Source code for Visual Basic , Visual C++, Visual C#, Excel, Delphi and Borland C++ Builder included.
Features:
• minimum system:
  - Pentium class CPU
  - USB1.1 or higher connection
  - Windows XP or higher
  - CD ROM player and mouse
• DIAGNOSTIC / TEST SOFTWARE:
  - separate output / input test7
  - clear all / set all function
  - counter function on inputs 1 and 2 with adjustable debounce (max 2KHz depends on total I/O load)
  - analog output set sliders
  - analog input bar-graph indication
• 100% compatible with: VM110 & K8055
Specifications:
• 5 digital inputs (0= ground, 1= open) (on board test buttons provided)
• 2 analog inputs with attenuation and amplification option (internal test +5V provided)
• 8 digital open collector output switches (max 50V/100mA) (on-board LED indication)
• 2 analog outputs:
  - 0 to 5V, output resistance 1K5
  - PWM 0 to 100% open collector outputs max 100mA / 40V (on-board LED indication)
• general conversion time: 2ms per command
• power supply: through USB approx. 70mA
• dimensions: 4.3 x 3.2"

Packaging | Carton

EAN code 54 10329 45401 2   UPC code 8 16353 01108 8

PIC® PROGRAMMER AND EXPERIMENT BOARD
VM111

Suitable for programming Microchip® FLASH PIC(tm) microcontrollers.
Features:
• supports 4 different 300 mil. PICs: 8p, 14p, 18p and 28p
• test buttons and LED indicators to carry out educational experiments, like with the enclosed programming examples
• easily connectable to a PC through the serial port
• enclosed is a Flash Microcontroller (PIC16F627) that can be reprogrammed up to 1000 times for experimenting at will
• software to compile and program your source code is included
Specifications:
• power supply: 12 or 15V DC, min. 300mA, non-regulated adapter (PS1208USA (115Vac))
• IBM Compatible PC, Pentium or better, with Windows™ 95/98/ME/NT/2000/XP, CDROM and a free serial RS232 port (Cable included, e.g. CW014)
• dimensions: 5.8" x 4.0"

Packaging	Carton /34
EAN code 54 10329 30585 7	UPC code 8 16353 01074 6

PERSONAL ANIMATED BADGE
VM112

1 x CR2032
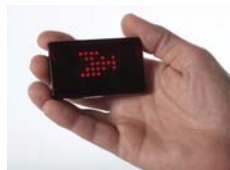
Great for parties, at the disco, advertisements, trade shows, ...

Features:
• create your own graphic animations on a badge
• draw the animation using the supplied software and send the animations to the badge (using RS232)
• 8 animations of 25 frames can be stored in the badge and simply selected
• adjustable animation speed
• two brightness levels
• sample animations supplied
• package includes:
  - RS232 cable
  - manual
  - CD with movie editor software and examples
  - 1 x CR2032 battery

Specifications:
• power supply: 1 x 3.0V CR2032 battery (incl.)
• battery life: more then 50 hours
• dimensions: 3.1 x 1.9"

Packaging	Carton /66
EAN code 54 10329 30833 9	UPC code

ASSEMBLED 7W AMPLIFIER
VM114

This small amplifier is constructed around the TDA2003 IC, capable of delivering 4Wrms at 4ohms. The IC is completely thermally and short-circuit protected. A conventional direct current can be connected as supply.
Features:
• also available in kit version: K4001
Specifications:
• music power output: 7W / 4ohm
• output: 3.5Wrms / 4ohm or 2Wrms / 8ohm
• total harmonic distortion: 0.05% (1W / 1kHz)
• frequency response: 20Hz to 20kHz (-3dB)
• signal-to-noise ratio: 86dB (A weighted)
• input sensitivity: 40mV / 150Kohm
• overload and short-circuit protected
• supply voltage: 15V DC (8 to 18V DC possible) / 0.5A
• dimensions: 2.2 x 1.4"
• -: -
• recommended adapter: PS1208USA

Packaging	Carton /66
EAN code 54 10329 31160 5	UPC code 8 16353 01075 3

USB CONTROLLED DMX INTERFACE
VM116

Features:
• this unit can control DMX fixtures using a PC and USB interface
• test software and "DMX Light Player" software is included, a DLL is provided to write your own software
• furthermore there is a stand-alone test function that outputs all 512 channels at a time, with adjustable levels
• kit includes:
  - nice enclosure
  - USB cable
  - CD with: test software, DLL for own developments, free DMX light player
• also available in kit version: K8062
Specifications:
• connected and powered through USB
• 512 DMX channels with 256 levels each
• 3 pin XLR-DMX output connector
• Windows 98SE or higher compatible
• DLL included to write your own software
• optional 9V battery needed for stand alone test mode
• solid state - fuse protection on DMX output
• dimensions: 4.2 x 4.0 x 1.8"

Packaging	Carton /34
EAN code 54 10329 32863 4	UPC code

8-CHANNEL RF REMOTE CONTROL SET
VM118

3 x AAA

Features:
• 8-channel RF remote control set
• latching or momentary mode for each output
• 8 addresses allow the use of multiple receivers
• 'All clear'- function
• open field range up to 50m / 165ft.
• optional extra transmitter type VM118R
• suited for all kinds of applications such as light control, audio speaker selection, garden applications ...
Specifications:
• TRANSMITTER:
  - power supply: 3 AAA batteries (not incl.)
  - 433MHz operation
  - 8 digitally encoded channels
  - rubber keypad
  - LED function/mode indication
  - dimensions: 5.9 x 2.3 x 0.9"
  - FCC approved ID code: NLO8058
• RELAY RECEIVER CARD:
  - 8 high-quality relay contacts, 5A/230Vac max.
  - relay outputs are transient suppressed using VDR's
  - LED confirmation on each relay contact
  - input power: 12Vac / 500mA
  - recommended housing: ---

Packaging	Carton /25
EAN code 54 10329 33105 4	UPC code 8 36479 00985 1

8-CHANNEL RF REMOTE TRANSMITTER
VM118R

3 x AAA

Features:
• 8 addresses allow the use of multiple receivers
• 'all clear'- function
• open-field range up to 50m / 165ft.
• toggle or momentary mode for each key
Specifications:
• power supply: 3 AAA batteries
• 433MHz operation
• 8 digitalkodade kanaler
• rubber keypad
• LED function/mode indication
• FCC approved ID code: NLO8058

Packaging	Carton /125
EAN code 54 10329 33106 1	UPC code
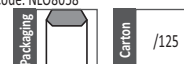
ONE CHANNEL DUAL OUTPUT RECEIVER
VM119

For use with our "VM118R" & "K8074"transmitter
Using multiple receivers of this type in combination with our 8 channel transmitter, will allow you to control remotely up to 8 devices at different places. e.g. Perfectly suited for hide -away control situations, for demonstrations, home use...
A single transmitter key-press activates two independent outputs. Each output can be configured as toggle, pulse or pulse with timer. This allows you

to e.g. Start two different timers, have a pulsed and a timed output, have two galvanically separated outputs, etc

Features:
- easy setup and transmitter 'learning', no jumper settings
- toggle or pulse function selectable per output
- unique feature: dual output
- easy fixation
- pulse function can have turn off timer
- up to 31 different "VM118R" transmitters or transmitter buttons can be stored
- 'All clear'-function
- LED indicators for outputs and functions

Specifications:
- for use with "VM118R" (or "K8058" kit) RF transmitters
- relay contacts NO / NC: 2A max. each
- 433MHz operation
- selectable timers per output: 0.5s, 5s, 30s, 1min, 5min, 15min, 30min and 60min
- open field range of up to 98.4ft possible
- power supply: 9 to 12V AC or DC / 100mA max
- dimensions: 3.14 x 2.75 x 0.98"

Packaging	Carton

EAN code	UPC code
54 10329 33102 3	

10-CHANNEL 12VDC LIGHT EFFECT GENERATOR
VM120

Features:
- 10 x 12V/400mA outputs to control cold-cathode fluorescent lamps (using FLPS adapter), light bulbs, LEDs and "solid state" relays, ...
- for use with advertisement lighting, party lights, eye-catchers, in the disco...
- ten pre-programmed light patterns selectable with a push button
- the number of used channels is adjustable
- the last used lighting effect is saved in non-volatile memory
- adjustable speed
- LED indication for every output
- 12V operation possible for use in cars
- options:
   - adapter: PSS1255 (12V output 5.5A)
   - power supply for cold-cathode fluorescent lamps: FLPS (300mm) or FLPS1 (100mm)
   - cold-cathode fluorescent lamps: FL(xx) - (100 or 300mm)
   - solid-state relays: VR25SS1A or VR3SS1A to drive mains voltage lamps
- also available in kit version: K8044

Specifications:
- power supply: 12V DC
- outputs: 12V DC / 400mA per channel (total : max 4A)
- dimensions PCB: 140 x 100 x 27mm (5.5" x 3.9" x 1.1")

Packaging	Carton /34

EAN code	UPC code
54 10329 33090 3	8 16353 01101 9

15-CHANNEL IR TRANSMITTER
VM121

```
3 x
AAA
```

Features:
- works together with the VM122 15-channel receiver
- allows the use of multiple receivers in one room

Specifications:
- power supply: 3 AAA batteries (not incl.)
- up to 15 channels can be operated
- rubber keypad
- LED function indication
- also compatible with most Velleman IR receiver kits
- range transmitter - receiver: up to 65ft.

Packaging	Carton /74

EAN code	UPC code
54 10329 33103 0	

15-CHANNEL IR RECEIVER
VM122

Features:
- works together with our VM121 transmitter
- 4 different output modes
   - 15 independent outputs
   - 15 radio (rotary simulation) outputs
   - 7 independent outputs & 8 rotary outputs
   - 7 rotary outputs & 8 rotary outputs (independent from each other)
- allows the use of multiple receivers in one room

Specifications:
- power supply: 8 -14VDC or 2x6 to 2x12VAC (150mA)
- 15 open collector contacts: max. 50V/50mA
- transmitter - receiver range: up to 65ft.
- current consumption:
   - all outputs off: 10mA
   - all outputs on: 150mA

Packaging	Carton /100

EAN code	UPC code
54 10329 33104 7	

ULTRASONIC RADAR MODULE
VM125

Features:
- buzzer output: fast / slow / continuous
- distance indication with 3-LED-bar
- adjustable alarm distance
- LED alarm indicator
- dry contact NO/NC relay
- applications: robot projects, object detection, distance measuring, parking aid, security systems

Specifications:
- range: 0.66 ... 8.20ft.
- frequency: 40kHz
- digital output: 5V (50mA max.)
- analog output: 0...5V (5mA max)
- buzzer output: 12V (100mA max.)
- relay contacts: 1A low voltage NO/NC
- power supply: 12VDC
- current consumption: 200mA max.
- dimensions: 4.3 x 2.0 x 0.7"

Packaging	Carton /109

EAN code	UPC code
54 10329 32908 2	

8-CHANNEL RELAY CARD
VM129

The purpose of this card is to convert electronic outputs or contacts to relay contacts.This results in a practical isolation between load and driving circuit. Ideal for use with our computer interface card VM110 or infrared remote control receiver VM122.
The card features high grade input and output connectors.

Features:
- recommended housing: -

Specifications:
- eight high quality relay contacts, 5A/230Vac max
- relay outputs are transient suppressed using VDRs
- LED confirmation on each relay contact
- eight drive inputs to use with open collectors or regular switches
- features 12Vdc / 200mA power output (for VM122 supply)
- power supply: 12Vac / 500mA (including 12V output)

Packaging	Carton /25

EAN code	UPC code
54 10329 33898 5	

DIMMER MODULE FOR ELECTRONIC TRANSFORMER
VM131

Dimming electronic transformers impossible? Not if you have this unit! A processor controlled circuit outputs a wave form that is suited for most dimmable electronic transformers. Can also be used for direct mains voltage lamps.

Features:
- LED status indication
- last dim setting memory
- soft start for increased lamp life
- suppression of radio & TV interference
- suitable for incandescent lamps, mains voltage halogen lighting and low voltage halogen lighting in combination with an electronic transformer
   - Velleman transformer types: HET60N (60W), HET105N (105W)

Specifications:
- operating voltage: 110-125V or 220-240V AC (50/60Hz)
- maximum load: 300W/230V, 0-98% adjustable
- ambient temperature: 5 - 35°C (41 - 95°F)
- dimming cycle speed: +/- 5 sec.
- dimensions: 3.15 x 2.75 x 0.98"

Packaging	Carton /50

EAN code	UPC code
54 10329 35055 0	

UNIVERSAL TEMPERATURE SENSOR
VM132

Features:
- applications:
  - measure indoor and outdoor temperatures
  - monitor heating and/or cooling of rooms, equipment, etc...
  - monitor temperatures in processes
  - put a temperature readout on your website
 - check your pools temperature...

Specifications:
- range: -20°C (-4°F)... +70°C (+158°F)
- output: 0..20mA current loop
- output voltage compliance: 10V
- one single adjustment
- 3-wire system (GND, +V and OUT)
- power supply:
  - 12VDC for 0..5V OUT
  - 15VDC for 0..10V OUT
- current consumption: 30mA max.
- dimensions: 2.17 x 1.38 x 0.59"

Packaging	Carton
	/1

EAN code	UPC code
54 10329 34281 4	

ENERGY SAVER MODULE
VM133

Ever forgot to turn off the light or other appliance ?
With this unit no more worries; It will always turn off your light or small appliance.
Just install it between the wires and it is set!
Different timers can be selected.
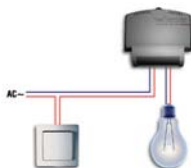
Features:
- automatically turns off your light or small appliance
- different timers selectable
- LED power / timer indication
- easy installation

Specifications:
- input voltage: 110 to 230VAC
- maximum output: 500W (250W inductive load)
- selectable timers: 1h, 2h, 4h or 8h
- dimensions: 3.16 x 2.77 x 0.98"

Packaging	Carton
	/50

EAN code	UPC code
54 10329 35312 4	

PIC™ PROGRAMMER BOARD
VM134

This board can program a wide range of Microchip® PIC™ microcontrollers

Features:
- regularly updated list of microcontrollers through our web site
- onboard configurable 40 pin. ZIF socket
- easy to use programming PICprog2006™ software included
- on board "In Circuit Serial Programming" connector

Specifications:
- power supply: 15V DC, min. 300mA adapter (Ex. PS1508)
- serial port connector: 9 p. SUBD
- dimensions: 5.23 x 2.57 x 0.79"
- minimum system requirements:
  - IBM Compatible PC, Pentium or better
  - Windows™98/ME/ NT/2000/XP/VISTA
  - CDROM drive
  - free serial RS232 port required (*)
- Currently supported controllers (check web site for updates):
  - PIC10F200
  - PIC12C508A
  - PIC12CE518
  - PIC16F54, PIC16F84A, PIC16F27, PIC16F627A, PIC16F628, PIC16F628A, PIC16F 30, PIC16F648A, PIC16F676, PIC16F785, PIC16F870, PIC16F871, PIC16F872, PIC16F873, PIC16F873A, PIC16F874, PIC16F874A, PIC16F876, PIC16F876A, PIC16F877, PIC16F877A
  - PIC18F1220, PIC18F1320, PIC18F2220, PIC18F2320, PIC18F4220, PIC18F4320, PIC18F2221, PIC18F2321, PIC18F2410, PIC18F2420, PIC18F2455, PIC18F2480, PIC18F2510, PIC18F2515, PIC18F2520, PIC18F2525, PIC18F2550, PIC18F2580, PIC18F2585, PIC18F2610, PIC18F2620, PIC18F2680, PIC18F4221, PIC18F4321, PIC18F4410, PIC18F4420, PIC18F4455, PIC18F4480, PIC18F4510, PIC18F4515, PIC18F4520, PIC18F4525, PIC18F4550, PIC18F4580, PIC18F4585, PIC18F4610, PIC18F4620, PIC18F4680

Packaging	Carton

EAN code	UPC code
54 10329 37631 4	

INTERVAL TIMER MODULE
VM136

General purpose pulse - pause timer for various interval timer automations
For intermittent operation of circuits and equipment.

Features:
- blinking light, warning light
- video/photo single frame shooting
- slide projector control
- miniature models applications
- automated testing
- automated aging tests

Specifications:
- output relay with NO / NC contact: 3A
- pulse time adjustable: between 0.5 and 5s
- pause time adjustable: between 2.5 and 60s
- power supply: 12Vdc / 100mA
- dimensions: 1.6 x 3.4"

Packaging	Carton

EAN code	UPC code
54 10329 36324 6	8 16353 01049 4

THERMOSTAT MODULE 5 - 30°C (41 - 86°F)
VM137

Simple low-cost thermostat / temperature controller for various applications.

Features:
- use for frost protection
- heating controller
- automotive applications (fan control)
- temperature regulated fan control (on/off)
- air-conditioning controller
- preset temperature alarm (frost alarm)

Specifications:
- temp. range: 5 to 30°C approx. (41 to 86°F)
- output relay with LED-indicator
- relay power rating: 3A normal open and normal closed contact
- power supply: 12VDC / 100mA
- hysteresis: 1°C (1.8°F)
- dimensions: 2.1 x 2.4 x 1.1"

Packaging	Carton

EAN code	UPC code
54 10329 36329 1	

DMX-CONTROLLED RELAY
VM138

This module allows you to control a relay by means of the well-known DMX512 protocol. This is used to control dimmers, scanners, moving-head spots and other lighting devices with a simple wiring.
In some cases, a simple ON/OFF selection is desired. there is where this module comes in. It is actually a bus-controlled power driver. The relay will be activated when the DMX value of the set channel equals 140 or more and turns off when the value is 120 or less.
Together with our K8062/VM116, a computer-controlled automation will be very easy to build.

Features:
- system addresses: 512 unique addresses, DIP switch settable
- LED indication for power supply, relay output status and error situation
- "Safe DMX data stream" mode reducing interference to a minimum
- "Relay hold" function in case of DMX signal loss
- control: DMX-512, 3-pin XLR plug (incl.)

Specifications:
- switching capacity: 10A (resistive load)
- supply voltage: 12VDC non-regulated
- power consumption: max. 100mA
- dimensions: 4.1 x 2.4 x 1.2"

Packaging	Carton

EAN code	UPC code
54 10329 39835 4	8 16353 01098 2

IR REMOTE CHECKER MODULE
VM139

Features:
- the easy way to check your IR remote for proper operation
- simple operation
- point the remote at the sensor and push any button
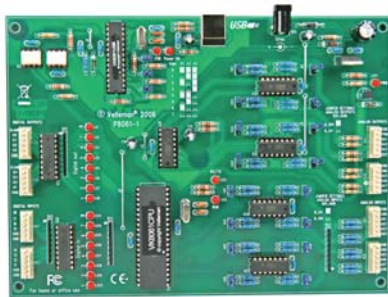- 4 flashing LEDs indicate remote operation
- low power consumption

Specifications:
- power supply: 9V battery (not incl.)
- dimensions: 2.2 x 1.2 x 1.32"

EAN code	Packaging	Carton	UPC code
54 10329 36403 8			

EXTENDED USB INTERFACE BOARD
VM140

This computer interface board has a total of 33 inputs / outputs, including analogue / digital and a PWM output.
The connection to the computer via the USB port is galvanically-optically isolated, so that damage to the computer is impossible thus providing a high level of secure implementation.
All communication routines are contained in a Dynamic Link Library (DLL). You may write custom Windows* Applications in Borland Delphi, Borland C++ Builder, Microsoft Visual Basic, Microsoft VC or most other 32-bit Windows application development tool that supports calls to a DLL.
*Windows XP is a registered trademark of Microsoft Corporation.

Features:
- 8 analogue 10 bit resolution inputs: 0...5 or 10VDC / 20k ohms
- 8 analogue 8 bit resolution outputs: 0...5V or 10VDC / 47 ohms
- 8 digital inputs: open collector compatible (connection to GND=0) with on-board LED indication
- 8 digital open collector outputs (max. 50V/100mA) with on-board LED indication
- one 10 bit PWM output: 0 to 100% open collector output (max 100mA / 40V) with on-board LED indication
- USB port: USB 1.1 & 2.0 compatible

Specifications:
- power consumption through USB port: approx. 60mA
- up to 8 cards can be connected to PC
- power supply through adapter: 12VDC / 300mA (PS1205)
- PWM frequency: 15.6kHz
- command execution time: between 21 and 48ms
- PCB dimensions: 7.68 x 5.59 x 0.79"
- minimum system requirements:
  - Pentium class CPU or higher with free USB port (1.1 or higher)
  - Microsoft Windows 2000 or Windows XP
  - CD-ROM player and mouse

EAN code	Packaging	Carton	UPC code
54 10329 37343 6			

START-STOP TIMER (1s - 60h)
VM141

Features:
- wide timing range
- easy time setting
- LED animation during operation
- on-board START-STOP buttons
- non retriggerable
- power-on trigger is possible
- debounced buffered inputs avoid false triggering
- compact size
- front panel mountable

Specifications:
- adjustable delay: 1s - 60h
- power supply: 12VDC / 100mA
- NO/NC relay: 24VAC/DC 3A max.
- dimensions: 2.8 x 1.8 x 0.8"

EAN code	Packaging	Carton	UPC code
54 10329 37649 9			8 16353 01076 0

MINI PIC-PLC APPLICATION MODULE
VM142

This application module may seem small but is big in performance - all depends on your programming skills.
Now you can create your own custom application without the hassle of making the hardware. All the buffered inputs and outputs are ready-made for you. The module features on-board LED, a relay output and a buzzer.
Make your own automation, controller, car application...
All you need is one of our programmers like vm134 or K8076

Features:
- 9 free programmable I/Os (4 in-, 5 outputs)
- PIC16F630 microcontroller from Microchip® on-board
- LED indication for power supply and relay output
- 1 free programmable LED indication
- on-board mini buzzer for audible signals
- on-board ICSP™ connector for programming
- PIC™ programmer supports PIC16F630

Specifications:
- power supply: 12V DC (unregulated) / 100mA
- 4 inputs (voltage sensing inputs)
- input signal voltage: 5 - 24VDC, @ 4K7
- 4 NPN transistor outputs (open-collector, sink outputs).:
  - transistor output current: max. 100mA each
  - direct 12V relay drive possible (no need for protection diode)
- 1 relay output with NO/NC contact (2A)
- MCU speed: fixed 4MHz internal oscillator
- dimensions: 3.15 x 2.75 x 0.98"

EAN code	Packaging	Carton	UPC code
54 10329 37856 1			

DRIVER MODULE FOR 1W LEDs
VM143/1W

Power up to four 1W high-power LEDs (not incl.) : "L-HP1PWN", "L-HP1R", "L-HP1G", "L-HP1B", "L-HP1Y"

Features:
- delivers accurate constant current required by most high power leds
- high efficiency due to switch mode principle
- built-in rectifier for easy connection to AC source
- compact size
- short circuit protected
- no heatsink required
- also suited as fixed current NiCd/NiMH battery charge circuit
- for home, disco, stage, education, architectural lighting, science projects, ...
- one to maximum four 1W LED's

Specifications:
- 350mA constant current source
- input voltage: 6..12VAC/9-18VDC
- power consumption: 650mA max.
- dimensions: 1.7 x 1.2 x 0.6"

EAN code	Packaging	Carton	UPC code
54 10329 37863 9			

DRIVER MODULE FOR 3W LEDs
VM143/3W

Power up to two 3W high-power LEDs (not incl.) : "L-HP3PWN", "L-HP3RN1", "L-HP3GN", "L-HP3BN", "L-HP3YN"

Features:
- delivers accurate constant current required by most high power leds
- high efficiency due to switch mode principle
- built-in rectifier for easy connection to AC source
- compact size
- short circuit protected
- no heatsink required
- also suited as fixed current NiCd/NiMH battery charge circuit
- for home, disco, stage, education, architectural lighting, science projects, ...
- one or two 3W LED's

Specifications:
- 700mA constant current source
- input voltage: 6..12VAC/9-18VDC
- power consumption: 650mA max.
- dimensions: 1.7 x 1.2 x 0.6"

EAN code	Packaging	Carton	UPC code
54 10329 37864 6			

TELEPHONE RING DETECTOR WITH RELAY OUTPUT
VM144

Features:
• simply connect in parallel with phone line
• powerful led flashes when phone rings
• the unit will feature a relay output if connected to a 12VDC power supply
• relay output: continuous or on/off to the rhythm of ringing of the telephone
• complete with enclosure
• great for noisy environments, for the hearing impaired, as addional ringer, to replace existing ringer, ...
• accepts standard adaptor & telephone plug

Specifications:
• 10.000 mcd led !
• connects to PSTN line
• RJ11 connector
• supply: 12VDC/100mA adapter (Ex. PS1203)
• output Contact (NO): 1A max.
• dimensions: 3.15 x 2.16 x 1.37"

Packaging	Carton

EAN code	UPC code
54 10329 37655 0	

DIGITAL PANEL THERMOMETER WITH MIN/MAX READ-OUT
VM145

Features:
• non-volatile memory for minimum and maximum temperature
• bright red LED read-out
• pre-calibrated sensor
• digital communication between sensor and display unit avoids measurement errors

Specifications:
• wide power supply range:
  - 9 ... 24VDC
  - 7 ... 17VAC
• power and temperature sensor connection via board-to-wire connector (20cm supplied)
• temperature range: -30°C (-22°F) to + 120°C (248°F)
• accuracy:
  - room temperature range: ± 1°C (2°F)
  - full range: ± 2°C (+/- 4°F)
• distance between sensor and display unit: tested up to 10m (33ft)
• current consumption: 40mA maximum
• dimensions:
  - panel module: 2.6 x 1.6"
  - cut-out: 2.1 x 1.5"
  - sensor: 2 x 0.4 x 0.11"
  - mounting depth: 1.65"
• weight: 1.4 oz

Packaging	Carton

EAN code	UPC code
54 10329 38557 6	

RGB LED STRIP EFFECT GENERATOR
VM146

Ideal for use with flexible LED light strips, e.g. LDB1-HS3027AC, CHLS4RGB. Multiply the output power of your Velleman LED controller with VM169 Infosheet: LED controller selection guide

Features:
• suited for both incandescent bulbs and LEDs
• up-down level adjust for each output
• hard transition effects: runnning light, Strobo, Colour loops, etc...
• smooth fade effects: colour change, flame effect, random colours, slow off etc...
• wide-range effect speed adjust
• Hi power MOSFET outputs
• Memory for last selected effect & speed
• easy up/down effect select
• suited for common anode RGB strips

Specifications:
• 256 intensity levels/ch.
• current limit possible (on-board resistor needed)
• LED PWM freq: 82Hz
• power supply: 10-15VDC/9A max. OR 24VDC regulated /3A max. (e.g. PSIN06024)*
• RGB output: 3 x 3A
• dimensions: ± 3.15 x 2.75 x 0.9"

Packaging	Carton

EAN code	UPC code
54 10329 39352 6	

PANEL COUNTER MODULE
VM147

Features:
• very practical for counting parts, people, scorekeeping, ...
• red LED read-out
• 2 inputs: counts up or down
• counting through external pulses or push buttons
• memory function constantly compares the current value with a preset value and activates an output for as long as both are equal or for an adjustable time
• debounce function for stable operation (with low counting frequencies)
• adjustable 'preset': 0000 to 9999
• auto reset when preset value is reached when counting up
  - example if preset= 5: 0000 > 0001 > 0002 > 0003 > 0004 > 0005 > 0000 > 0001 > 0002 > 0003 > 0004 > 0005 > 0000 > 0001 ....
• auto 'load preset' mode when counting down
  - example if preset = 6: 0006 > 0005 > 0004 > 0003 > 0002 > 0001 > 0000 > 0006 > 0005 > 0004 > 0003 > 0002 > 0001 > 0000 > 0006 ....
• comes with board-to-wire connectors (20cm wire)

Specifications:
• counter input: dry contact, connecting to ground
• 'equal'- output: max. 100mA (@ max. 30V) 'open-collector' output
• max. counting speed: 400 / sec. (10 / sec. with debounce delay)
• max. count: 4 digits (0000 to 9999)
• output pulse length: 100 to 900ms or 'as long as equal'
• power supply: 9 to 12VDC (unregulated)
• power consumption: 2 41/64" x 1 19/32"
• dimensions:
  - panel module: 2.63 x 1.6"
  - cut-out: 2.12 x 1.45"
  - mounting depth: 1.65"

Packaging	Carton

EAN code	UPC code
54 10329 39583 4	8 16353 01087 6

PANEL THERMOSTAT MODULE
VM148

NEW

Features:
• general purpose panel mount thermostat
• usable for heating or cooling purposes, (central heating, airco, incubator,...)
• separate output-ON and output-OFF setting (hysteresis)
• direct manual temperature adjustment
• bright red LED read-out
• comes with easy board-to-wire connectors and sensor (20cm wire)
• calibrate option
• under- and overflow indication

Specifications:
• temperature range:
  - °C: -18°C ~ + 60°C
  - °F: 0°F ~ +146°F
• temperature resolution: ± 0.5°C or ± 2°F
• accuracy: +/- 2°C, fine tune till +/- 0,5°C
• readout update interval: 1 second
• relay contact: NO - 3A (max. 230V)
• power supply: 9 - 12V DC
• power consumption: < 70mA
• dimensions:
  - panel module: 67x40.5 mm / 2.6x1.6"
  - cut-out: 54x37 mm / 2.1x1.5"
  - mounting depth: 40mm / 1.6"
  - weight: 1.76 oz

Packaging	Carton

EAN code	UPC code
54 10329 41673 7	8 16353 01088 3

RGB LED DIMMER FOR DIN RAIL
VM150
NEW

For use with:
- 12-24VDC common anode RGB or single colour led strips
- 12-24VDC led armatures
Multiply the output power of your Velleman LED controller with VM169
Infosheet: LED controller selection guide
Features:
- easy DIN-rail mounting
- Hi-power outputs
- Dual pushbutton operation
  - Press to select colour
  - Press to adjust intensity
- Buttons can be paralleled
- Single colour mode
- Short circuit protection
Specifications:
- PWM freq.: 90Hz
- power supply: 12-24VDC (e.g. Velleman LPS series)
- Max output current: 5A /channel
- DIN-rail enclosure: 2 modules wide

Packaging	Carton
EAN code 54 10329 42890 7	UPC code

FAN TIMER
VM154

Features:
- Easy dipswitch setting for all functions
- applications possibilities:
  - Selectable turn-ON & turn-OFF timer
  - Turn-ON timer only
Specifications:
- power supply: 230VAC
- times:
  - Turn-ON: approx 3 min
  - Turn-OFF: 7/15 min approx.
- Max load: 3A
- dimensions: 3.15 x 2.75 x 0.9"

Packaging	Carton
EAN code 54 10329 40205 1	UPC code

POCKET AUDIO GENERATOR
VM156

Great little gadget for service, repair, testing, education, etc...
Features:
- microprocessor technology
- digital waveform generation
Specifications:
- sine wave: 50Hz, 100Hz, 1KHz, 10KHz, 20KHz
- burst: 50Hz, 100Hz, 1KHz
- burst mode: 20ms ON, 500ms OFF
- noise: 32-bit digital noise
- output level (10Kohm): 0 to 775mV (0dB)
- outputs: 2 x RCA (cinch)
- power supply: 2 x CR2016 or CR2025 battery (excl.)
- dimensions: 3.4 x 2.0 x 1.0"

Packaging	Carton
EAN code 54 10329 40504 5	UPC code

LED STRIP COLOR DIMMER RECEIVER for VM118R
VM161

For use with optional VM118R full size remote
Ideal for use with common anode led strips e.g.
- CHLS4RGB : FLEXIBLE WEATHERPROOF LED MODULE - RGB
- LDB1-HS3027AC : FLEXIBLE LED STRIP MODULE - RGB
Features:
- easy remote control operation
- Hi power MOSFET outputs
- ideal for use with common anode led strips
- 7 colour tones
- 10 dimming steps
- optional:
  - USB TO RF REMOTE CONTROL TRANSMITTER: VM118R
  - 8-Channel RF remote transmitter: VM118R
Specifications:
- LED PWM frequency: ± 300Hz
- 3x 12V/3A outputs
- TX/RX: 433MHz operation
- power supply: max. 12V/9A
  - Remark: Only connect 1 RGB LED strip (e.g. CHLS7RGB) of max. 3x1A/24V when using power supply PSIN06024
- dimensions: 3.15 x 2.75 x 09"

Packaging	Carton
EAN code 54 10329 41958 5	UPC code

PANEL CLOCK MODULE
VM163
NEW

LED display panel clock for universal use.
The clock features an "alarm" output and an option to turn off the display for "in car" or battery use.
Features:
- 12h/24h selectable time readout
- one daily program (1 on-time & off-time)
- bright red LED read-out
- quartz time base
- possibility to deactivate the screen (eg. for use in the car)
- backup battery connection
- alarm open collector output
- comes with easy board-to-wire connectors (7 7/8" wire)
Specifications:
- DC voltage operation 9 to 15V
- power consumption: 60mA max. (8mA display blank)
- backup battery: external 4,5V (ex. 3 x AA not. Incl.)
- "open collector" output: max. 24V / 100mA
- backup battery consumption: max. 200 µA
- dimensions:
  - panel module: 2.63 x 1.6"
  - cut-out: 2.12 x 1.45"
  - mounting depth: 1.65"

Packaging	Carton
EAN code 54 10329 41831 1	UPC code

MINI USB INTERFACE BOARD
VM167
NEW

"Use your PC to connect to the outside World"
Test software and examples downloadable via www.velleman.eu !

Features:
- very Small, universal USB powered & controlled I/O board !
- add USB interface to existing equipment
- 15 inputs / outputs, including analogue inputs / digital inputs/outputs and PWM outputs
- the number of inputs/outputs can be further expanded by connecting two cards to the PC's USB connectors
- all communication routines are contained in a Dynamic Link Library (DLL)
Specifications:
- 5 x analogue 10 bit resolution inputs: 0...5V / (30K)
- 8 x digital 5V inputs/outputs with on-board LED indication: Input/output mode is selectable in groups of 4 terminals
- 1 x 32 bit pulse counter up to 1MHz input frequency
- 2 x 8 bit 5V PWM outputs: 0 to 100%
- on-board LED indication for I/O and PWM outputs
- output current, PWM: 10mA / Digital outputs: 6mA
- up to 2 cards can be connected to one PC
- USB port: USB 1.1 & 2.0 compatible
- DLL supports Windows XP, Windows Vista and Windows 7*
- PWM frequency selection: 2930Hz,11.7kHz or 46.9kHz
- command execution time, read:
  - read: 4ms
  - write: 1ms
- power consumption through USB port: approx. 50mA
- dimensions: 68 x 40 mm / 2.7 x 1.6"

Packaging	Carton
EAN code 54 10329 43596 7	UPC code

RGB POWER SLAVE MODULE 3 x 4A
VM169 **NEW**

Multiply the output power of your Velleman LED controller !
VM146, VM150, VM151, VM152, VM161, VM162, VM168, CHLSC1, …
Features:
- add more led strips to your existing controller
- every unit adds up to 144W (12V) or 288W (24V)
- works with a single power supply or multiple supplies
- eases distribution of led strips
- allows simultaneous use of 12V and 24V strips
- only 4 interconnecting wires required (e.g. CHLWIRE)
Specifications:
- open collector/drain inputs
- power supply: 12-24VDC / 12A max.
- dimensions: 80 x 70 x 23mm / 3.14 x 2.75 x 0.9"

Packaging | Carton
EAN code 54 10329 43436 6 | UPC code

LOW VOLTAGE LED LIGHT ORGAN
VM186 **NEW**

Also available in kit version MK186
Features:
- panel-mount concept: easy to build in
- Hi-power output
- built-in microphone
- adjustable sensitivity
- blue indicator led
- ideal for:
  - 12/24V RGB led strips
  - 12/24V single colour led strips
  - 12V halogen lamps
  - incandescent lamps
  - 12V led lamps
  - etc...
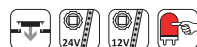- suited for in-car use
Specifications:
- power supply: 12-24VDC
- output: 5a max.
- dimensions: 100 x 40 x 35mm / 3.93 x 1.57 x 1.37"

Packaging | Carton
EAN code 54 10329 44065 7 | UPC code 8 36479 00983 7

LOW VOLTAGE LED DIMMER
VM187 **NEW**

Also available in kit version MK187
Features:
- panel-mount concept: easy to build in
- Hi-power output
- Adjustable level
- blue indicator led
- ideal for:
  - 12/24V RGB led strips
  - 12/24V single colour led strips
  - 12V halogen lamps
  - incandescent lamps
  - 12V led lamps
  - etc...
- suited for in-car use
Specifications:
- power supply: 12-24VDC
- output: 5a max.
- dimensions: 100 x 40 x 35mm / 3.93 x 1.57 x 1.37"

Packaging | Carton
EAN code 54 10329 44102 9 | UPC code 8 36479 00984 4

12V CAR BATTERY MONITOR
VM189 **NEW**

This small circuit is of great value to check your car battery status.
(enclosure not included!)
Features:
- easy to build in
- only 2 wires to connect (connect after ignition)
- uses multi colour 3mm LED
  - green: battery OK
  - Slow pulsing (green): battery OK or charging
  - red: battery voltage is low
  - red blinking: battery is being overcharged
- includes: board to wire connector
Specifications:
- dimensions: 30x20mm / 1.18 x 0.78" (board)

Packaging | Carton
EAN code 54 10329 44959 9 | UPC code 8 16353 01065 4

VELLEMAN PROJECT BOX
VPB108 **NEW**

Project box for various applications
Can be used for Velleman Kit projects or you own project.

Features:
- suitable for Velleman:
  - multifunctional dimmer: K8028
  - AC power slave: K8034
  - video signal cleaner: K8036
  - 4 channel recorder / logger: K8047
  - 2 channel RF remote receiver: K8057
- The enclosure can be used for Din rail mounting, or stand-alone
- securable cover for connections
- pre drilled holes for LED indicators
Specifications:
- outside dimensions: 4 21/64" x 3 15/16" x 1 49/64"
- Max PCB dimensions: 3 15/16" x 2 61/64"

Packaging | Carton
EAN code 54 10329 37837 0 | UPC code

INSTRUMENTS

1MHz POCKET FUNCTION GENERATOR
HPG1
NEW

A complete function generator in pocket format!
Now you can take test signals on the move, 3 waveforms can be selected. Set the output voltage or frequency and select signal waveform using the on the screen menu. A powerful sweep function is also included.

Features:
- DDS type generator (Direct Digital Synthesis)
- DAC resolution: 10 bits
- frequency range: from 1Hz to 1.000.000Hz (± 0.01%)
- frequency steps: 1Hz, 10Hz, 100Hz, 1kHz and 10kHz
- waveforms: sine, square and triangle
- sweep function with bi-direction option
- output voltage: max. 8Vpp
- real output level measurement: dBm / Vrms or Vpp readout (±3%)
- typical sine wave distortion (THD): < 0.1% @ 0dB / 600 ohms
- square wave rise/fall time: typ. 0.2µs
- output impedance: 50 ohms
- multi-language menu (Eng / Fre / Dut / Ge / Es)
- white LED backlight
- charging power supply: 9Vdc/200mA
- operates on NiMH rechargeable battery pack (included)
- dimensions: 2.9 x 4.5 x 1.14"
- includes:
  - handheld Pocket Generator
  - getting started manual
  - BNC adapter, BNC male to RCA female
  - BNC male to 2x 4mm banana plug
  - USB power supply adaptor

Packaging		Carton	

EAN code	54 10329 45087 8	UPC code	8 16353 01096 8

THREE-IN-ONE LAB UNIT (Scope, Function generator and Power supply)
LAB2U
NEW

LAB2 on the EDS show in Las Vegas: http://ecnmag.com/Multimedia/Videos/2010/05/Velleman-Demo-EDS/
Another 3-in-1 unit from Velleman!
Following the success of our LAB-1 unit, a LAB-2 is born.
This unique unit includes a digital oscilloscope, a digital function generator and a simple but easy-to-use power supply. The 3 units are electrically separated for ease of measurement. Measuring and testing just became easier and more affordable than ever!

Specifications:
- oscilloscope 40MS/s:
  - bandwidth: up to 10 MHz (-3dB*)
  - input range: 1mV to 20V/division in 14 steps
  - input coupling: DC, AC and GND
  - real-time sample rate up to 40MS/s
  - AD resolution: 8 bits
  - time base: 250ns to 1h per division
  - auto set-up function
  - probe x10 readout option
  - readouts: DC, AC+DC,True RMS, dBm, Vpp, Min-Max. (±2.5%)
  - audio power measurement from 2 to 32 ohms
  - max. 100Vp AC+DC (input 600Vp using x10 probe)
  - standard 1M ohms 60MHz x1 - x10 probe (incl.)
  - white LED backlight
- 1MHz function generator:
  - DDS type generator (Direct Digital Synthesis)
  - DAC resolution: 10 bits
  - frequency range: from 1Hz to 1.000.000Hz (± 0.01%)
  - frequency steps: 1Hz, 10Hz, 100Hz, 1kHz and 10kHz
  - waveforms: sine, square and triangle
  - sweep function with bi-direction option
  - output voltage: max. 15Vpp
  - real output level measurement: dBm / Vrms or Vpp readout (±3%)
  - typical sine wave distortion (THD): < 0.1% @ 0dB / 600 ohms
  - square wave rise/fall time: typ. 0.2µs
  - output impedance: 50 ohms
  - multi-language menu (Eng / Fre / Dut / Ge / Es)
  - white LED backlight
- power supply:
  - voltage output (fixed voltages): 3V, 5V, 6V, 9V, 12V (±5%)
  - peak output current: 1A
  - LED Output overload indicator
  - LED Output ON indicator
  - output ON/OFF switch
- in the box:
  - LAB-2 unit
  - oscilloscope probe
  - RCA adaptor
  - manual
  - AC cord
- *: -4dB at: 1mV, 2mV, 5mV, 0.1V and 2mV

Packaging		Carton	/8

EAN code		UPC code	8 36479 00917 2

THREE-IN-ONE LAB UNIT
LAB1U

Your space saving lab solution!

Features:
- contents: 1 multimeter, 1 power supply & 1 soldering iron
- this unit covers 99% of your home lab needs
- perfect solution for starters or schools

Specifications:
- digital multimeter:
  - 3 1/2 backlit LCD
  - automatic polarity indication
  - DC voltage: 200mV to 600V in 5 steps
  - AC voltage: 200V and 600V
  - DC current: 200µA to 10A in 5 steps
  - resistance test: 200 ohm to 2Mohm
  - diode, transistor and continuity test
  - data-hold function and buzzer
  - CATI 600V
  - CATII 300V
- regulated power supply:
  - selectable output voltages: 3 - 4.5 - 6 - 7.5 - 9 - 12Vdc
  - output: 1.5A (2A peak)
  - LED overload indication
  - with output on/off switch
  - very low ripple
  - LED power indication
- soldering station:
  - low-voltage iron: 24V
  - ceramic 48W heating element with temperature sensor
  - temperature range: OFF - 302 - 842°F
  - lead-free soldering possible
  - supplied with sponge and spare bit

Packaging		Carton	/4

EAN code		UPC code	8 36479 00768 0

SPARE SOLDERING IRON FOR LAB1
LAB1SCS

Packaging		Carton	

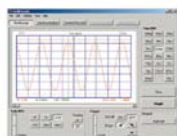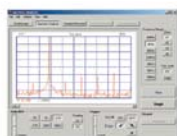| EAN code	54 10329 34915 8	UPC code	

DIGITAL STORAGE SCOPES FOR PC

PC-SCOPE 12MHz 1 CHANNEL WITH ADAPTER (110V)
PCS100AU

Features:
• comes with adapter: yes (110V)

Oscilloscope

Spectrum Analyser

	Packaging		Carton
EAN code		UPC code	8 36479 00212 8

PC-SCOPE 50MHz WITH ADAPTER - 110V
PCS500AU

Features:
• comes with adapter: yes (110V)

Oscilloscope

Transient Recorder

Spectrum Analyser

	Packaging		Carton
EAN code		UPC code	8 36479 00018 6

TWO-CHANNEL USB PC OSCILLOSCOPE
PCSU1000

The PCSU1000 digital storage oscilloscope uses the power of your PC to visualize electrical signals. Its high sensitive display resolution, down to 0.15mV, combined with a high bandwidth and a sampling frequency of up to 1GHz are giving this unit all the power you need.
The USB connection makes this unit a snap to set-up, no external power required! In the field measurements using a lap-top computer have never been this easy.
This scope comes in a stylish vertical space saving design.
Powerful software will fulfill all your needs, but for those who like a challenge; a DLL is supplied, which allows you to create your own application.
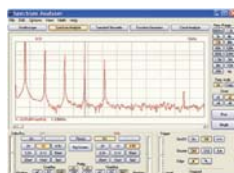
Features:
• oscilloscope:
  - timebase: 20ns to 100ms per division
  - trigger source: CH1, CH2, EXT or free run
  - trigger edge: rising or falling
  - trigger level: full-screen adjustable
  - step interpolation: linear or smoothed
  - markers for: voltage and frequency
  - input range: 5mV to 2V/division
  - input sensitivity: 0.15mV display resolution
  - auto set-up function and X10 option
  - pre-trigger function
  - readouts: True RMS, dBV, dBm, p to p, Duty cycle, Frequency...
  - recording length: 4K samples / channel
  - real time sampling frequency: 1.25kHz to 50MHz
  - sampling frequency for Repetitive signals: 1GHz
• spectrum analyzer:
  - frequency range: 0...1.2kHz to 25MHz
  - linear or logarithmic time scale
  - operating principle: FFT (Fast Fourier Transform)
  - FFT resolution: 2048 lines
  - FFT input channel: CH1 or CH2
  - zoom function
  - markers for amplitude and frequency
• transient recorder:
  - time scale: 20ms/div to 2000s/div
  - max. recording time: 9.4hours/screen
  - automatic data storage
  - automatic recording for more than 1 year
  - max. number of samples: 100/s
  - min. number of samples: 1 sample / 20s
  - markers for time and amplitude
  - recording and display of screensrecording and display of screens

Specifications:
• general information:
  - inputs: 2 channels, 1 external trigger input
  - input impedance: 1Mohm // 30pF
  - bandwidth: DC to 60 MHz ±3dB
  - max. input voltage: 30V (AC + DC)

  - input coupling: DC, AC and GND
  - Supply from USB port (500mA)
  - dimensions: 8.2 x 2.2 x 7"
• minimum system requirements:
  - IBM compatible PC
  - needs Win98SE or higher*
  - SVGA display card (min. 800x600, 1024x768 recommended)
  - mouse
  - USB port 1.1 or 2.0 compatible
  - CD Rom player
• includes:
  - USB PC oscilloscope
  - 2 x 60MHz scope probe (PROBE60S)
  - USB cable
  - software on CD
  - getting started manual
  - translations on CD

	Packaging		Carton	/10
EAN code	54 10329 34694 2	UPC code	8 36479 00803 8	
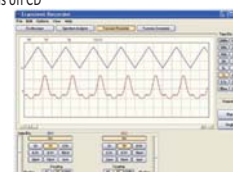
PERSONAL SCOPE

RECHARGEABLE BATTERY PACK 6V/1800mAh FOR APS230
BPAPS230

Features:
• rechargeable baatery pack for: APS230
Specifications:
• nom.voltage: 6V
• typ. capacity: 1800mAh

	Packaging		Carton
EAN code	54 10329 32448 3	UPC code	

HANDHELD POCKET SCOPE 40MS/s (probe included)   NEW
HPS140I

Do not let its size fool you!
This Oscilloscope packs a lot of power in a tiny box.
Now you can really take a powerful oscilloscope everywhere.
Visit our HPS140 website for more information and user demos: www.hps140.com
Visit our HPS140 forum: HPS140 Handheld Pocket Oscilloscope Forum
Features:
• 40Mega samples/sec in real time
• bandwidth up to 10MHz
• full auto range option
• sensitivity down to 0.1mV
• signal markers for amplitude and time
• memory Hold function
• direct audio power measurement
• USB battery charger included
• X10 measuring probe included

- optional: Carrying Bag BAGPS

Specifications:
- bandwidth: up to 10 MHz (-3dB or -4dB at selected ranges)
- input range: 1mV to 20V/division in 14 steps
- input coupling: DC, AC and GND
- real-time sample rate up to 40MS/s
- AD resolution: 8 bits
- time base: 250ns to 1h per division
- auto set-up function (or manual)
- probe x10 readout option
- readouts: DC, AC+DC,True RMS, dBm, Vpp, Min-Max. (±2.5%)
- audio power measurement from 2 to 32 ohms
- hold & store function
- time and Voltage markers readout
- Max. 100Vp AC+DC
- white LED backlight
- operates on NiMH rechargeable battery pack (included)
- operates up to 6 hours on one charge*
- charging power supply: 9Vdc/200mA
- for use on CLASS II pollution degree II installations
- dimensions: 74 x 114 x 29mm / 2.9 x 4.5 x 1.14"
- weight: 200g, (7oz)

Packaging | Carton

EAN code   54 10329 43828 9   UPC code   8 36479 00980 6

10MS/S PERSONAL POCKET SCOPE
PPS10

Joystick control for true hand-held operation. Set all the functions using only your thumb. With RS232 interface for PC connectivity. Measure up to 2MHz with a sensitivity down to 0.1mV.
Great for the hobbyist or the professional on the move !
Comes with measuring probe and RS232 computer cable.

Features:
- measurements: dBm, dBV, DC, rms ...
- trigger mode: run, normal, once, roll, slope +/-
- X and Y position signal shift
- audio power calculation (rms and peak)
- signal markers for Volt and Time
- frequency readout (through markers)
- recorder function (roll mode)
- signal storage (2 memories)
- full auto set up
- LCD: 128 x 64 pixels / high-contrast
- DVM read-out with x10 option
- time base: 200ns to 1hour/div in 32 steps
- 5mV to 20V/div in 12 steps
- 0.1mV sensitivity
- 10Ms/s sampling rate
- up to 2MHz analogue bandwidth
- joystick operation
- optical isolated RS232 output for PC
- optional:
  - practical holster: BAGPS
- in the box:
  - Personal Scope unit
  - insulated safety probe
  - user manual
  - RS232 cable

Specifications:
- power supply:
  - 5 x 1.5V AAA battery or Nicd / NiMH (not incl.)
  - includes battery charging circuit
  - optional: adapter 9V / 300mA (PSU03RUSA)
- dimensions: 6.10 x 3.9 x 1.78"
- weight: 395g

Packaging | Carton

EAN code   54 10329 33238 9   UPC code   8 36479 00818 2

HANDHELD PERSONAL SCOPE WITH USB
HPS50

Designed By electronics enthusiasts For electronics enthusiasts! Powerful, compact and USB connectivity, this sums up the features of this oscilloscope. The large keyboard and bright LCD makes this unit a breeze to use, combine this with great specifications and you wonder how you ever managed without it!

Features:
- 40MHz sampling rate
- 12MHz analog bandwidth
- 0.1mV sensitivity
- 5mV to 20V/div in 12 steps
- 50ns to 1hour/div time base in 34 steps
- Ultra fast full auto set up option
- adjustable trigger level
- X and Y position signal shift
- DVM readout
- audio power calculation (rms and peak) in 2, 4, 8, 16 & 32 ohm
- dBm, dBV, DC, rms ...measurements
- signal markers for Volt and Time
- frequency readout (through markers)
- recorder function (roll mode)
- signal storage (2 memories)
- high resolution LCD 192x112 pixels
- LCD backlight
- galvanically separated USB output for PC
- data or bitmap download to PC
- different screen modes
  - normal screen view
  - wide screen with DVM
  - normal screen with large DVM
  - wide screen with large DVM
- USB PC Connection real-time and screen capture
- includes:
  - worldwide charging adaptor
  - insulated measurement probe x1 / x10: PROBE60S
  - USB cable
  - Handheld Personal Scope

Specifications:
- power supply:
  - Li-ion battery: 7.4V / 1050mAh
- weight: 15.52oz.
- dimensions: 4.3 x 6.9 x 1.6"

Packaging | Carton

EAN code   54 10329 41449 8   UPC code   8 36479 00902 8

ADVANCED PERSONAL SCOPE 240MS/s
APS230

Features:
- 2 input channels
- high contrast LCD with white backlight
- full auto set-up for volt/div and time/div
- recorder roll mode, up to 170h per screen
- trigger mode: run - normal - once - roll ...
- adjustable trigger level and slope
- peak measurements: max, min. and pk to pk
- measurements: rms, dB(rel), dBV, dBm and dBG
- Direct Audio power measurements
- x1 and x10 probe calculation option
- several display modes
- StereoScope mode for audio measurement
- X and Y position shift
- battery pack included, fast charge possible
- in the box:
  - RS232 cable (9 pole sub D)
  - 2 Insulated 60MHz X10 measuring probes
  - user manual
  - adaptor (110Vac 60Hz / 230Vac 50Hz)
  - battery pack
  - Advance Personal Scope unit

Specifications:
- input impedance: 1 Mohm / 20pF
- bandwidth: 2 x 30MHz
- sampling: 240MS/s per channel
- step markers for voltage, time, ...
- vertical resolution: 8 bit
- sensitivity: min. 30µV
- volts per division: 1mV to 20V/div
- time base: from 25ns to 1 hr/div
- AC/DC input coupling selection
- RS232 communication with PC (PCUSB6 for USB connection in option)
- dimensions: 9.1 x 5.9 x 2.0"
- weight: 30oz. incl. battery

Packaging | Carton /8

EAN code   54 10329 30831 5   UPC code   8 36479 00480 1

PERSONAL SCOPE 10MS/s
HPS10

5 x AA

The Velleman Personal Scope is not a graphical multimeter but a complete portable oscilloscope at the size and the cost of a good multimeter. Its high sensitivity - down to 0.1mV/div - and extended scope functions make this unit ideal for hobby, service, automotive and development purposes. Because of its extreme value for money, the PersonalScope is well suited for educational use in schools and colleges. Suitable for measurements on audio equipment, mains voltage applications, digital signals, all kind of sensors, signal analysis in automotive applications, car stereo, etc... Its full auto setup function, makes measuring waveforms very easy.

Features:
- 10MHz sampling rate
- 0.1mV sensitivity
- up to 2MHz analogue bandwidth
- 5mV to 20V/div in 12 steps
- 200ns to 1hour/div time base in 32 steps
- full auto set up
- trigger mode: run, normal, once, roll, slope +/-
- X and Y position signal shift
- DVM readout with x10 option
- audio power calculation (rms and peak)
- dBm, dBV, DC, rms ... measurements
- signal markers for Volt and Time
- frequency readout (through markers)
- recorder function (roll mode)
- signal storage (2 memories)
- LCD: 128x64 pixels / high-contrast
- up to 20h on alkaline batteries
  - maximum size battery is 2000mAh (bigger batteries will not fit)
- optional:
  - practical holster: BAGHPS
  - adapter 9V / 500mA: PS905USA

Specifications:
- power supply: 5 x 1.5V AA battery or Nicd / NiMH (not incl.)
- internal charging circuit

Packaging | Carton **/20**

EAN code **54 10329 30010 4** | UPC code **8 36479 00593 8**

PERSONAL SCOPE 10MS/s - SPECIAL EDITION
HPS10SE

5 x AA

The Velleman Personal Scope™ is not a graphical multimeter but a complete portable oscilloscope at the size and the cost of a good multimeter. Its high sensitivity - down to 0.1mV/div - and extended scope functions make this unit ideal for hobby, service, automotive and development purposes. Because of its exceptional value for money, the PersonalScope is well suited for educational use in schools and colleges. It is suitable for measurements on audio equipment, mains voltage applications, digital signals, all kinds of sensors, signal analysis in automotive applications, car stereos, etc... Its full auto setup function makes it esay to measure waveforms.
Same as the HPS10, but with blue LCD, white backlight. Comes in a handy, sturdy carry case.

Features:
- 10MHz sampling rate
- 0.1mV sensitivity
- up to 2MHz analogue bandwidth
- 5mV to 20V/div in 12 steps
- 200ns to 1hour/div time base in 32 steps
- full auto set up
- trigger mode: run, normal, once, roll, slope +/-
- DVM readout with x10 option
- audio power calculation (rms and peak)
- dBm, dBV, DC, rms ... measurements
- signal markers for Volt and Time
- frequency readout (through markers)
- recorder function (roll mode)
- signal storage (2 memories)
- LCD: 128x64 pixels / high-contrast
- up to 20h on alkaline batteries
  - maximum size battery is 2000mAh (bigger batteries will not fit)
- optional:
  - practical holster: BAGHPS
  - adapter 9V / 500mA: PS905USA

Specifications:
- power supply: 5 x 1.5V AA battery or Nicd / NiMH (not incl.)
- internal charging circuit

Packaging | Carton **/10**

EAN code **54 10329 31921 2** | UPC code **8 36479 00963 9**

PC FUNCTION GENERATORS 0-1MHZ

## USB-PC SCOPE + GENERATOR (2CH.)
PCSGU250

A complete USB-powered lab-in-a-box
Feature-packed PcLab2000-LT software for two channel oscilloscope, spectrum analyser, recorder, function generator and bode plotter. With the generator, you can create your own waveforms using the integrated signal wave editor. For automated measurements, it is even possible to generate wave sequences, using file or computer RS232 input.


Features:
- function generator:
  - crystal-based stability
  - standard waveforms: sine, square and triangle
  - predefined library waveforms included: sine(x)/x, DCV, sweep, ...
- oscilloscope:
  - auto set-up function and X10 option
  - pre-trigger function
  - readouts: True RMS, dBm, p to p, Duty cycle, Frequency...
- transient recorder:
  - automatic storage of data
  - automatic recording for more than 1 year
  - record and display of screens
- bode Plotter:
  - automated sync between oscilloscope and generator
  - logatithmic scale option
  - Volt or dB display scale
  - phase plot option
- spectrum analyser:
  - linear or logarithmic timescale
  - operating principle: FFT (Fast Fourier Transform)
  - FFT input channel: CH1 or CH2
  - zoom function
- in the box:
  - getting started manual
  - USB PC Scope+generator unit
  - USB cable
  - software on CD
  - 1 x 60MHz scope probe (PROBE60S)
  - BNC adapter, BNC male to RCA female (CBNC15)
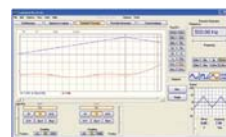
Specifications:
- general:
  - markers for: amplitude/voltage and frequency/time
  - input coupling: DC, AC and GND
  - Supply from USB port (500mA)
  - dimensions: 8.2 x 2.2 x 7"
- function generator:
  - amplitude range: 100mVpp to 10Vpp @ 1KHz// 600ohm load / 0V offset
  - offset: from 0 to -5V or +5V max. (resolution 0.4% of full scale)
  - vertical resolution: 8 bits
  - square wave rise/fall time: 0.2µs
  - sample rate: 12.5MHz
  - typical sine wave distortion (THD): < 1%
  - output impedance: 50ohm
  - frequency range: from 0.005Hz to 500kHz
- oscilloscope:
  - bandwidth: two channels DC to 12 MHz ±3dB
  - input impedance: 1 Mohm / 30pF
  - maximum input voltage: 30V (AC + DC)
  - time base: 0.1µs to 500ms per division
  - input range: 10mV to 3V/division
  - input sensitivity: 0.3mV display resolution
  - record length: 4K samples / channel
  - sampling frequency: 250Hz to 25MHz
- transient recorder:

- timescale: 20ms/Div to 2000s/Div
- max record time: 9.4hour/screen
- max. number of samples: 100/s
- min. number of samples: 1 sample/20s
- bode Plotter:
  - voltage range: 10mV, 30mV, 0.1V, 0.3V, 1V, 3V
  - frequency range: 1kHz , 10kHz, 100kHz, 500kHz
  - Frequncy start: 10Hz, 100Hz, 1kHz, 10kHz
- spectrum analyser:
  - frequency range: 0 .. 120Hz to 12MHz
  - FFT resolution: 2048 lines
- minimum system requirements:
  - IBM compatible PC
  - Windows™ 2000, XP, Vista *
  - SVGA display card (min.1024 x 768)
  - mouse
  - free USB port 1.1 or 2.0
  - CD Rom player
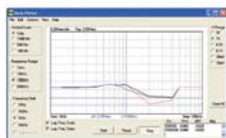
2MHz USB PC FUNCTION GENERATOR
PCGU1000

The PCGU1000 is a digital function generator which can be connected with a PC via USB.
Standard signal waves like e.g. sine, triangle and rectangle are available; other sine waves can be easily created.
The signal waves are created in the PC and produced by the function generator via DDS (Direct Digital wave Synthesis)
Frequencies up to 2MHz.
Features 2 equal outputs and a TTL Sync output.
Output voltage of 1mVtt up to 10Vtt at 600 ohms.
All outputs are galvanically separated from the PC in order to avoid measuring problems. Comes with power adapter.
Features:
- frequency range: from 0.01Hz to 2MHz
- crystal-based stability
- outputs are galvanically isolated from the PC
- low sine wave distortion
- two parallel output connectors for waveforms
- TTL-level synchronization output
- stores up to 8192 of waveform points
- standard waveforms: sine, square and triangle
- predefined library waveforms included: noise, sweep, ...
- you can create your own waveforms with the integrated signal wave editor
- sweep frequency range 0.0001Hz to 25MHz
- sweep time 1ms to 10 hours
- noise mode bandwidth 25MHz
- extended bode plot option together with PC scope
- automated wave sequence generation, using file or computer RS232 input.
- DLL available for custom software development
- in the box:
  - USB function generator
  - getting started manual
  - software on CD
  - USB cable
  - worldwide charging adaptor
Specifications:
- amplitude range: 100mVpp to 10Vpp @ 1KHz// 600ohm load / 0V offset
- frequency setting resolution: 0.01%
- With internal 40 dB attenuator (output divided by 100)
- direct digital wave synthesis (DDS),stores up to 8192 of waveform points
- amplitude resolution: 0.4% of full scale
- offset: from 0 to -5V or +5V max. (resolution 0.4% of full scale)
- vertical resolution: 8 bits (0.4% of full scale)
- sample rate: 50MHz
- typical sine wave distortion (THD): < 0.08%
- output impedance: 2 x 50ohm
- power supply: standard 9V DC adapter, 600mA (included)
- dimensions: 55 x 190 x 200mm
- minimum system requirements:
  - IBM compatible PC

- Windows™ 98SE, ME, 2000, XP, Vista *
- SVGA display card (min. 800x600)
- mouse
- free USB port
- CD Rom player
- includes:
  - USB PC function generator
  - USB cable
  - getting started manual
  - software on CD

| EAN code	UPC code
54 10329 36244 7	

DATALOGGERS

4-CHANNEL USB RECORDER / LOGGER
PCS10

Features:
- record DC signals or slow-moving signals over very long periods
- the measurements are automatically stored on your hard disk for further processing
- thanks to the USB connection no power supply is necessary and installation is easy and straightforward
- signals are instantly displayed on the PC screen using an analogue or DVM display
- USB cable included
- PC-LAB2000 Software included
- also available in kit version: K8047
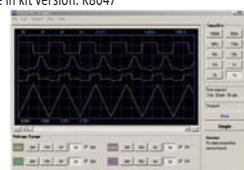
Specifications:
- hardware:
  - USB connected and powered
  - four DC-coupled input channels
  - input resistance: 1Mohm
  - maximum samples per second: 100
  - four input ranges: 3V / 6V / 15V and 30V
  - sensitivity: 10mV
  - accuracy: ±3% of full scale
  - maximum input: 30Vdc
  - power and recording/diagnostic LED
- software:
  - analogue trace or DVM readout
  - 4 channels record simultaneously
  - minimum / maximum sample hold function for DVM
  - from 1 sec to 1000 sec per division
  - storage and recall of screens (full colour) or data
  - automatic recording option for long recordings
  - on screen markers for time and voltage
  - DLL included for your own developments
- system requirements:
  - PC, running Win98SE or higher (does not work on WinNT or Win95)
  - free USB port
  - mouse
  - CD-ROM player

	Packaging	Carton /34
EAN code	54 10329 23956 5	UPC code 8 16353 01057 9

PANEL SCOPE

PANEL SCOPE 10MS/s
VPS10

Panel mount oscilloscope for monitoring, system analysis, educational purposes, system demonstrations, sensor testing...
Or just connect it to your car's audio system and use it as an eye-catcher!
Never before has an oscilloscope had so many potential applications. A must have!

Features:
- panel mount
- high-contrast backlight LCD
- full auto set up
- recorder roll mode
- user-friendly set-up menu
- measurements: rms, dB(rel), dBV, dBm
- Direct Audio power measurements
- x1 and x10 probe calculation
- 6 display modes

Specifications:
- input impedance: 1Mohm / 30pF
- connection of internal or external signal
- bandwidth: 2MHz
- sampling: 10MS/s
- 128 x 64 pixels LCD white backlight
- vertical resolution: 8 bit
- max. sensitivity: 0.1mV
- DVM readout
- AC or DC input coupling
- power supply: 9-13VDC or 6VAC / 300mA
- dimensions: 6.5 x 3.5"
  - depth: 1.4"

	Packaging	Carton /20
EAN code	54 10329 32472 8	UPC code

PLIERS AND CUTTERS

POCKET TOOL WITH LED LIGHT & POUCH
ZLACS03

Features:
- pocket tool with LED light
- long-life LED: 100.000hrs
- water-resistant
- stainless steel
- tools: flat nose pliers, wood saw, small blade, small screwdriver and bottle opener
- battery life: 12hrs
- comes with: nylon belt pouch

Specifications:
- power supply: 3 x V13GAC button cell batteries (incl.)
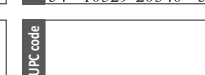- bulb type: Ø 0.2" white LED
- dimensions: 2.8" x 1.3" x 0.6"

Packaging		EAN code	54 10329 20616 1
Carton	/96	UPC code	

HEAVY-DUTY UNIVERSAL PLIERS
VT04

Specifications:
- size: 6.0"

Packaging		EAN code	54 10329 20339 9
Carton	/60	UPC code	

HEAVY-DUTY LONG NOSE PLIERS
VT05

Specifications:
- size: 6.0"

Packaging		EAN code	54 10329 20340 5
Carton	/60	UPC code	

HEAVY-DUTY UNIVERSAL CUTTER
VT06

Specifications:
- size: 6.0"

Packaging		EAN code	54 10329 20341 2
Carton	/60	UPC code	
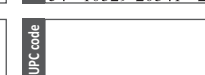
HQ MINIATURE NEEDLE PLIERS
VT046

Features:
- carbon steel, hardened
- black oxide finish

Specifications:
- size: 4.5"

Packaging		EAN code	54 10329 20299 6
Carton	/120	UPC code	8 36479 00431 3

HQ MINIATURE FLAT NOSE PLIERS
VT054

Features:
- carbon steel, hardened
- black oxide finish

Specifications:
- size: 4.9"

Packaging		EAN code	54 10329 20301 6
Carton	/120	UPC code	8 36479 00432 0

HQ MINIATURE BENT NOSE PLIERS
VT055

Features:
- carbon steel, hardened
- black oxide finish

Specifications:
- size: 4.9"

Packaging		EAN code	54 10329 20302 3
Carton	/120	UPC code	8 36479 00433 7

HQ MINIATURE LONG NOSE PLIERS
VT056

Features:
- carbon steel, hardened
- black oxide finish

Specifications:
- size: 4.5"

Packaging		EAN code	54 10329 20303 0
Carton	/120	UPC code	8 36479 00434 4

HQ MINIATURE DIAGONAL CUTTER
VT057

Features:
- carbon steel, hardened
- black oxide finish

Specifications:
- size: 4.3"

Packaging		EAN code	54 10329 20304 7
Carton	/120	UPC code	8 36479 00435 1

MICRO CUTTING NIPPERS
VT100

For precision work.
Specifications:
- size: 5.1"

Packaging		EAN code	54 10329 20308 5
Carton	/168	UPC code	8 36479 00437 5

5" ELECTRICAL CUTTER & STRIPPER
VT109

Strips wires from 20-24 AWG and cuts wires with a max. Ø of 0.05".
Specifications:
• size: 4.7"

Packaging		EAN code	54 10329 20029 9
Carton	/150	UPC code	8 36479 00439 9

UNIVERSAL CUTTER - HEAVY-DUTY
VT09

HQ heavy-duty
Specifications:
• size: 6.5"

Packaging		EAN code	54 10329 41009 4
Carton	/50	UPC code	8 36479 00436 8

CABLE CUTTER
VTCC

Curved blade cuts wires up to Ø0.4".
Specifications:
• size: 6.5"

Packaging		EAN code	54 10329 20247 7
Carton	/60	UPC code	8 36479 00450 4

CABLE CUTTER
VTCC2

Curved blade cuts wires up to Ø0.4".
Features:
• cuts cables up to Ø 10.5mm
Specifications:
• size: 6.5"

Packaging		EAN code	54 10329 35937 9
Carton		UPC code	

HQ PLIERS AND CUTTERS

HQ PLIERS AND CUTTERS - CR-V

Specifications:
• made of CR-V steel with nickel satin finish
• handles of double injected plastic

Order Code	type	length
VT257	diagonal cutter	4.3"

Packaging		EAN code	54 10329 31933 5
Carton	/120	UPC code	

VT257

HQ PLIERS AND CUTTERS - CARBON STEEL

Order Code	jaws height	dimensions	weight
VT301	0.1"	2 11/64" x 5 5/16"	2.78 oz
VT302	2 11 / 64" x 6 7 / 64"	3.42 oz.	
VT303	2 11 / 64" x 6 7 / 64"		2.78 oz
VT304	2 11 / 64" x 5 29 / 32"		2.78 oz
VT305	0.1"	2 11/64" x 5 5/16"	2.78 oz

Packaging		EAN code	54 10329 42126 7
Carton		UPC code	

VT301

Packaging		EAN code	54 10329 42127 4
Carton		UPC code	

VT302

Packaging		EAN code	54 10329 42128 1
Carton		UPC code	

VT303

Packaging		EAN code	54 10329 42129 8
Carton		UPC code	

VT304

Packaging		EAN code	54 10329 42130 4
Carton		UPC code	

VT305

COMPACT MULTIPURPOSE PLIERS - 28 IN 1
VTMPP3

Universal pliers, awl, knife, saw, bottle opener, scissors, 12 bits, etc. Made of stainless steel.
Features:
• comes with belt bag

Packaging		EAN code	54 10329 20465 5
Carton	/48	UPC code	8 36479 00516 7

COMPACT HIGH-QUALITY STAINLESS STEEL MULTIPURPOSE PLIERS
VTMPP6

Features:
• multipurpose pliers: knife, pliers, cutter, screwdriver, files, saw, bottle opener, can opener, etc.
• comes with black carrying bag and keychain

Specifications:
• length (folded): 2 19/32"
• weight: 3 oz

Packaging		EAN code	54 10329 38539 2
Carton		UPC code	

TOOL SET / 5PCS DIFFERENT PLIERS
VTSET

Stainless-steel precision pliers set (5 pcs) : diagonal cutter, top cutter, bent nose pliers, flat nose pliers, long nose pliers.

Features:
• supplied in blister

Packaging		EAN code	54 10329 21156 1
Carton	/30	UPC code	8 36479 00529 7

STRIPPERS AND CUTTERS

JOKARI TOOLS

JOKARI CABLE & WIRE STRIPPER (Ø5/16" - 1 7/64")
VT10282

Features:
• for all common round cables (Ø5/16" - 1 7/64")
• with screw to adjust cutting depth
• spare inner knife: VT10282/SP1

Specifications:
• length: 6 11/16"
• weight: 3 oz

Packaging		EAN code	40 11391 10282 8
Carton	/170	UPC code	

JOKARI AUTOMATIC WIRE STRIPPER
VT20040

Features:
• for all common flexible and solid cables with diameters of 0.5 - 4.0 mm²
• it is not necessary to adjust the diameter. The scanning system avoids any damage to the conductor.
• integrated side cutter for wires of up to Ø5/64" and an optical linear measure of 5/16"-15/32"
• the body of the stripper consists of fibreglass-reinforced polyamide

Specifications:
• length: 7 9/32"
• weight: 3.38 oz

Packaging		EAN code	40 11391 20040 1
Carton	/90	UPC code	

JOKARI COAXIAL CABLE STRIPPER
VT30010

Features:
• the JOKARI coaxial cable stripper is perfectly suitable for fast and precise stripping of all common coax cables, e.g. TV antenna cable with a diameter from 4.8 up to 7.5mm, RG 58/59 as well as PVC round cables of 3 x 0.7 mm²
• the stripping process is done in two steps by different blades on both ends of the tool
• the easy and safe handling of the coaxial cable stripper makes this tool an immense aid for everday's work
• blades:
  - blade for outer sheathing
  - blade adjusting itself to cutting depth of inner conductor

Specifications:
• cable Ø: from 3/16" to 19/64"
• dimensions: 3 13/16" x 33/64" x 33/64"
• weight: 0.77 oz

Packaging		EAN code	40 11391 30010 1
Carton	/250	UPC code	

HEAVY-DUTY WIRE STRIPPER/CUTTER
VTSTRIP4

Features:
• cuts and strips 10-24 AWG copper wire, full or multicore
• crimps 10-22 AWG insulated terminals
• crimps 4-22 AWG non-insulated terminals
• crimps 0.275"-0.315" ignition terminals

Packaging		EAN code	54 10329 28292 9
Carton		UPC code	

UNIVERSAL STRIPPER
VT5021

Wire stripper, cutter, steel wire cutter, pliers (AWG 10,12, 14, 16, 18, 20, 22).

Specifications:
• size: 7.4"

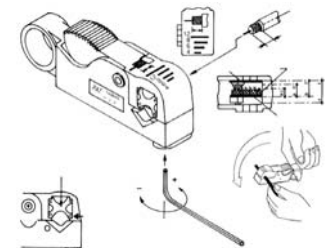| Packaging		EAN code	54 10329 20030 5
Carton	/100	UPC code	8 36479 00441 2

STRIPPER FOR COAX CABLE
VTCOAX

Rotary coax cable stripper, no replacement cassettes needed for stripping RG58/59/62/6/3C2V,... Stripping "D" : 0.16"/0.24"/0.31"/0.47". In front of the V-block, the mark 6=RG6, 8=RG58 and 3C2V, 9=RG59 / R662
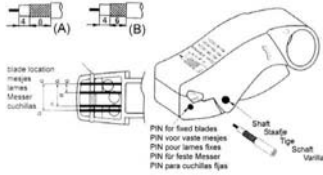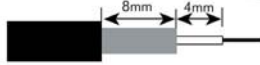
Packaging		EAN code	54 10329 20031 2
Carton	/200	UPC code	8 36479 00451 1

12mm

COAX STRIPPER - 3 BLADES
VTCOAX3

Coax cable stripper with 3 adjustable knives. Strips RG-58 / 59 / 62 cables. Also removes the outer insulation.

Packaging		EAN code	54 10329 20009 1
Carton	/160	UPC code	8 36479 00452 8

8mm 4mm

(A) (B)

blade location
meejes
lames
Messer
cuchillas

PIN for fixed blades
PIN voor vaste mesjes
PIN pour lames fixes
PIN für feste Messer
PIN para cuchillas fijas

Shaft
Staafje
Tige
Schaft
Varilla

COAX CABLE STRIPPER/CUTTER
VTCOAXF

For round cables, stranded wire, UTP, multiconductor cable & irregularly shaped cable.
Specifications:
• set of spare cutters (6pcs): -

Packaging		EAN code	54 10329 20040 4
Carton	/100	UPC code	8 36479 00453 5

SELF-ADJUSTING STRIPPER/CUTTER
VTSTRIP

Deluxe wire cutter/stripper tool. A quick and very user-friendly tool, providing improved efficiency and safety.
Specifications:
• maximum strip length: 1.0"
• strips wires from 0.01" sq. to 0.24" sq.

Packaging		EAN code	54 10329 20400 6
Carton	/60	UPC code	8 36479 00547 1

LOW-COST ADJUSTING STRIPPER/CUTTER
VTSTRIPL

Specifications:
• maximum strip length: 1.0"
• strips wires from 0.01" sq. to 0.24" sq.

Packaging		EAN code	54 10329 21622 1
Carton	/100	UPC code	8 36479 00549 5

CRIMPING TOOLS

CRIMPING TOOLS FOR MODULAR JACKS

RATCHET CRIMP/CUT/STRIP TOOL
VT070

Features:
• 2 positions for: 8P8C (RJ-45), 6P6C (RJ-12) & 6P4C (RJ-11)
• ratchet type

Packaging		EAN code	54 10329 20774 8
Carton		UPC code	8 36479 00613 3

NON-RATCHET CRIMP/CUT/STRIP TOOL
VT071

Features:
• 2 positions for: 8P8C (RJ-45), 6P6C (RJ-12) & 6P4C(RJ-11)
• non-ratchet type

Packaging		EAN code	54 10329 20773 1
Carton		UPC code	8 36479 00612 6

CRIMPING TOOL FOR CONNECTOR 4P4C, 4P2C (RJ11)
VTM4

Features:
• for RJ11 modular connectors
Specifications:
• set of spare cutters (6pcs): -

Packaging		EAN code	54 10329 20039 8
Carton	/60	UPC code	8 36479 00503 7

CRIMPING TOOL FOR CONNECTOR 6P6C, 6P4C, 6P2C, 4P4C, 4P2C (RJ11, RJ12)
VTM4/6
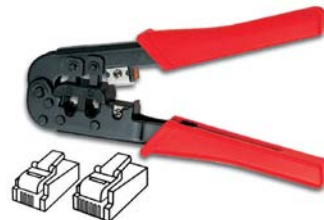
Features:
• for RJ11, RJ12 modular connectors

Packaging		EAN code	54 10329 20034 3
Carton	/50	UPC code	8 36479 00504 4

CRIMPING TOOL FOR CONNECTOR 4P4C, 6P4C, 8P8C (RJ10, RJ11, RJ45)
VTM468L
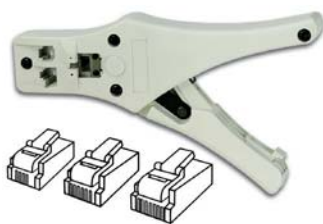
Features:
- for RJ10, RJ11, RJ45 modular connectors (4P4C, 6P4C, 8P8C)
- US-type crimping tool
- ABS

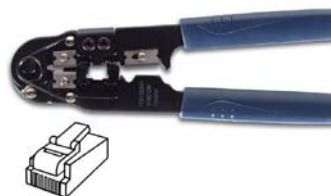| Packaging		EAN code	54 10329 20669 7
Carton	/50	UPC code	8 36479 00505 1

MODULAR CONNECTOR CRIMPING TOOL
VTM468
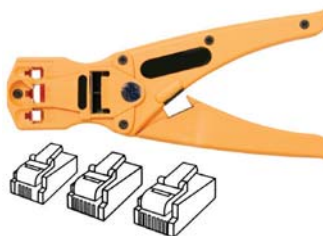
Specifications:
- crimps: 8P2C, 8P4C, 8P6C, 8P8C, 6P2C, 6P4C, 6P6C, 4P2C, 4P4C
- includes stripper and cutter function
- dimensions: 7.9" x 2.4" x 1.0"
- weight: 6.3oz

Packaging		EAN code	54 10329 20004 6
Carton	/10	UPC code	8 36479 00727 7

MODULAR CONNECTOR CRIMP TOOL
VTM468P
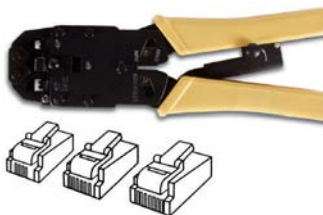
Specifications:
- crimps: 8P2C, 8P4C, 8P6C, 8P8C, 6P2C, 6P4C, 6P6C, 4P2C, 4P4C
- can also be used as a stripper or cutter
- dimensions: 8.1" x 2.6" x 0.8"

Packaging		EAN code	54 10329 21527 9
Carton	/50	UPC code	

CRIMPING TOOL FOR CONNECTOR 6P6C, 6P4C, 6P2C (RJ12)
VTM6

Features:
- for RJ12 modular connectors

Specifications:
- set of spare cutters (6pcs): -

Packaging		EAN code	54 10329 20362 7
Carton	/60	UPC code	8 36479 00507 5

CRIMPING TOOL FOR CONNECTOR 6P6C, 6P4C, 8P8C (RJ12, RJ45)
VTM6/8
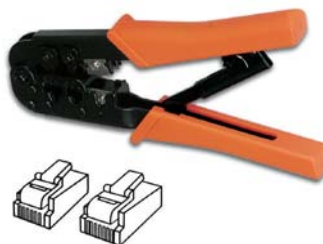
Features:
- for RJ12, RJ45 modular connectors

Packaging		EAN code	54 10329 20035 0
Carton	/50	UPC code	8 36479 00508 2

CRIMPING TOOL KIT FOR CONNECTOR 6P6C, 6P4C (RJ12) (50 pcs)
VTM6S

3-way tool : cutting, stripping, crimping
Features:
- comes in plastic box with 50 pcs of RJ12 plugs
- for RJ12 modular connectors
- steel frame with black oxide finish

Packaging		EAN code	54 10329 22004 4
Carton	/20	UPC code	

CRIMPING TOOL FOR CONNECTOR 8P8C (RJ45)
VTM8

Features:
- for RJ45 modular connectors

Specifications:
- set of spare cutters (6pcs): -

Packaging		EAN code	54 10329 20036 7
Carton	/60	UPC code	8 36479 00509 9

CRIMPING TOOL KIT FOR NETWORK CABLES
VTMUS2

Features:
- includes:
  - LAN tester
  - telecom impact tool
  - crimping tool for connectors 6PC, 8PC (RJ12, RJ45)
  - coax cable stripper/cutter
  - coax cable stripper
  - 45 modular plugs: 15 x 6P4C, 15 x 6P6C, 15 x 8P8C

Packaging		EAN code	54 10329 33017 0
Carton	/5	UPC code	8 36479 00841 0

CRIMPING TOOL KIT FOR NETWORK CABLES
VTMUS3

NEW

Features:
- includes:
  - crimping tool for: 8P8C/RJ45, 6P6C/RJ12, 6P4C/RJ11, 4P4C
  - LAN tester
  - UTP/STP wire stripper & cutter
  - punch down tool with 66 & 110/88 blades
  - 125 modular plugs: 50 x 6P6C, 50 x 4P4C, 25 x 8P8C

Specifications:
- power supply LAN tester: 1 x E-block 9V battery (6LR61, not incl.)

Packaging		EAN code	54 10329 45988 8
Carton		UPC code	

6PCS SPARE CUTTERS
VT/SP2

Specifications:
- 6pcs
- for VTMUS, VTM4, VTM6 or VTM8

Packaging		EAN code	54 10329 23420 1
Carton	/50	UPC code	

CRIMPING TOOLS

RATCHET CRIMPING TOOL FOR NON-INSULATED TERMINALS
VTBNCU1

Specifications:
- size: 256" .319" .068" .213"
- description: RG 58, 59 ,62, 6

Packaging		EAN code	54 10329 32249 6
Carton	/30	UPC code	

SELF ADJUSTING FAST CRIMPING TOOL FOR CORD-END SLEEVE CONNECTORS
VTECT4

NEW

Features:
- self adjusting: suitable for a whole range of cord end sleeves
- pressure on 4 sides: better contact than traditional crimping profiles
- simple and reliable, comfortable to operate
- medium carbon steel with black oxide finish
- strong electroplated metal crimping jaws
- reinforced spring
- for "cord end" connectors: FCEW, FCEGY, FCER, FCEBK, FCEB

Specifications:
- cross section: 1/64" x 15/64"
- length: 7 1/64"
- weight: 13 oz.

Packaging		EAN code	54 10329 43568 4
Carton		UPC code	

COAX CRIMPING TOOL RATCHET TYPE
VTBNC

For crimping BNC/TNC/N/F.
Features:
- spare die: VTBNC/SP1

Specifications:
- RG cable: 59, 62, 140, 210, BELDEN 8279, 55, 58, 141, 142, 223, 303, 400, FIBREOPTIC
- size: 8.7"
- crimper die:
  - 0.256" (6.5mm)
  - 0.213" (5.41mm)
  - 0.068" (1.72mm)

Packaging		EAN code	54 10329 21525 5
Carton	/50	UPC code	8 36479 00442 9

CRIMPING TOOL FOR F & BNC CONNECTORS
VTFBNC

Specifications:
- for crimping cables: BNC, TNC, UHF, SMA - 59, 62, 140, 210, 55, 58, BELDEN : 8279, 141, 142, 223, 303, 400
- size: 9.0"

Packaging		EAN code	54 10329 20755 7
Carton	/20	UPC code	

COAX TOOL SET, CRIMPING, CUTTING & STRIPPING TOOL
VTBNCS

Includes : 1 crimping tool with set of 5 dies to crimp all types of coaxial connectors, 1 cable cutter (Ø up to 0.41"), 1 coax stripper, 1 mounting screwdriver. Comes with blowmolded case.
Specifications:
- coax stripper: RG-58/59/62/6/6QS/3C/4C/5C/...
- cutter: up to 10.5mm
- crimper die:
  - 336A4: RG58, 59, 62, 140, 141, 142, 210, 223, 174, 303, 400, Fiber Optic, BELDEN 8279
  - 336C: RG6, 59, 62, 140, 210, BELDEN 8279, 55, 58, 141, 142, 223, 303, 400, Fiber Optic
  - 336G: RG 55, 58, 59, 62, 8X, 140, 141, 142, 210, 223, 303, 400, BELDEN 8279, Fiber Optic
  - 336J: RG122, 174, 178, 179, 180, 187, 188, 195, 316, BELDEN 8218, Fiber Optic
  - 336K: RG8, 9, 11, 87A, 149, 165, 174, 179, 187, 188, 213, 214, 216, 225, 316, BELDEN 9913

Packaging		EAN code	54 10329 21162 2
Carton	/10	UPC code	8 36479 00443 6

HIGH-PRECISION CRIMPING TOOL FOR NON-INSULATED TERMINALS
VTM504

High-precision crimping tool for non-insulated terminals.
Specifications:
- crimping range: 1.5, 2.5, 6, 10, 16mm (AWG16-18, 14-16, 10-12, 8, 6)
- crimper made of alloy steel, frame made of carbon steel, overall black oxide finish
- length: 12 1/2" (315mm)

Packaging		EAN code	54 10329 20614 7
Carton		UPC code	

CRIMPING TOOL FOR CORD-END CONNECTOR
VTECT3

Easy crimping for cord-end connectors from 0.02" sq. to 0.24" sq. Wire cutter and stripper.
Features:
- for "cord end" connectors: FCEW, FCEGY, FCER, FCEBK, FCEB

Specifications:
- size: 5 45/64"

Packaging		EAN code	54 10329 39607 7
Carton		UPC code	8 36479 00858 8

HEAVY-DUTY CRIMPING TOOL FOR FAST-ON
VTHCT
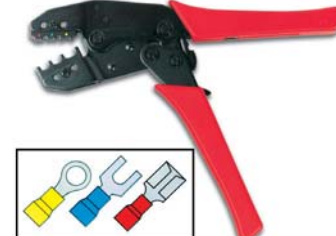
For crimping insulated terminals : red, blue, yellow.
Specifications:
- crimping wire size:
  - AWG: 22-18, 16-14, 12-10
  - inches: 0.02-0.04"sq., 0.06-0.10" sq., 0.16-0.24" sq.
- size: 8.7"

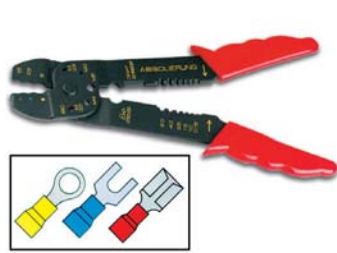| Packaging		EAN code	54 10329 20229 3
Carton	/30	UPC code	8 36479 00474 0

LOW-COST CRIMPING TOOL 8" FOR FAST-ON
VTCT

4-way crimping tool : crimper terminal (for insulated terminals), screw cutter (for M2-M5), wire cutter and wire stripper.
Specifications:
• size: 8.1"

| Packaging | EAN code | 5 410329 21280 3 |
| Carton | /100 | UPC code | 8 36479 00454 2 |

RATCHET CRIMPING TOOL FOR NON-INSULATED TERMINALS
VTNCT

Specifications:
• wire size: AWG 10-12, 14-16, 18-20
• size: 8.7"

| Packaging | EAN code | 5 410329 20037 4 |
| Carton | /30 | UPC code | 8 36479 00519 8 |

SPARE DIE FOR VTBNC
VTBNCSP

Specifications:
• for: for VTBNC

| Packaging | EAN code | 5 410329 23421 8 |
| Carton | | UPC code | |

SPECIAL TOOLS

EXTRACTORS

LOW-COST IC EXTRACTION TOOL
VTIC

Specifications:
• size: 4.1"

| Packaging | EAN code | 5 410329 20007 7 |
| Carton | /1000 | UPC code | 8 36479 00497 9 |

WIRE PRONG HOLDER
VTP

Easily picks up small bits and pieces.
Specifications:
• pencil model with hook clip
• size: 4.5"

| Packaging | EAN code | 5 410329 20307 8 |
| Carton | /100 | UPC code | 8 36479 00520 4 |

PLCC EXTRACTOR
VTPLCC

Specifications:
• suitable for 18-pin to 124-pin PLCC IC's
• weight: 1oz

| Packaging | EAN code | 5 410329 20306 1 |
| Carton | /200 | UPC code | 8 36479 00522 8 |

CABLE TYING TOOL
VTCTT

Specifications:
• Ø: up to 0.09"
• size: 6.3"
• with cutter knife

| Packaging | EAN code | 5 410329 20032 9 |
| Carton | /60 | UPC code | 8 36479 00456 6 |

5" GRIPPING TOOL
VTGT

Specifications:
• length: 5"
• max. jaw opening: 1.2"
• comes in "fish bowl": 30pcs

| Packaging | EAN code | 5 410329 20058 9 |
| Carton | /4 | UPC code | |

4" QUICK RATCHETING BAR CLAMP AND SPREADER
VTGT20N

Features:
• 4", 100mm jaw opening
• easy to use
• nylon fibre filled jaws
• robust and light

| Packaging | EAN code | 5 410329 40826 8 |
| Carton | | UPC code | |

IDC CRIMPING TOOL
VTIDC

Steel frame. This tool makes it easy to connect flat cables with IDC-type connectors. Crimps connectors from 0.24" to 1.08".
Specifications:
• size: 9.6"

| Packaging | EAN code | 5 410329 20033 6 |
| Carton | /30 | UPC code | 8 36479 00498 6 |

SPARE BLADE FOR VTPD
VTPD/SB

Specifications:
- 110/88 blade included
- for VTPD & VTPD2

Packaging		EAN code	54 10329 23440 9
Carton	/20	UPC code	

TELECOM TOOL
VTPD2

Features:
- for seating wire into terminal blocks or cutting off wire ends
- economic type

Specifications:
- length: 4.5"
- spare blade for VTPD2: VTPD/SB

Packaging		EAN code	54 10329 20010 7
Carton		UPC code	8 36479 00596 9

TELECOM IMPACT TOOL
VTPD4

Features:
- 'hi-lo' selector determines the cutting power of the blade and the pressure this blade exerts on the cable
- built-in combination hook/spludger for wire handling
- comfortable handle
- easy blade replacement
- with safe storage space for one spare blade
- interchangeable and reversible blades
- spare blade: VTPD4/SB

Specifications:
- blade: 110/88 type
- length: 6.6"

Packaging		EAN code	54 10329 24225 1
Carton	/72	UPC code	

SPARE BLADE FOR VTPD4
VTPD4/SB

Features:
- for: VTPD4

Packaging		EAN code	54 10329 24224 4
Carton		UPC code	

COMBINATION SNAP RING PLIERS
VTSRP

Specifications:
- effective range: 0.39"-1.97"
- comes with convertible tips of 180°, 90° and 45°
- jaws can be interchanged for 6 different purposes (internal / external)
- dimensions: 5.5"
- supplied in blister

Packaging		EAN code	54 10329 20328 3
Carton	/60	UPC code	8 36479 00544 0

TWEEZERS

SMOOTH NOSE TWEEZERS
VTTW1

Specifications:
- anti-magnetic stainless steel
- length: 5.3"

Packaging		EAN code	54 10329 20161 6
Carton	/100	UPC code	8 36479 00557 0

FLAT NOSE TWEEZERS
VTTW2

Specifications:
- anti-magnetic stainless steel
- length: 5.3"

Packaging		EAN code	54 10329 20310 8
Carton	/100	UPC code	8 36479 00558 7

SHARP NOSE TWEEZERS
VTTW3

Specifications:
- anti-magnetic stainless steel
- length: 4.72"

Packaging		EAN code	54 10329 20311 5
Carton	/150	UPC code	8 36479 00559 4

BENT NOSE TWEEZERS
VTTW4

Specifications:
- anti-magnetic stainless steel
- length: 4.72"

Packaging		EAN code	54 10329 20194 4
Carton	/200	UPC code	8 36479 00560 0

BENT NOSE AND STRAIGHT TWEEZERS SET
VTTW5

NEW

Features:
- ideal for intricate work involving miniature parts e.g. repairing watches
- stainless steel with PVC coating: perfect for computer-, electronic-, radio- and other small assembly work

Specifications:
- bent nose tweezer:
  - length: 5 3/4"
  - nose: 1 9/64"
  - angle: 45°
  - weight: 0.8 oz
- straight tweezer:
  - length: 5 3/4"
  - nose: 63/64"
  - width: 29/64"
  - weight: 0.88 oz

Packaging		EAN code	54 10329 42392 6
Carton		UPC code	8 36479 00924 0

SET OF 4 TWEEZERS
VTTWSET

Specifications:
• 1 bent nose, 1 flat spade, 1 self-closing and 1 normal
• anti-magnetic stainless steel

| Packaging | | EAN code | 54 10329 20332 0 |
| Carton | /250 | UPC code | 8 36479 00561 7 |

SET OF 4 TWEEZERS - NON-CONDUCTIVE
VTTWSET2

Specifications:
• non-conductive

| Packaging | | EAN code | 54 10329 20011 4 |
| Carton | /150 | UPC code | 8 36479 00572 3 |

HAMMERS

SMALL HAMMER
VTHAM1

Specifications:
• weight: 3.53oz

| Packaging | | EAN code | 54 10329 32984 6 |
| Carton | /120 | UPC code | |

TOOL SETS

SOLDERING TOOL SETS

TOOL KIT (18 pcs)
VTSET23U

Specifications:
• contents:
  - 30W soldering iron
  - desoldering pump
  - solder in dispenser 1.0mm 17g
  - snap-off knife
  - heavy-duty long nose pliers
  - heavy-duty universal pliers
  - adjustable wrench
  - heavy-duty universal cutter
  - self-adjusting wire stripper
  - PLCC extraction tool
  - screwdriver / voltage tester with neon indicator 5 x 90mm
  - screwdrivers:
    · cross:
      | 1/4" x 4 9/10"
      | 1/5" x 2 9/10"
      | 1/10" x 2 9/10"
    · flat:
      | 1/4" x 4 9/10"
      | 1/5" x 2 9/10"
      | 1/10" x 2 9/10"
• dimensions: 13 25/64" x 8 21/32" x 2 11/64"
• weight: 4 lbs

| Packaging | | EAN code | |
| Carton | /10 | UPC code | 8 36479 00757 4 |

TOOL KIT (8 pcs)
VTSET24U

Specifications:
• contents:
  - 30W soldering iron
  - desoldering pump
  - soldering stand with cleaning sponge
  - solder in dispenser 1.0mm 17g
  - miniature diagonal cutter
  - pair of tweezers
  - digital multimeter: DVM830L
  - precision screwdriver set:
    · cross:
      | 1/7"
      | 1/9"
      | 1/11"
    · flat:
      | 1/12"
      | 1/19"
      | 1/25"
• dimensions: 12 19/32" x 7 3/32"
• weight: 2.64 lbs

| Packaging | | EAN code | |
| Carton | /20 | UPC code | 8 36479 00755 0 |

TOOL KIT (11 pcs)
VTSET25U

Specifications:
• contents:
  - 30W soldering iron
  - desoldering pump
  - snap-off knife
  - miniature long nose pliers
  - miniature diagonal cutter
  - screwdrivers:
    · cross:
      | 2/10" x 4 9/10"
      | 2/10" x 2 9/10"
      | 1/10" x 2 9/10"
    · flat:
      | 2/10" x 4 9/10"
      | 2/10" x 2 9/10"
      | 1/10" x 2 9/10"
• dimensions: 10 4/5" x 6 1/3" x 1 7/10"
• weight: 1.8 lbs

| Packaging | | EAN code | |
| Carton | /20 | UPC code | 8 36479 00756 7 |

TOOL KIT (19 pcs)
VTSET26U

Specifications:
• contents:
  - 30W soldering iron
  - solder in dispenser 0.04" 0.6oz
  - miniature long nose pliers
  - miniature diagonal cutter
  - pair of tweezers
  - digital multimeter: DVM830L
  - crimping / cutting tool for fast-on connectors
  - self-adjusting wire stripper
  - soldering aid kit (6pcs): VTSA
  - screwdriver / voltage tester with neon indicator 5 x 90mm
  - screwdrivers:
    · cross:
      | 0.20" x 2.95"
      | 0.09" x 2.95"
    · flat:
      | 0.20" x 2.95"
      | 0.09" x 2.95"
• dimensions: 13.39" x 8.66" x 1.97"
• weight: 2.76lbs

| Packaging | | EAN code | |
| Carton | /10 | UPC code | 8 36479 00758 1 |

UNIVERSAL QUICK-RELEASE BIT SET - 29 pcs + HOLDER
VTBT17

NEW

Features:
• set of 29 security bits in S2 steel
• magnetic quick-release holder for screw machines
• storage box with rotating belt clip
• contents:
  - flat: SL3.0/SL4.5/SL5.5/SL6.5
  - cross: PH0/PH1/PH2/PH3
  - pozi: PZ0/PZ1/PZ2/PZ3
  - hex: H2/H2.5/H3/H4/H5/H6
  - star: T6H/T7H/T8H/T9H/T10H/T15H/T20H/T25H/T27H/T30H/T40H

Specifications:
• dimensions: 4 9/64" x 2 7/8" x 1 11/16"
• weight: 9 oz

Packaging	EAN code
	54 10329 42131 1
Carton	UPC code

30-IN-1 PRECISION SCREWDRIVER SET
VTSCRSET15

NEW

Features:
• general purpose reversible ratchet screwdriver with bit set
• extensible shaft for enhanced accessibility
• handle can contain 14 double-end screwdriver bits
• contents:
  - flat: 1.0/1.5/2.0/2.5/3.0/3.5/4.0
  - cross: PH000/PH00/PH0/PH1
  - pozi: PZ0/PZ1
  - star: T4/T5/T6/T7/T8/T9/T10/T15/T20
  - hex: H0.7/H0.9/H1.3/H1.5/H2.0/H2.5/H3.0/H4.0
  - ratchet screwdriver

Specifications:
• weight: 2.65 oz.
• length extensible shaft: 1.61" ~ 4.29"

Packaging	EAN code
	54 10329 42125 0
Carton	UPC code
	8 16353 01028 9

INSULATED SCREWDRIVER SET - 1000V - VDE - 7 pcs
VTSCRSET16

NEW

Features:
• electrical insulation (1000V) - VDE (IEC 60900)
• black magnetic CVS tips
• ergonomic interchangeable handgrip
• certified to IEC, VDE and DIN 1000V safety standards
• dropforged and heat-treated
• contains:
  - 4 x flat: 2.5/3.5/5.5/6.5
  - 3 x cross: PH0/PH1/PH2

Specifications:
• dimensions carrying case: 6.89" x 12.60" x 1.57"
• weight: 18oz

Packaging	EAN code
	54 10329 42812 9
Carton	UPC code

TOOL KIT FOR GAMING CONSOLES - 27 pcs.
VTSCRSET20

NEW

Great tool kit for anyone working on gaming consoles or other consumer electronics with special types of screws and fasteners.
The ratchet handle features forward, reverse and locking function for easy operation.

Features:
• to open most gaming consoles in the market: Xbox®, Xbox®360, PlayStation®3, PlayStation®2, PlayStation®Portable (PSP), Nintendo®, ...
• handle:
  - rotating head: to facilitate support and rotation control
  - soft grip handle: ergonomic handle for flexible grip position and torque
  - groove: for better grip and faster rotation
  - blade: consists of a HQ chrome-steel alloy, heat-treated
  - ratchet: clockwise - lock - anticlockwise
• comes in plastic storage box

Specifications:
• contains:
  - 1 x handle: rachet handle 5.5"
  - 1 x extension bitholder: extension bitholder 4.53"
  - 20 bits (1"):
    · flat: 2.0, 3.0, 4.0
    · PH: 000, 00, 0, 1
    · PZ: PZ0, PZ1
    · star: T4, T5, T6, T7, T8, T9, T10, T15, T20
    · hex: 1.3
    · tri-wing: 1.5, 2.0, 3.0
    · star + centre: T5H, T6H, T8H, T10H, T15H, T20H
  - 1x: multifunctional opening tool
  - 1x: tweezers
  - 1x: Nintendo bit holder
  - 2 bits (1.53"): Nintendo
• weight: 12.56 oz

Packaging	EAN code
	54 10329 44127 2
Carton	UPC code
	8 16353 01080 7

BIT SET WITH RATCHET SCREWDRIVER - 101 pcs
VTTS12

NEW

Features:
• handy, all-in-one 101-piece ratchet set
• reversible ratchet handle
• S2 bits
• comes in a handy storage box

Specifications:
• contents:
  - 1" screwdriver bits (95 pcs):
    · Phillips: 2 x PH0, 2 x PH1, 3 x PH2, 2 x PH3
    · flat: 1/8" , 5/32" , 13/64" , 15/64"
    · pozi: PZ0, 2 x PZ1, 3 x PZ2, 2 x PZ3
    · star: T8, 2 x T10, 2 x T15, 2 x T20, 2 x T25, T27, T30, T40, T45
    · security star: T8, T10, T15, T20, T25, T27, T30, T40, T45
    · hex: H1.5, H2, H2.5, H3, H4, H4.5, H5, H5.5, H6mm
    · hex (SAE): H1/16", H5/64", H3/32", H7/64", H1/8", H9/64", H5/32", H3/16", H7/32", H1/4"
    · security hex: 5/64" , 3/32" , 1/8" , 5/32" , 13/64" , 15/64"
    · security hex (SAE): 5/64", 3/32", 7/64", 1/8", 9/64", 5/32"
    · square: S0, S1, S2, S3
    · spanner: 4, 6, 8, 10
    · four-wing: 6, 8, 10
    · tri-wing: 1, 2, 3, 4
    · clutch: 1, 2, 3
    · spline: M5, M6, M8
  - adaptors (5 pcs):
    · 1" bit adaptor
    · 2" bit adaptor
    · 2 23/64" bit adaptor
    · wing nut driver
    · 1" coupler
  - ratchet screwdriver
• dimensions: 9 1/16" x 5 29/32" x 1 37/64"
• weight: 2.12 lbs

Packaging	EAN code
	54 10329 42134 2
Carton	UPC code
	8 16353 01026 5

57-BITS SCREWDRIVER SET - CHROME-VANADIUM
VTTS7N

Features:
• ideal for DIY household repairs & projects
• all bits in chrome-vanadium
Specifications:
• contents:
  - cross bits: PH0, PH1, PH2, PH3
  - pozzi bits: PZ0, PZ1, PZ2, PZ3
  - fractional flat bits: 1/8, 5/32, 3/16, 1/4, 9/32
  - metric hex bits: H2, H2.5, H3, H4, H5, H5.5, H6
  - fractional hex bits: H1/16, H5/64, H3/32, H1/8, H5/32, H3/16, H1/4
  - square bits: S0, S1, S2, S3
  - 'star' bits: T10, T15, T20, T25, T27, T30, T40
  - metric flat bits: 2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7mm
  - sockets: 3/16, 1/4, 9/32, 5/16, 11/32, 3/8, 7/16, 15/32, 1/2 + adapter
  - holder for bits on both sides, 1 x hooked

| Packaging | | EAN code | 54 10329 35674 3 |
| Carton | /24 | UPC code | 8 36479 00801 4 |

BIT SET (40pcs)
VTBT12

Features:
• in metal box
Specifications:
• hexagonal chrome-vanadium shank 0.39": all bits in length 1.2" and 2.95"
• 7 x hexagonal: from 0.16" to 0.47"
• 7 x 'star': from T20 to T55
• m5-6-8-10-12
• drive ratchet adapters: 1/2" and 3/8"

| Packaging | | EAN code | 54 10329 34017 9 |
| Carton | /10 | UPC code | 8 36479 00764 2 |

10-IN-1 CR-V MINI PRECISION SCREWDRIVER SET
VTBT13

Electronics maintenance set in chrome-vanadium.
Features:
• contains:
  - handle
  - 1 x PH1
  - 1 x SL3.0
  - 8 x star (T5/T6/T7/T8/T9/T10/T15/T20)
Specifications:
• handle length: 3 27/64"
• screwdriver length: 1 49/64"
• dimensions carrying case: 3 15/16" x 3 17/64" x 55/64"

| Packaging | | EAN code | 54 10329 40314 0 |
| Carton | | UPC code | 8 36479 00855 7 |

12-IN-1 CR-V MINI PRECISION SCREWDRIVER SET
VTBT14

Electronics maintenance set in chrome-vanadium.
Features:
• contains:
  - handle
  - 3x cross: PH000/PH00/PH0
  - 3 x flat: 1.5/2.0/2.5
  - 6 x star: T5/T6/T7/T8/T9/T10
Specifications:
• handle length: 3 11/32"
• screwdriver length: 2 11/64"
• dimensions carrying case:
  - open: 7 9/16" x 3 47/64" x 25/32"
  - closed: 2 23/64" x 3 47/64" x 63/64"

| Packaging | | EAN code | 54 10329 40311 9 |
| Carton | | UPC code | 8 36479 00856 4 |

28-IN-1 CR-V MINI PRECISION SCREWDRIVER SET
VTBT15

Electronics maintenance set in chrome-vanadium.
Features:
• contains:
  - handle
  - adapter
  - extension bit holder (length 100mm)
  - 5 x cross: PH000/PH00/PH0/PH1/PH2
  - 5 x flat: 1.5/1.7/2.0/3.0/4.0
  - 8 x 'star': T5/T6/T7/T8/T9/T10/T15/T20
  - 7 x hex: 3.0/3.5/4.0/4.5/5.0/5.5/6.0
  - 2 x triangle: 2.0/2.5
Specifications:
• handle length: 4 9/64"
• dimensions carrying case: 4 21/64" x 5 29/32" x 55/64"

| Packaging | | EAN code | 54 10329 40326 3 |
| Carton | | UPC code | 8 36479 00857 1 |

12 pcs. 5/1 CRV SCREWDRIVER IN COUNTER DISPLAY
VTBT16

Features:
• 12 chrome-vanadium screwdrivers (5-in-1) in one display
• ratchet function: two directions and lock
• BIT storage space inside handle
• each screwdriver contains:
  - handle: 1x
  - PH1: 1x
  - PH2: 1x
  - PH3: 1x
  - SL5.0: 1x
  - SL6.0: 1x
Specifications:
• handle length: 4 9/64"
• bit length: 35/64"
• display dimensions: 14 29/64" x 11 1/16" x 10 43/64"
• weight screwdriver: 4 oz
• weight display: 3.30 Lbs

| Packaging | | EAN code | 54 10329 40899 2 |
| Carton | | UPC code | 8 36479 00901 1 |

PRECISION SCREWDRIVER SET - 32 pcs
VTSCRSET10
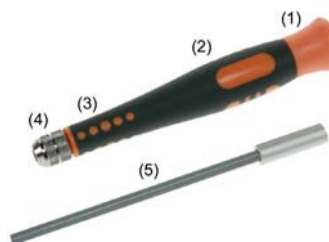
Features:
• special handle with swivel cap
• figure:
  - (1) rotating head: to facilitate support and rotation control
  - (2) soft grip handle: ergonomic handle for flexible grip position and torque
  - (3) groove: for better grip and faster rotation
  - (4) fastener: to ensure locking bits
  - (5) blade: consists of a HQ chrome-steel alloy, heat-treated
Specifications:
• contains:
  - 1 x handle: 4 29/64" x 25/32"
  - 1 x blade: 4 17/32" x 9/32"
  - 30 bits (1"):
    · flat: 1, 1.5, 2, 2.5, 3, 3.5, 4
    · PH: PH000, PH00, PH0, PH1
    · PZ: PZ0, PZ1
    · star: T4, T5, T6, T7, T8, T9, T10, T15, T20
    · hex: 0.7, 0.9, 1.3, 1.5, 2.0, 2.5, 3.0, 4.0
• weight: 4.23 oz

| Packaging | | EAN code | 54 10329 38519 4 |
| Carton | | UPC code | 8 36479 00900 4 |

TOOL SET - 41 pcs
VTSET28

Features:
- contains:
  - universal pliers: 140mm
  - ratchet handle: 140mm
  - ratchet screwdriver: 105mm
  - extension bar
  - bit adapter
  - 27 bits: PZ# 0, 1, 2, 3 ; PH# 1, 2, 3 ; S1, S2 ; T10, T15, T20, T25, T27, T30, T40 ; FLAT 3, 4, 5, 6, 7 ; HEX 2, 3, 4, 5, 5.5, 6
  - 9 sockets: 5, 6, 7, 8, 9, 10, 11, 12, 13mm

Specifications:
- supplied in plastic carrying case: 10 1/32" x 7 7/8" x 1 21/32"

Packaging		EAN code	54 10329 38742 6
Carton	/12	UPC code	8 36479 00851 9

PROFESSIONAL TOOLSET - 35 pcs
VTTS10

Features:
- ratchet with lock function
- two unique handles for more flexible work
- CrV bits

Specifications:
- contains:
  - 1/4" sockets (11 pcs): 5/32", 13/64", 7/32", 15/64", 9/32", 5/16", 23/64", 25/64", 7/16", 15/32", 33/64"
  - screwdriver bits (20 pcs):
    · Phillips: PH0, PH1, PH2, PH3
    · SL: 3, 5, 7mm
    · Pozidriv: PZ2
    · flat: 2.5, 3, 4, 5, 6, 8mm
    · star: T10, T15, T20, T25, T30, T40
  - 1/4" ratchet handle
  - handle driver
  - bit holder
  - 1/4" x 2" extension bar
  - storage case

Packaging		EAN code	54 10329 39051 8
Carton		UPC code	

PROFESSIONAL TOOLSET - 40 pcs
VTTS11

Features:
- handy, all-in-one 40-piece ratchet set
- reversible ratchet handle
- Cr-V bits

Specifications:
- contains:
  - 1/4" sockets (11 pcs): 5/32", 13/64", 7/32", 15/64", 9/32", 5/16", 23/64", 25/64", 7/16", 15/32", 33/64"
  - screwdriver bits (26 pcs):
    · Phillips: PH0, PH1, PH2, PH3
    · SL: 3, 4, 5, 6, 8mm
    · Pozidriv: PZ0, PZ1, PZ2, PZ3
    · flat: 2, 2.5, 3, 4, 5, 6, 7mm
    · star: T10, T15, T20, T25, T30, T40
  - adapter
  - magnetic bit holder (3 15/16")
  - 3-position reversible ratchet screwdriver

Packaging		EAN code	54 10329 39052 5
Carton		UPC code	8 36479 00899 1

SCREWDRIVER - 12 BITS " STAR "
VTTS9
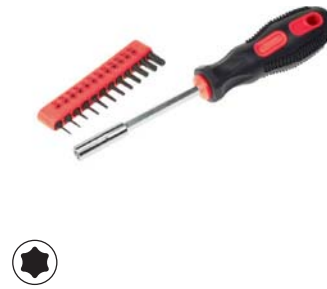
Features:
- universal handle to use with multiple bits
- bits are made of Chrome Vanadium steel
- sturdy handle with rubber coating

Specifications:
- contains:
  - screwdriver handle with bit holder
  - 12 'star' bits: T3, T4, T5, T6, T7, T8, T9, T10, T15, T20, T25, T30

Packaging		EAN code	54 10329 37033 6
Carton		UPC code	8 36479 00832 8

33 PCS BIT SET
VTBT6

Specifications:
- contents:
  - hex: #2, 2.5, 3, 4, 5, 6
  - 'star': # T10, T15, T20, T25, T30, T40
  - flat: 3, 4, 5, 6, 7
  - philips: 1 PH0, 2 PH1, 3 PH2, 2 PH3
  - pozzi: 2 PZ1, 3 PZ2, 2 PZ3
  - magnetic bit holder: 1/4" hex

Packaging		EAN code	54 10329 21402 9
Carton	/48	UPC code	8 36479 00723 9

SECURITY BIT SET / 33 PCS
VTBT5

Specifications:
- contents:
  - 'star': #T8, T10, T15, T20, T25, T27, T30, T35, T40
  - hex: #5/64", 3/32", 7/64", 1/8", 9/64", 5/32"
  - hex: #2, 2.5, 3, 4, 5, 6
  - tri-wing: #1, 2, 3, 4
  - fork: #4, 6, 8, 10
  - four-wing: #6, 8, 10
  - magnetic bit holder: 1/4" hex

Packaging		EAN code	54 10329 20518 8
Carton	/72	UPC code	8 36479 00668 3

100-PC SCREWDRIVER BIT SET
VTBT11

Features:
- chrome vanadium
- satin finish
- indispensable when working on: cars, machinery, household appliances, electric & electronic devices

Specifications:
- contents:
  - philips bits: PH.0, PH.1, PH.2 (5x), PH.3
  - pozzi bits: PZ.0, PZ.1, PZ.2 (5x), PZ.3
  - square bits: S0, S1, S2, S3
  - flat bits: 3, 4, 4.5, 5, 5.5, 6, 6.5, 7, 8mm
  - antenna remover bits: 4, 6, 8, 10
  - 'star' bits: T8, T10, T15, T20, T25, T27, T30, T40, T45
  - tri-wing bits: 6, 8, 10
  - 'star' with centre bits: T8, T10, T15, T20, T25, T27, T30, T35, T40
  - four-wing bits: 1, 2, 3, 4
  - metric hex bits: 1.5, 2, 2.5, 3, 4, 5, 5.5, 6, 8mm
  - clutch bits: 1, 2, 3
  - fractional hex bits: 1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32, 3/16, 7/32, 1/4
  - dodecagonal 'star' bits: M5, M6, M8
  - metric hex with centre bits: 2, 2.5, 3, 4, 5, 6mm
  - fractional hex with centre bits: 5/32, 9/64, 1/8, 7/64, 3/32, 5/64
  - 1 wing nut driver
  - 4 extension bits:
    · socket bit holder: 1 pc
    · magnetic bit holder: 1 pc
    · 1/4" sq. x 1/4" x 2" extension: 1 pc
    · 1/4" sq. x 1/4" x 1" extension: 1 pc

Packaging		EAN code	54 10329 31926 7
Carton	/24	UPC code	8 36479 00477 1

25-PC TOOLSET
VTTS

Specifications:
• contains:
  - 4.5" long nose pliers
  - 4.5" side cutter
  - stainless-steel tweezers
  - 1.4" sockets: 7, 8, 9, 10
  - magnetic screwdriver: 1.0"
  - 10 bits: flat 0.12", 0.20", 0.28"; philips #1, #2, #3 (0.98") ; 'star' #T10, #T20, #T30
  - 6 precision screwdrivers: flat and philips
• dimensions carrying case: 6.1" x 3.9" x 1.9"

Packaging		EAN code	54 10329 20297 2
Carton	/30	UPC code	8 36479 00551 8

11 PC TOOL SET
VTSET18

Specifications:
• contents:
  - flat screwdrivers: 0.16" x 3.9", 0.12" x 3.0", 0.22" x 4.9", 0.26" x 5.9"
  - philips screwdrivers: PH#0 x 3.0", PH#1 x 3.9", PH#2 x 3.9"
  - voltage tester with neon indicator: 230V - 250V
  - heavy-duty pliers: 6.3"
  - heavy-duty long nose pliers: 6.3"
  - heavy-duty universal cutter: 5.9"

Packaging		EAN code	54 10329 21361 9
Carton	/10	UPC code	

SCREWDRIVER SET 7 pcs - 12 BITS
VTSET20

Features:
• bit length adjustable (0.6" - 3.7") by sliding it up into or out of the hollow handle
• 6 different blades (12 bits) (L : 4.3")
Specifications:
• contents:
  - 1 handle (L : 4.3")
  - philips: PH00, PH1
  - flat: 0.08", 0.16"
  - 'star': T5, T6, T7, T8, T9, T10, T15, T20

Packaging		EAN code	54 10329 22279 6
Carton	/100	UPC code	

10-PC SCREWDRIVER SET
VTTS2

The bitholder has a holder for bits on both sides.
Specifications:
• comes with 10 bits:
  - slotted: 5mm, 6 mm
  - cross: PH1, PH2
  - star: T10, T15, T20
  - hex: H3, H4, H5

Packaging		EAN code	54 10329 20318 4
Carton	/100	UPC code	8 36479 00552 5

34-PC PROFESSIONAL TOOLSET
VTTS4

Specifications:
• contains:
  - 5.9" flexible blade
  - magnetic pick-up tool
  - T-ratchet handle
  - 4" stainless steel holder
  - 19 bits: PZ#1, 2, 3 ; #T10, #T15, #T20, #T25, #T30, #T40 ; HEX 3, 4, 5, 6 ; FLAT 4, 6, 7 ; PHILIPS PH#.1, PH#.2, PH#.3 + 1 bit adapter
  - 9 sockets: 0.20", 0.24", 0.28", 0.31", 0.35", 0.39", 0.43", 0.47", 0.51"
• dimensions carrying case: 10.4" x 6.4" x 2.0"

Packaging		EAN code	54 10329 22011 2
Carton	/12	UPC code	8 36479 00554 9
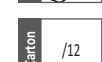
SCREWDRIVERS

SCREWDRIVERS - ELECTRONIC

SCREWDRIVERS - PHILIPS

SCREWDRIVER PH0 / 4.7"
VTC1

PH#0

Specifications:
• PH#0
• length: 4.7"

Packaging		EAN code	54 10329 20321 4
Carton	/100	UPC code	8 36479 00446 7

SCREWDRIVER PH0-3 / 6.7"
VTC2

PH#3

Specifications:
• PH#0-3
• length: 6.7"

Packaging		EAN code	54 10329 20322 1
Carton	/100	UPC code	8 36479 00447 4

SCREWDRIVER PH1 / 10.0"
VTC3

PH#1

Specifications:
• PH#1
• length: 10.0"

Packaging		EAN code	54 10329 20338 2
Carton	/100	UPC code	8 36479 00448 1

ELECTRONIC SCREWDRIVERS - FLAT

SCREWDRIVER FLAT 0.06" / 4.7"
VTF1

.06"

Specifications:
• flat 0.06"
• length: 4.7"

Packaging		EAN code	54 10329 20329 0
Carton	/100	UPC code	8 36479 00464 1

SCREWDRIVER FLAT 0.09" / 6.7"
VTF2

Specifications:
- flat 0.09"
- length: 6.7"

.09"

| Packaging | EAN code | 54 10329 20337 5 |
| Carton | /100 | UPC code | 8 36479 00465 8 |

POCKET SCREWDRIVERS

2-IN-1 POCKET SCREWDRIVER - 50 PCS IN PLASTIC JAR
VTCF1ND — **NEW**
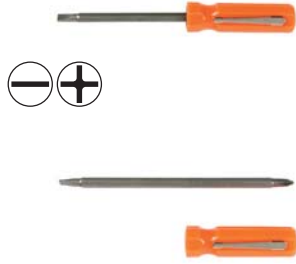
Features:
- screwdriver 2-in-1 (50x)
- cross & flat tip
- with pocket clip

Specifications:
- each screwdriver:
  - total length: 4 23/32"
  - weight: 0.8 oz
  - tip:
    · flat: 13/64"
    · cross: PH1
- total weight: 2.75 lbs

| Packaging | EAN code | 54 10329 42617 0 |
| Carton | UPC code | |

2-IN-1 POCKET SCREWDRIVER - 30 PCS IN PLASTIC JAR
VTCF2D — **NEW**

Features:
- screwdriver 2-in-1 (30x)
- cross & flat tip

Specifications:
- each screwdriver:
  - total length: 4 23/32"
  - weight: 1 oz.
  - tip:
    · flat: 11/64"
    · cross: PH1
- total weight: 1.76 lbs

| Packaging | EAN code | 54 10329 43985 9 |
| Carton | UPC code | |

PROFESSIONAL SCREWDRIVERS - CR-V STEEL

PROFESSIONAL SCREWDRIVERS - CROSS - MAGNETIC TIP

Features:
- made of Cr-V steel

Features:
- magnetic tip
- black-coated shaft
- specially injected ergonomic handle ensuring strong grip

Order Code	tip	shaft length	length with handle
VTSDPH0A	PH0	1 1/2"	6 1/4"
VTSDPH0D	PH0	4"	7 3/16"
VTSDPH1A	PH1	1 1/2"	3 13/16"
VTSDPH1C	PH1	3"	6 7/8"
VTSDPH1F	PH1	6"	7 7/8"
VTSDPH2A	PH2	1 1/2"	3 13/16"
VTSDPH2D	PH2	4"	8 7/16"
VTSDPH2F	PH2	5 15/16"	10 3/8"
VTSDPH3F	PH3	6"	10 3/8"

EAN 54 10329 40379 9 — VTSDPH0A
EAN 54 10329 40381 2 — VTSDPH0D
EAN 54 10329 40383 6 — VTSDPH1A
EAN 54 10329 40386 7 — VTSDPH1C
EAN 54 10329 40388 1 — VTSDPH1F
EAN 54 10329 40390 4 — VTSDPH2A
EAN 54 10329 40392 8 — VTSDPH2D
EAN 54 10329 40394 2 — VTSDPH2F
EAN 54 10329 40396 6 — VTSDPH3F
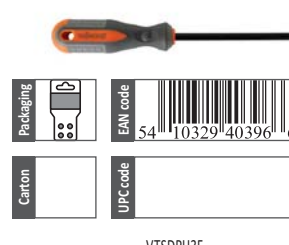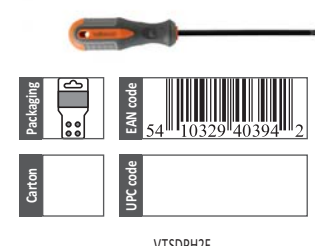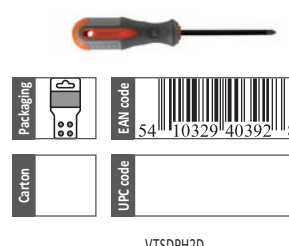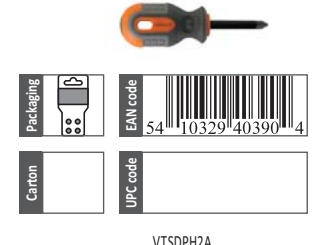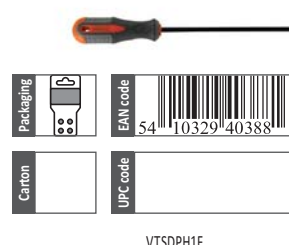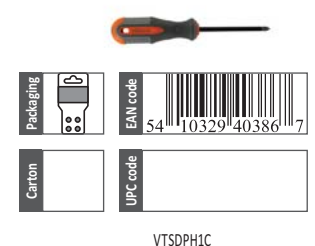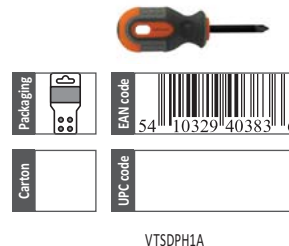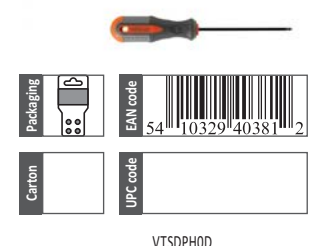
PROFESSIONAL SCREWDRIVERS - FLAT - MAGNETIZED TIP

Features:
• made of Cr-V steel
Features:
• magnetic tip
• black-coated shaft
• specially injected ergonomic handle ensuring strong grip

Order Code	tip	shaft length	length with handle
VTSDF03C	3mm	3"	6 1/4"
VTSDF04D	4mm	4"	7 3/16"
VTSDF05D	5mm	4"	7 7/8"
VTSDF06A	6mm	1 1/2"	3 3/4"
VTSDF06F	6mm	6"	10 3/8"
VTSDF08F	8mm	6"	10 3/8"
VTSDF10G	10mm	7 7/8"	12 3/8"

Packaging | EAN code 54 10329 40364 5
Carton | UPC code
VTSDF03C

Packaging | EAN code 54 10329 40366 9
Carton | UPC code
VTSDF04D

Packaging | EAN code 54 10329 40368 3
Carton | UPC code
VTSDF05D

Packaging | EAN code 54 10329 40370 6
Carton | UPC code
VTSDF06A

Packaging | EAN code 54 10329 40372 0
Carton | UPC code
VTSDF06F

Packaging | EAN code 54 10329 40374 4
Carton | UPC code
VTSDF08F

Packaging | EAN code 54 10329 40376 8
Carton | UPC code
VTSDF10G

PROFESSIONAL SCREWDRIVERS - 'STAR'

Features:
• made of Cr-V steel

Order Code	tip	shaft length	length with handle
VTQTT7	T7	2.0"	5.4"
VTQTT9	T9	2.0"	5.4"

Packaging | EAN code 54 10329 23954 1
Carton /6 | UPC code
VTQTT7
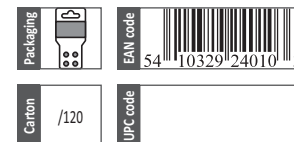
Packaging | EAN code 54 10329 24010 3
Carton /120 | UPC code
VTQTT9

PROFESSIONAL SCREWDRIVERS - 'STAR' - MAGNETIZED TIP

Features:
• made of Cr-V steel
Features:
• magnetic tip
• black-coated shaft
• specially injected ergonomic handle ensuring strong grip

Order Code	tip	shaft length	length with handle
VTSDT05C	T5	3"	6 3/8"
VTSDT06C	T6	3"	6 3/8"
VTSDT07C	T7	3"	6 3/8"
VTSDT08C	T8	3"	6 3/8"
VTSDT10C	T10	3"	6 3/8"
VTSDT15C	T15	3"	6 3/8"
VTSDT20E	T20	4 3/4"	8 5/8"
VTSDT25E	T25	4 3/4"	8 5/8"
VTSDT30E	T30	4 3/4"	8 5/8"
VTSDT40E	T40	4 3/4"	8 5/8"

Packaging | EAN code 54 10329 40411 6
Carton | UPC code
VTSDT05C

Packaging | EAN code 54 10329 40415 4
Carton | UPC code
VTSDT06C

Packaging | EAN code 54 10329 40417 8
Carton | UPC code
VTSDT07C

Packaging | EAN code 54 10329 40421 5
Carton | UPC code
VTSDT08C

Packaging | EAN code 54 10329 40423 9
Carton | UPC code
VTSDT10C
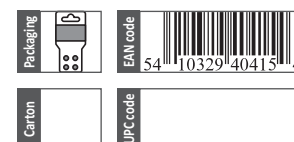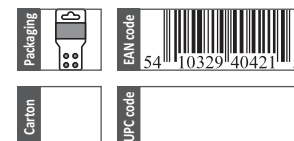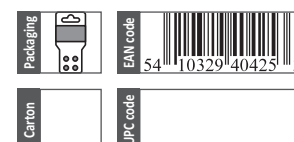
Packaging | EAN code 54 10329 40425 3
Carton | UPC code
VTSDT15C

VTSDT20E

VTSDT25E

VTSDT30E

VTSDT40E

PROFESSIONAL SCREWDRIVERS - CR-V STEEL

PROFESSIONAL SCREWDRIVERS - 'STAR'+CENTRE

Features:
• made of Cr-V steel

Order Code	tip	shaft length	length with handle
VTQTT20	T20 + centre	3.9"	7.8"
VTQTT27	T27 + centre	4.9"	9.1"
VTQTT30	T30 + centre	4.9"	9.1"
VTQTT40	T40 + centre	5.9"	10.2"

VTQTT20

VTQTT27

VTQTT30

VTQTT40

PROFESSIONAL SCREWDRIVERS - POZI

Features:
• made of Cr-V steel

Order Code	tip	shaft length	length with handle
VTQPZ0	PZ0	3"	6.4"
VTQPZ1	PZ1	4"	7.8"
VTQPZ2	PZ2	5.9"	10"
VTQPZ3	PZ3	5.9"	10.2"

VTQPZ0

VTQPZ1

VTQPZ2

VTQPZ3

PROFESSIONAL SCREWDRIVERS - POZI - MAGNETIZED TIP

Features:
• made of Cr-V steel
Features:
• magnetic tip
• black-coated shaft
• specially injected ergonomic handle ensuring strong grip

Order Code	tip	shaft length	length with handle
VTSDPZ0C	PZ0	3"	6 1/4"
VTSDPZ1A	PZ1	1 1/2"	3 3/4"
VTSDPZ1C	PZ1	3"	6 7/8"
VTSDPZ2A	PZ2	1 1/2"	3 3/4"
VTSDPZ2D	PZ2	4"	8 3/8"
VTSDPZ3F	PZ3	6"	10 3/8"

VTSDPZ0C

VTSDPZ1A

VTSDPZ1C

VTSDPZ2A

VTSDPZ2D
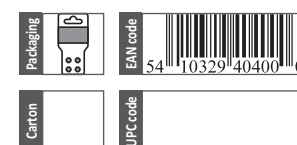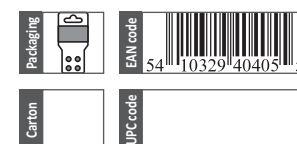
VTSDPZ3F

SCREWDRIVERS - ECONOMIC

SCREWDRIVERS - SETS - VELLEMAN

6-PC SCREWDRIVER SET WITH "SOFT GRIP"
VTSCRSET8

Features:
• ergonomic "soft-grip" handle
• hardened blades of chrome vanadium-molybdenum steel with magnetised tip
Specifications:
• flat: 5/32" x 2 61/64", 13/64" x 3 15/16", 15/64" x 5 29/32"
• cross: PH0x3", PH1x4", PH2x6"

Packaging	EAN code	54 10329 33174 0
Carton /20	UPC code	8 36479 00747 5

SCREWDRIVER SET - EXTRA LONG SHAFT - 6 pcs
VTSCRSET12

Features:
• superior quality screwdriver set
• extra long shaft for easy access to sunken screws
• soft-grip handle for extra grip
• comes in a convenient carrying case
• CrV shaft with insulating coating
• magnetic tip
Specifications:
• contains:
  - flat tip: 3.5 mm, 4.0mm, 4.5mm x 175mm
  - cross: PH0, PH1 X 175mm
  - screwdriver with voltage tester: 4.0 X 3 5/32"
• length:
  - voltage tester: 3 5/32" shaft and 2 3/4" handle
  - screwdriver: 6 57/64" shaft and 4" handle

Packaging	EAN code	54 10329 38740 2
Carton	UPC code	

PRECISION SCREWDRIVERS

TS1 PENTALOBE SCREWDRIVER FOR iPHONE 4
VTSDIP1

NEW

Features:
• suitable to open iPhone 4
• pentalobe screwdriver TS1
• suction cup: can be used to easily open the Apple iPhone 4 case
• iPhone is a trademark of Apple Inc., registered in the U.S. and other countries.
Specifications:
• dimensions:
  - shaft: 1 19/64"
  - total length: 4 23/32"

Packaging	EAN code	54 10329 45036 6
Carton	UPC code	8 16353 01036 4

10-PC ELECTRONIC SCREWDRIVER SET
VTSET17

Features:
• special set for watches, precision applications, etc.
Specifications:
• philips: 1 PH0, 1 PH1
• flat: 2 0.05", 4 0.04", 1 0.06", 1 0.08"

Packaging	EAN code	54 10329 21045 8
Carton /192	UPC code	8 36479 00792 5

6-PC PRECISION SCREWDRIVER SET
VTSET6

Specifications:
• 2 philips: PH#0, PH#1
• 4 flat: 0.06", 0.07", 0.09" and 0.12"

Packaging	EAN code	54 10329 20236 1
Carton /200	UPC code	8 36479 00541 9

6-PC PRECISION SCREWDRIVER SET (FLAT/PH)
VTSET1

Specifications:
• flat: 0.04", 0.06", 0.09", 0.12"
• philips: PH#0, PH#1
• size: 4.1"

Packaging	EAN code	54 10329 20538 6
Carton /100	UPC code	8 36479 00530 3

7-PC SCREWDRIVER SET
VTSET13

Specifications:
• flat: 0.08"x1.6", 0.10"x1.6", 0.12"x1.6", 0.14"x1.6"
• philips: PH#00x1.6", PH#0x1.6", PH#1x1.6"

Packaging	EAN code	54 10329 22007 5
Carton /60	UPC code	8 36479 00534 1

6-PC ELECTRONIC SCREWDRIVER SET (FLAT/PH)
VTSET2

Specifications:
• flat: 0.05", 0.08", 0.09", 0.12"
• philips: PH#0, PH#1-2
• size: 4.7"

Packaging	EAN code	54 10329 20396 2
Carton /100	UPC code	8 36479 00537 2

6-PC ELECTRONICS SCREWDRIVER SET (FLAT/PH)
VTSET29

NEW

Specifications:
• flat: 0.06", 0.08", 0.09", 0.12" x 2.0"
• philips: PH0, PH00 x 2.0"
• size: 5.1"

Packaging	EAN code	54 10329 43142 6
Carton	UPC code	

6-PC ELECTRONIC SCREWDRIVER SET ('STAR')
VTSET3

Specifications:
• #T6, #T7, #T8, #T9, #T10, #T15
• size: 4.7"

Packaging	EAN code	54 10329 20397 9
Carton	/100	
	UPC code	8 36479 00538 9

6-PC ELECTRONICS SCREWDRIVER SET ('STAR')
VTSET30

NEW

Specifications:
• T6, T7, T8, T9, T10, T15 x 2.0"
• size: 5.1"

Packaging	EAN code	54 10329 43143 3
Carton		
	UPC code	8 16353 01058 6

16-PC PRECISION SCREWDRIVER AND TOOL SET
VTSET5

Features:
• swivel-headed cap
• black oxidized tips for greater durability and accuracy

Specifications:
• 4 philips: PH#1-1, PH#1-2, PH#0, PH#0-2
• 3 socket: 0.12", 0.16", 0.20"
• 3 hex: 0.06", 0.08", 0.10"
• 6 flat: 0.04", 0.06", 0.08", 0.09", 0.12", 0.15"

Packaging	EAN code	54 10329 21513 2
Carton	/50	
	UPC code	8 36479 00540 2

15-PC SCREWDRIVER TOOL SET
VTSET15

Specifications:
• flat: 0.12"x1.6", 0.08"x1.6", 0.10"x1.6", 0.14"x1.6", 0.16"x1.6"
• philips: PH#00x1.6", PH#0x1.6", PH#1x1.6", PH#2x1.6"
• 'star': #T6x1.6", #T8x1.6", #T9x1.6", #T10x1.6", #T15x1.6", #T20x1.6"
• size: 4.7"

Packaging	EAN code	54 10329 20463 1
Carton	/50	
	UPC code	8 36479 00536 5

PRECISION SCREWDRIVER SETS (MICROTIP)

SET OF 6 PRECISION HEX SCREWDRIVERS (MICROTIP)
VTSET10

Specifications:
• 4 metric: 0.13"x2.9", 0.16"x2.9", 0.20"x2.9", 0.22"x2.9"
• 2 inch: 1/8"x2.9", 3/16"x2.9"

Packaging	EAN code	54 10329 20715 1
Carton	/24	
	UPC code	8 36479 00531 0

SET OF 8 PRECISION SCREWDRIVERS (MICROTIP)
VTSET11

Specifications:
• 5 flat: 0.08"x2.9", 0.10"x2.9", 0.12"x2.9", 0.14"x2.9", 0.16"x2.9"
• 3 philips: PH#0-0x2.9", PH#0x2.9", PH#1x2.9"

Packaging	EAN code	54 10329 20694 9
Carton	/24	
	UPC code	8 36479 00532 7

SET OF 8 PRECISION 'STAR' SCREWDRIVERS (MICROTIP)
VTSET12

Specifications:
• 8 'star': #T5x1.6", #T6x1.6", #T7x1.6", #T8x1.6", #T9x2.9", #T10x2.9", #T15x2.9", #T20x2.9"

Packaging	EAN code	54 10329 20695 6
Carton	/24	
	UPC code	8 36479 00533 4

ELECTRONICS BIT SET (19PCS) WITH SCREWDRIVER (MICROTIP)
VTSET9

Features:
• 20-pc precision bit set

Specifications:
• 2 philips: PH#0-0, PH#0
• 4 flat: 0.08", 0.10", 0.12", 0.16"
• 5 'star': #T6, #T7, #T8, #T9, #T10
• 3 hex: 0.06", 0.08", 0.10"
• 3 ball: 0.06", 0.08", 0.10"
• 2 pozzi: PZ#0-0, PZ#0

Packaging	EAN code	54 10329 20526 3
Carton	/24	
	UPC code	8 36479 00543 3

SET OF 2 PLIERS, TWEEZERS AND 8 SCREWDRIVERS (MICROTIP)
VTSET14

Specifications:
• 1 4" long nose pliers
• 1 4" diagonal pliers
• 1 4.9" tweezers
• 5 flat: 0.05"x1.6", 0.06"x1.6", 0.07"x1.6", 0.08"x1.6", 0.09"x1.6"
• 3 philips: PH#000, PH#00, PH#0

Packaging	EAN code	54 10329 20696 3
Carton	/24	
	UPC code	8 36479 00535 8

HEX KEY AND 'STAR' WRENCH SETS

HEX KEY WRENCH SETS

HEX KEY WRENCH SET - 8PCS
VTHEX8

Specifications:
• hex: 0.06", 0.08", 0.10", 0.12", 0.14", 0.16", 0.20", 0.24"

Packaging		EAN code	54 10329 21998 7
Carton	/150	UPC code	8 36479 00479 5

MULTIFUNCTIONAL BICYCLE TOOL KIT
VTTS6

Features:
• 16 tools in one to be carried on your belt in a practical case
• ideal for houshold and leisure use
• high-quality nickel-plated tool steel

Specifications:
• 4 spanners: 8 / 10 / 15mm + 14 GE
• 6 ring spanners: 2 / 2.5 / 3 / 4 / 5 / 6mm
• 1 crosshead screwdriver
• 1 flat-blade screwdriver
• 3 socket spanners: 8 / 9 / 10mm
• 1 bit adapter

Packaging		EAN code	54 10329 33022 4
Carton	/48	UPC code	

9 pc BALLPOINT HEX KEY WRENCH SET
VTHEX9

Specifications:
• hex: 0.06"x0.18", 0.08"x0.19", 0.10"x0.21", 0.12"x0.23", 0.16"x0.26", 0.20"x0.29", 0.24"x0.32", 0.31"x0.37", 0.39"x0.44"
• chrome-vanadium steel

Packaging		EAN code	54 10329 23125 5
Carton	/50	UPC code	

'STAR' SETS

9 PC 'STAR' SET
VTSTAR

Specifications:
• 'star': T10x5.5, T15x6.0, T20x7.1, T25x7.6, T27x8.4, T30x9.4, T40x10.6, T45x11.9, T50x13.4
• chrome-vanadium steel

Packaging		EAN code	54 10329 23172 9
Carton	/40	UPC code	

MINI WRENCH SET - STAR - 8 pcs
VTSTAR2

Specifications:
• 'star': T5x4.2, T6x4.2, T7x4.8, T8x5, T9x5, T10x5.4, T15x5.7, T20x6.2
• chrome-vanadium steel

Packaging		EAN code	54 10329 32983 9
Carton	/72	UPC code	8 36479 00748 2

STAR KEY SET - 9 pcs
VTSTAR3

NEW

Specifications:
• 'star': T10x5.5, T15x6.0, T20x7.1, T25x7.6, T27x8.4, T30x9.4, T40x10.6, T45x11.9, T50x13.4
• chrome-vanadium steel

Packaging		EAN code	54 10329 43146 4
Carton		UPC code	

ADJUSTERS

HIGH-FREQUENCY CERAMIC ADJUSTER - CROSS
VTCS1

Features:
• special ceramic blades and anti-static handles
• no electromagnetic induction
• no eddy current loss in HF (High Frequency)
• 100% electric insulation

Specifications:
• tip: cross
• length: 3 47/64"

Packaging		EAN code	54 10329 35847 1
Carton		UPC code	

HIGH-FREQUENCY CERAMIC ADJUSTER - FLAT 1mm
VTCS2

Features:
• special ceramic blades and anti-static handles
• no electromagnetic induction
• no eddy current loss in HF (High Frequency)
• 100% electric insulation

Specifications:
• tip: flat 1/32"
• length: 3 47/64"

Packaging		EAN code	54 10329 35848 8
Carton		UPC code	

HIGH-FREQUENCY CERAMIC ADJUSTER - FLAT 1.5mm
VTCS3

Features:
• special ceramic blades and anti-static handles
• no electromagnetic induction
• no eddy current loss in HF (High Frequency)
• 100% electric insulation

Specifications:
• tip: flat 1/16"
• length: 3 47/64"

Packaging		EAN code	54 10329 35849 5
Carton		UPC code	

HIGH FREQUENCY ADJUSTER SET - 10 pcs
VTCSS

Features:
• set of 10 plastic adjusters
Specifications:
• length: 4 17/32"
• tips:
  - flat: 1/32", 1/16", 5/64", 13/64"
  - cross: 3/32", 1/8"
  - hex: 5/64", 3/32"
  - square: 1/16" x 1/16", 5/64" x 5/64"

Packaging		EAN code	54 10329 35846 4
Carton		UPC code	

6-PC PLASTIC TUNING NEEDLE SET
VTPT

Packaging		EAN code	54 10329 21290 2
Carton	/200	UPC code	8 36479 00523 5

KNIVES, CUTTERS AND SAWS

PRECISION KNIFE WITH 5-PC BLADE SET
VTK1

Specifications:
• size: 5.7"

Packaging		EAN code	54 10329 20312 2
Carton	/144	UPC code	8 36479 00499 3

SMALL CUTTER
VTK3B

Features:
• with lock
• supplied in display box: 60pcs
Specifications:
• size: 4.9"

Packaging		EAN code	54 10329 21999 4
Carton	/20	UPC code	8 36479 00883 0

CUTTER - METAL HOUSING
VTK4

Features:
• metal housing
• high-Q lock button
• set of spare blades: -
  - set of spare blades: VTSB3 (5pcs)
Specifications:
• size: 6.1"

Packaging		EAN code	54 10329 22000 6
Carton	/20	UPC code	

SET OF SPARE BLADES FOR VTK4 - 5PCS
VTSB3

Specifications:
• 5pcs
• for VTK4

Packaging		EAN code	54 10329 23442 3
Carton	/1	UPC code	

BIG CUTTER
VTK5

Features:
• plastic handle with metal protection
• with lock button
• set of spare blades: -
Specifications:
• size: 6.3"

Packaging		EAN code	54 10329 22001 3
Carton	/360	UPC code	8 36479 00597 6

SPARE BLADES FOR VTK5 - 12PCS
VTKSB1

Specifications:
• 12pcs

Packaging		EAN code	54 10329 22003 7
Carton	/200	UPC code	

50-PC HEAVY-DUTY KNIFE SET
VTK6N

NEW

Features:
• contains:
  - 5 aluminium blade holders with 5 blades
  - 31 spare blades
  - 2 prickers with 2 pricker needles
  - 4 pricker needles
  - 1 whetstone

Packaging		EAN code	54 10329 42317 9
Carton		UPC code	8 36479 00923 3

13-PC HEAVY-DUTY KNIFE SET
VTK7

Features:
• contains: 3 cutters with blade and 10 spare blades

Packaging		EAN code	54 10329 20662 8
Carton	/80	UPC code	8 36479 00661 4

MINI HACKSAW WITH SOFT GRIP
VTMS1

Features:
• miniature metal hacksaw with soft grip
• standard 6" saw
• saw is replaceable
Specifications:
• usable surface: 7 9/32"

Packaging		EAN code	54 10329 32232 8
Carton	/100	UPC code	

MISCELLANEOUS TOOLS AND ACCESSORIES

TOOLS

PICK-UP TOOL
VTPMT

With magnetic tip & mirror.
Specifications:
• length: 21 17/64" max. (telescopic)
• Ø mirror: 1.2"

Packaging		EAN code	54 10329 20046 6
Carton	/100	UPC code	8 36479 00571 6

SET OF DIAMOND FILES - 10PCS
VTDF1

Specifications:
• powder-coated
• 10pcs
• size: 4.7"

Packaging		EAN code	54 10329 21989 5
Carton	/200	UPC code	8 36479 00461 0

SET OF DIAMOND FILES - 5PCS
VTDF2

Specifications:
• powder-coated
• 5pcs
• size: 5.5"

Packaging		EAN code	54 10329 21990 1
Carton	/500	UPC code	8 36479 00462 7

DIAMOND NEEDLE FILE SET - 6 pcs
VTDF3

Features:
• powder-coated
• comfortable rubber grip
Specifications:
• length: 6 7/64"
• length: 6 7/64"

Packaging		EAN code	54 10329 38428 9
Carton		UPC code	

HELPING HAND WITH MAGNIFIER
VTHH

Features:
• when 2 hands are not enough
• with magnifier, dioptre 2.5
Specifications:
• size: 4.9" x 2.2" x 7.7"

Packaging		EAN code	54 10329 20316 0
Carton	/24	UPC code	8 36479 00486 3

MAGNETIZER - DEMAGNETIZER
VTMD

* screwdriver not included
Features:
• magnetizes / demagnetizes all kind of tools
Specifications:
• dimensions: 2.0" x 2.0" x 1.2"

Packaging		EAN code	54 10329 20048 0
Carton	/144	UPC code	8 36479 00510 5

INSULATION TAPE SET PVC

INSULATION TAPE (6 rolls of 16.4ft.)
T5S

Set of 6 rolls of tape in different colours.
Specifications:
• different colors: yellow, white, green, black, blue, red
  (individual length : 16.4ft.)

Packaging		EAN code	54 10329 21080 9
Carton	/50	UPC code	8 36479 00722 2

CARRYING BAGS

TOOL BAG
VTBAG1

Specifications:
• color: dark-green
• dimensions: 15.6" x 11.4" x 3.5" x 2.8"

Packaging		EAN code	54 10329 31494 1
Carton	/10	UPC code	8 36479 00739 0

GLUE TOOLS

20 GLUE STICKS FOR USE WITH VTGG4 & VTGG5
VTG2

Specifications:
- 20pcs
- dimensions: 150 x Ø11mm (± 4%)
- for: VTGG4 & VTGG5

Packaging	EAN code 54 10329 21994 9
Carton	UPC code

SOLDER

LEAD-FREE SOLDER 99.3% SN - 0.7% CU

Features:
- lead-free

Specifications:
- 99.3% SN - 0.7% Cu
- with resin core
- melting point: 446°F

Order Code	weight	Ø
SOLD100G6LF	0.22 lbs	1/32"
SOLD100GLF	0.22 lbs	1/32"
SOLD1KLF	2.2 lbs.	1/32"
SOLD250GLF	0.55 lbs.	1/32"
SOLD500G8LF	1.10 lbs.	1/32"
SOLD500GLF	1.10 lbs.	1/32"
SOLDERDISPLF	0.5 oz	1/32"

SOLD100G6LF — EAN 54 10329 35794 8 — UPC 8 36479 00793 2
SOLD100GLF — EAN 54 10329 35792 4 — UPC 8 36479 00794 9
SOLD1KLF — EAN 54 10329 35796 2 — UPC 8 36479 00795 6
SOLD250GLF — EAN 54 10329 35797 9 — UPC 8 36479 00796 3
SOLD500G8LF — EAN 54 10329 35799 3 — UPC 8 36479 00797 0
SOLD500GLF — EAN 54 10329 35798 6 — UPC 8 36479 00799 4
SOLDERDISPLF — /500 — EAN 54 10329 35613 2 — UPC 8 36479 00800 7

ELECTRIC SOLDERING TOOLS

SOLDERING IRONS

SOLDERING IRONS "CLASSIC"

ELECTRIC SOLDERING GUN "QUICK HOT" 30-130W / 110V
VTSG130NU

This soldering gun for fast heat application consists of stainless steel and is equipped with a dual-power ceramic heating element. The VTSG130N is a rugged-looking soldering device of exemplary quality. It saves energy and can replace every iron with a supply current from 30W to 130W. Ideal for standard soldering work.

Features:
- dual-power ceramic heater: 30 and 130W
- 2 heating positions: instant heating in "Hi"-position is 10 x quicker than heating in "Lo"-setting
- requires no preheating in "Hi" position
- remark: do not use the soldering gun in the "Hi" position for lo,ger than 30 seconds
- spare bit: BITC30DPN

Specifications:
- power supply: 110V

CERAMIC SOLDERING IRON 30W / 110V
VTSC30N1U **NEW**

Features:
- ceramic heating element
- spare bit: BITC30N1

Specifications:
- power supply: 110Vac / 30W

UPC code 8 36479 00982 0

SOLDERING IRON 20W / 110V
VTS20U

A high-quality, mains-powered soldering iron of 20W for general purposes.

Specifications:
- power supply: 20W / 110V AC
- UL approved
- spare bit: BITU20

UPC code 8 36479 00729 1

HIGH-Q SOLDERING IRON 60W / 110V + UL
VTS60U

Features:
- double-wound heating element
- spare bit: BIT60

Specifications:
- ratings: 60W / 110V
- length: 8 21/32"

UPC code 8 36479 00890 8

SOLDERING IRON BITS

SPARE BIT FOR VTS60
BIT60

NEW

Features:
• for: VTS60
Specifications:
• tip: 3.0mm

| Packaging | EAN code | 54 10329 32525 1 |
| Carton | UPC code | |

SPARE BIT FOR VTSC30DP
BITC30DPN

Features:
• for: VTSC30DP/VTSC30/VTSG130/STC30

| Packaging | EAN code | 54 10329 39568 1 |
| Carton | UPC code | |

SPARE BIT FOR VTS20U - 0.04"
BITU20

Specifications:
• tip: 0.04"

| Packaging | EAN code | 54 10329 28711 5 |
| Carton | UPC code | |

SOLDERING ACCESSORIES

PROFESSIONAL SOLDER TIP CLEANER
VTSTC

Specifications:
• Ø: 3.54"
• spare golden curls: VTSTCGC

| Packaging | EAN code | 54 10329 20314 6 |
| Carton /40 | UPC code | 8 36479 00545 7 |

SPARE GOLDEN CURLS FOR VTSTC
VTSTCGC

Specifications:
• for VTSTC

| Packaging | EAN code | 54 10329 28736 8 |
| Carton | UPC code | 8 36479 00546 4 |

UNIVERSAL SOLDERING IRON STAND
STAND40

Features:
• ideal for: small soldering irons
• with cleaning sponge

| Packaging | EAN code | 54 10329 21665 8 |
| Carton /50 | UPC code | 8 36479 00401 6 |

SOLDERING IRON STAND
STAND50

Specifications:
• heavy-duty
• with cleaning sponge

| Packaging | EAN code | 54 10329 20320 7 |
| Carton /36 | UPC code | 8 36479 00402 3 |

SOLDERING IRON STAND - DELUXE
STAND60

Features:
• with solder and iron holder and sponge
• solder is not included

| Packaging | EAN code | 54 10329 20315 3 |
| Carton /24 | UPC code | 8 36479 00403 0 |

ECONOMIC SOLDERING IRON STAND
STANDLC

Features:
• economic version
• with cleaning sponge

| Packaging | EAN code | 54 10329 22353 3 |
| Carton /50 | UPC code | 8 36479 00404 7 |

SOLDERING AIDS
VTSA

Set of 6 soldering aids.
Features:
• contents: specialized soldering aids to protect your heat-sensitive components: knife and brushes, scraper and hooks, fork and spikes

| Packaging | EAN code | 54 10329 33163 4 |
| Carton /100 | UPC code | |

SOLDERING STATIONS

SOLDERING STATIONS

LOW-COST SOLDERING STATION 50W 374-896°F
VTSS5U

Features:
- manual temperature setting
- electronic temperature control
- power-on LED indication
- with ground output

Specifications:
- heater power for soldering iron: 50W
- temperature: 374-896°F
- voltage supply: 115VAC
- weight: 2.65 lbs.
- dimensions: 7 1/4" x 3 31/32" x 3 1/2"
- input power: 50VA max.
- spare bits: BITS5, BITS5C/1, BITS5C/2, BITS5C/3

Packaging	Carton	EAN code	UPC code
			8 36479 00754 3

SOLDERING STATIONS WITH CERAMIC HEATER

SOLDERING STATION WITH LCD OUTPUT, 60W, CUL APPROVED
VTSSC60NU

Features:
- 3 preset buttons: to easily configure any preferred temperature quickly
- LCD display: monitors current and set temperature
- the heating element uses low voltage AC current, ensuring anti-static, low leakage and interference
- ergonomic handle for long time usage

Specifications:
- input voltage: 110V (60Hz)
- output voltage: 24VAC
- temperature range: 302 ~ 842°F
- temperature stability: ±35°F
- power consumption: max. 85W (soldering iron output 60W)
- resistance between nozzle and ground: < 2M ohm
- potential between nozzle and ground: < 5mV
- Spare bits: VTSSC60NU/SPB2 - SPB3 - SPB4

Packaging	Carton	EAN code	UPC code
			8 36479 00875 5

SPARE TIP FOR VTSSC60NU - 1/16" (1.5MM) POINTED W/ 60° SLANT EDGE
VTSSC60NU/SPB5

Packaging	Carton	EAN code	UPC code

SOLDERING STATION WITH LCD & CERAMIC HEATER 48W 302°F - 842°F
VTSSC40NU

Features:
- manual temperature setting
- LCD display with digital temperature scale
- temperature preset on LCD display
- with on/off switch
- ceramic heating element with temperature sensor
- standard tip (incl.): BITC10N1

Specifications:
- max. heater power for soldering iron: 48W
- temperature range: 302 - 842°F
- low-voltage iron: 24V AC
- weight: 3.48lbs.
- dimensions: 7.28" x 3.94" x 6.69"
- replacement soldering iron: VTSSC40N/SP
- spare bits:
  - BITC10N2: 1.0mm
  - BITC10N3: 3.0mm
  - BITC10N4: 2.0mm

Packaging	Carton	EAN code	UPC code
	/5		8 36479 00773 4

SPARE BITS FOR SOLDERING STATIONS

SPARE BITS FOR SOLDERING STATION VTSS10/20/30

Order Code	tip
BIT16	1.6mm (1 / 16")
BIT32	0.8mm (1 / 32")
BIT64	1 / 64"

Packaging	EAN code	Carton	UPC code
	54 10329 28673 6		

BIT16

Packaging	EAN code	Carton	UPC code
	54 10329 28678 1		

BIT32

Packaging	EAN code	Carton	UPC code
	54 10329 28679 8		

BIT64

SPARE BITS FOR SOLDERING STATIONS VTSCC10N/20N/30N

Order Code	tip
BITC10N1	1 / 16" round
BITC10N2	1 / 32" round
BITC10N3	1 / 8" slant-edged
BITC10N4	5 / 64" pointed & slant-edged

EAN code 54 10329 27411 5
UPC code 8 36479 00909 7
BITC10N1

EAN code 54 10329 27409 2
UPC code 8 36479 00910 3
BITC10N2

EAN code 54 10329 27413 9
UPC code 8 36479 00911 0
BITC10N3
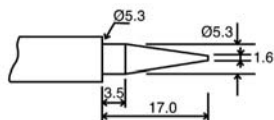
EAN code 54 10329 27415 3
UPC code 8 36479 00912 7
BITC10N4

SPARE BITS FOR SOLDERING STATION VTSSC50N

Order Code	tip
BITC50N1	1 / 64" fine
BITC50N2	1 / 32"

EAN code 54 10329 21619 1
BITC50N1

EAN code 54 10329 21620 7
BITC50N2

SPARE BITS FOR SOLDERING STATIONS VTSS5

Order Code
BITS5
BITS5C/1
BITS5C/2
BITS5C/3

EAN code 54 10329 23151 4
UPC code 8 36479 00786 4
BITS5

EAN code 54 10329 35392 6
BITS5C/1

EAN code 54 10329 35393 3
BITS5C/2
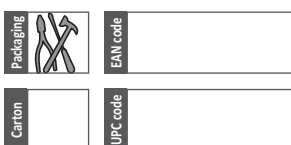
BITS5C/3

SOLDERING IRONS FOR SOLDERING STATIONS

SPARE SOLDERING IRON FOR VTSCC40N
VTSSC40N/SP

Features:
• for: VTSSC40N

EAN code 54 10329 32881 8

SPARE BIT FOR VTSSC40N / 50N
VTSSC40N/SPB

Specifications:
• spare bit voor: VTSSC40N and VTSSC50N
• tip: 1.06mm

EAN code 54 10329 33840 4

SPARE SOLDERING IRON FOR VTSSxx
VTSSI

Specifications:
• heater power for soldering iron: 48W
• iron voltage: 24V
• replacement bits:
  - BIT16: 1.6mm (1/16")
  - BIT32: 0.8mm (1/32")
  - BIT64: 0.4mm (1/64")

EAN code 54 10329 28735 1

ANTI-STATIC PRODUCTS

ANTI-STATIC WRIST STRAP - BLACK
AS2

Features:
• suitable for: AS4, AS5, AS8
Specifications:
• material: the conductive tape is made of nylon and the interior surface is coated with conductive carbon
• grounding cord: PU coil cord with resistor of 1 Mohm
• band size: 2 x 9.1"
• color: black

EAN code 54 10329 20351 1
Carton /200
UPC code 8 36479 00019 3

ANTI-STATIC ADJUSTABLE ELASTIC WRIST STRAP - BLUE
AS3

Features:
• suitable for: AS4, AS5, AS8
Specifications:
• material: the conductive elastic tape is a combination of polyester (exterior) and woven stainless steel (interior). This combination insulates the surface of the elastic band.
• grounding cable: 6ft. PU coil cord with resistor of 1 Mohm
• band size: 2 x 8.3"
• band resistivity: < 50 ohm
• color: blue

Packaging		EAN code	54 10329 20352 8
Carton	/400	UPC code	8 36479 00020 9

ANTI-STATIC MAT WITH GROUND CABLE / 11.8" x 22"
AS4

Features:
• dual purpose PVC-latex material can be used either as dissipative or conductive matting
• easy to clean and maintain
• comes with: grounding cord
• optional (not incl.): AS2, AS3
Specifications:
• material: PVC
• dimensions: 11.8" x 22"
• thickness: 0.08"
• with grounding cord
• surface resistivity: 10e7 ~ 10e10 ohm/m²
• charge decay: < 0.03sec

Packaging		EAN code	54 10329 23380 8
Carton	/50	UPC code	8 36479 00021 6

ANTI-STATIC MAT WITH GROUND CABLE / 19.7" x 23.6"
AS5

Features:
• dual purpose PVC-latex material can be used either as dissipative or conductive matting
• easy to clean and maintain
• comes with: grounding cord
• optional (not incl.): AS2, AS3
Specifications:
• material: PVC
• dimensions: 19.7" x 23.6"
• thickness: 0.08"
• with grounding cord
• surface resistivity: 10e7 ~ 10e10 ohm/m²
• charge decay: < 0.03sec

Packaging		EAN code	54 10329 21971 0
Carton	/25	UPC code	8 36479 00610 2

ANTI-STATIC MAT WITH GROUND CABLE / 30" x 42"
AS8

Features:
• comes with: grounding cord
• optional (not incl.): AS2, AS3
Specifications:
• dimensions: 30" x 42"

Packaging		EAN code	54 10329 36502 8
Carton		UPC code	8 36479 00354 5

ANTI-STATIC FIELD SERVICE KIT- RED / 24" x 24"
AS9

NEW

Features:
• provides a portable static-free work area for working with sensitive electronics in the field
• contents:
  - mat with two connect points
  - adjustable elastic wrist strap
  - 10 ft coil cord
  - 6ft common point grounding cord with banana jack & clip
• optional elastic wrist strap: AS3
Specifications:
• dimensions mat: 23.62" X 23.62"

Packaging		EAN code	54 10329 43071 9
Carton		UPC code	8 36479 00914 1

GAS SOLDERING IRONS

SEMI-PROFESSIONAL GAS SOLDERING IRONS

GAS SOLDERING IRON / TORCH 3/1
GASIRON2

Features:
• cordless soldering iron
• can be used also as torch and as hotblower
• portable soldering tool, powered by butane gas
• with on/off switch
Specifications:
• autonomy: 40 min. (average use)
• temperature: max. 842°F
• spare bit: GASIRON2/SPB

Packaging		EAN code	54 10329 31960 1
Carton	/96	UPC code	

SPARE BIT FOR GAS SOLDERING IRON
GASIRON2/SPB

Packaging		EAN code	54 10329 32971 6
Carton		UPC code	

PORTASOL SEMI-PROFESSIONAL GAS SOLDERING IRON
GAS/PROF

Features:
• portable soldering tool, powered by butane gas
• cordless
• fast, flint-sparked ignition through built-in lighter in the cap
• refills in less than 10 seconds
• melts solder in less than 40 seconds
• built-in catalytic converter provides a powerful yet safe flameless combustion
Specifications:
• autonomy: 90min
• refill time: 10sec
• temperature tip (max.): 842°F
• adjustable temperature
• equivalent to 10 - 60W
• standard tip: BITP2.4
• available tips: BITP1.0, BITP2.4, BITP3.2, BITP4.8, BITP/B, BITP/K, BITP/T

Packaging		EAN code	50 99681 10001 2
Carton	/40	UPC code	8 36479 00313 2

PORTASOL COMPLETE SET - SEMI-PROFESSIONAL
GAS/SET

1) iron-plated soldering tip (0.09")
2) rugged plastic storage case
3) Portasol soldering tool with 0.1" tip
4) cleaning sponge
5) blowtorch accessory
6) safety stand
7) hot blower accessory
8) hot knife accessory

Features:
• portable soldering tool, powered by butane gas
• cordless
• fast, flint-sparked ignition through built-in lighter in the cap
• refills in less than 10 seconds
• melts solder in less than 40 seconds
• built-in catalytic converter provides a powerful yet safe flameless combustion

Specifications:
• autonomy: 90min
• refill time: 10sec
• temperature tip (max.): 842°F
• adjustable temperature
• equivalent to 10 - 60W
• standard tips (incl.): BITP2.4, BITP/B, BITP/K, BITP/T
• available tips: BITP1.0, BITP2.4, BITP3.2, BITP4.8, BITP/B, BITP/K, BITP/T

Packaging		EAN code	50 99681 50001 0
Carton	/40	UPC code	8 36479 00315 6

GAS TORCHES 'PRO'

PORTASOL SUPERPRO SOLDERING IRON
GAS/PRO
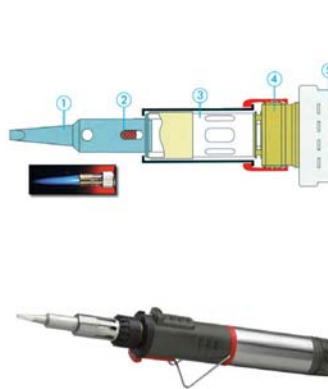
Features:
• piezo ignition
• power adjustment
• range of 6 soldering tips
• stainless steel gas tank provides 2 hours of operating time

Specifications:
• autonomy: 120min
• refill time: 30sec
• temperature tip (max.): 1076°F
• adjustable temperature
• equivalent to 25 - 125W
• standard tip: BITSP2.4
• available tips: BITSP1SF, BITSP2SF, BITSP3SF, BITSP4SF, BITSP1.0, BITSP2.4, BITSP3.2, BITSP4.8, BITSP/B, BITSP/K, DFLECTOR

Packaging		EAN code	50 99681 40001 3
Carton	/50	UPC code	8 36479 00312 5

PORTASOL SUPERPRO SOLDERING TOOL SET
GAS/PROSET
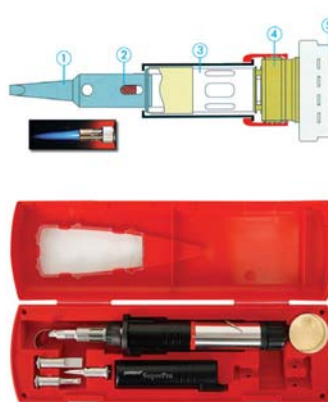
Features:
• piezo ignition
• power adjustment
• range of 6 soldering tips
• stainless steel gas tank provides 2 hours of operating time

Specifications:
• autonomy: 120min
• refill time: 30sec
• temperature tip (max.): 1076°F
• adjustable temperature
• equivalent to 25 - 125W
• standard tips (incl.): BITSP2.4, BITSP4.8, BITSP/B, BITSP/K, DFLECTOR
• available tips: BITSP1SF, BITSP2SF, BITSP3SF, BITSP4SF, BITSP1.0, BITSP2.4, BITSP3.2, BITSP4.8, BITSP/B, BITSP/K, DFLECTOR

Packaging		EAN code	50 99681 40002 0
Carton	/20	UPC code	8 36479 00314 9

BITS

SPARE BIT .04" - TECHNIC (G/CT/10)
BIT1.0

Features:
• for GASIRON

Packaging		EAN code	50 99681 09001 6
Carton	/1	UPC code	8 36479 00030 8

HOT BLOWER - PROFESSIONAL
BITP/B

Features:
• for GAS/PROF and GAS/SET

Packaging		EAN code	54 10329 22249 9
Carton		UPC code	8 36479 00033 9

SPARE KNIFE BIT - SUPERPRO
BITSP/K

Features:
• for GAS/PRO and GAS/PROSET

Packaging		EAN code	54 10329 28707 8
Carton	/1	UPC code	

SPARE BIT .04" DF - SUPERPRO
BITSP1.0

Features:
• for GAS/PRO and GAS/PROSET

Packaging		EAN code	50 99681 48005 3
Carton	/20	UPC code	8 36479 00040 7

SPARE BIT 0.19" SF - SUPERPRO
BITSP4SF

Features:
• for GAS/PRO and GAS/PROSET

Packaging		EAN code	50 99681 48004 6
Carton		UPC code	

DEFLECTOR (FOR CRIMPING TUBE) - SUPERPRO
DFLECTOR

Features:
• for GAS/PRO and GAS/PROSET

Packaging		EAN code	54 10329 28715 3
Carton		UPC code	8 36479 00211 1

DESOLDERING TOOLS

DESOLDERING PUMPS

POWERFUL DESOLDERING PUMP
VTD1

Specifications:
• length: 10.8"

Packaging	EAN code: 54 10329 20052 7
Carton /100	UPC code: 8 36479 00457 3

EXTRA-POWERFUL DESOLDERING PUMP
VTD2

Specifications:
• length: 13.2"

Packaging	EAN code: 54 10329 28726 9
Carton /100	UPC code: 8 36479 00458 0

DESOLDERING PUMP WITH ANTI-STATIC TIP
VTD3

Features:
• antistatic tip
Specifications:
• length: 7.5"
• Ø: 0.8"
• spare bit: BITVTD3

Packaging	EAN code: 54 10329 20024 4
Carton /100	UPC code

ECONOMIC DESOLDERING PUMP
VTD4

Features:
• material: ABS & aluminum
Specifications:
• length: 7.5"
• Ø: 0.8"
• spare bit: BITVTD4

Packaging	EAN code: 54 10329 20319 1
Carton /100	UPC code: 8 36479 00459 7

H.Q. DESOLDERING PUMP
VTD5

Features:
• aluminum body in 1 piece
Specifications:
• length: 6.4"
• Ø: 0.7"
• spare bit: BITVTD5

Packaging	EAN code: 54 10329 20749 6
Carton /200	UPC code: 8 36479 00460 3

DESOLDERING BRAID

DESOLDERING BRAID
DESOLDER

Specifications:
• Ø: 0.08"
• length: 59"

Packaging	EAN code: 54 10329 23893 3
Carton /10	UPC code: 8 36479 00400 9

DESOLDERING IRONS

VACUUM DESOLDERING PUMP WITH HEATER 30W
VTDESOL3U

Features:
• easy, single handed operation
• desoldering pump with heater
• spare tip: BIT/DESOL3

Packaging	EAN code
Carton	UPC code

ACCESSORIES

SPARE BITS

SPARE TIP FOR VTDESOL3
BIT/DESOL3

Features:
• spare tip for: VTDESOL3

Packaging	EAN code: 54 10329 35218 9
Carton	UPC code

VTD3 ANTI STATIC SPARE TIP
BITVTD3

Specifications:
• material:

Packaging	EAN code: 54 10329 28712 2
Carton	UPC code

VTD4 SPARE TIP
BITVTD4

Specifications:
• material: ABS (Acrylonitrile Butadiene Styrene)

Packaging	EAN code: 54 10329 28713 9
Carton	UPC code

VTD5 SPARE TIP
BITVTD5

Specifications:
• material:

Packaging	EAN code: 54 10329 28714 6
Carton	UPC code

EUROCARDS

EUROCARDS - WITH MOUNTING HOLES

Features:
• with mounting holes in each corner

Order Code	track	material	bore Ø	dimensions		packaging
ECI-H	IC pattern	single-sided board, epoxy FR-4, 1.6mm, 1.0 oz. flux coated bare copper	0.041"	3.9"x6.3"	compatible with eurodin connectors DIN41617 and DIN41612	1pc in blister
ECL-H	full line	single-sided board, epoxy FR-4, 1.6mm, 1.0 oz. flux coated bare copper	0.041"	3.9"x6.3"	compatible with eurodin connectors DIN41617 and DIN41612	1pc in blister
ECS1-H	1-hole island	single-sided boasingle-sided board, epoxy FR-4, 1.6mm, 1.0 oz. flux coated bare copper	0.041"	3.9"x6.3"	compatible with eurodin connectors DIN41617 and DIN41612	1pc in blister
ECS2-H	2-hole island	single-sided board, epoxy FR-4, 1.6mm, 1.0 oz. flux coated bare copper	0.041"	3.9"x6.3"	compatible with eurodin connectors DIN41617 and DIN41612	1pc in blister
ECS3-H	3-hole island	single-sided board, epoxy FR-4, 1.6mm, 1.0 oz. flux coated bare copper	0.041"	3.9"x6.3"	compatible with eurodin connectors DIN41617 and DIN41612	1pc in blister
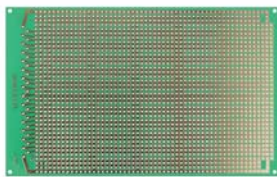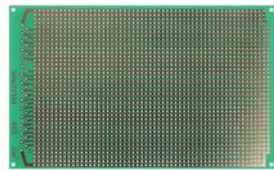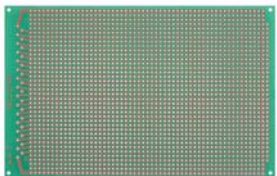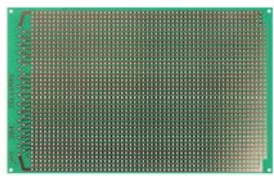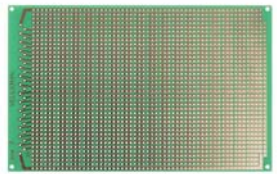
Order Code	track	material	bore Ø	dimensions		packaging
ECL1/2	full line	single-sided board, epoxy FR-4, 1.6mm, 1.0 oz. flux coated bare copper	0.041"	3.9"x3.1"	compatible with eurodin connectors DIN41617 and DIN41612	1pc in blister
ECS1/2	1-hole island	single-sided board, epoxy FR-4, 1.6mm, 1.0 oz. flux coated bare copper	0.041"	3.9"x3.1"	compatible with eurodin connectors DIN41617 and DIN41612	1pc in blister
ECSD	subd25 / centr	single-sided board, epoxy FR-4, 1.6mm, 1.0 oz. flux coated bare copper	0.041"	3.9"x6.3"		1pc in blister

Packaging — EAN code 54 10329 41251 7
Carton — UPC code 8 36479 00862 5
ECI-H

Packaging — EAN code 54 10329 41252 4
Carton — UPC code 8 36479 00863 2
ECL-H

Packaging — EAN code 54 10329 41257 9
Carton — UPC code 8 36479 00864 9
ECS1-H

Packaging — EAN code 54 10329 41259 3
Carton — UPC code 8 36479 00867 0
ECS2-H

Packaging — EAN code 54 10329 41260 9
Carton — UPC code 8 36479 00868 7
ECS3-H

Packaging — EAN code 54 10329 22132 4
Carton /200 — UPC code 8 36479 00240 1
ECL1/2

Packaging — EAN code 54 10329 22212 3
Carton /200 — UPC code 8 36479 00242 5
ECS1/2

Packaging — EAN code 54 10329 23561 1
Carton /200 — UPC code 8 36479 00245 6
ECSD

HIGH-Q SOLDERLESS BREADBOARDS

HIGH-Q BREADBOARD - 640 HOLES
SD10N

Features:
• base socket (see figure): twin columns of 5 x 64 terminals are separated by a 0.3" center channel

Specifications:
• material:
  - external body is made of ABS
  - the internal interconnected clips are made of an alloy of silver and nickel
• base socket: 1
• bus strip: 0
• tie points: 640
• 14-pins IC capacity: 9
• binding post: 0
• dimensions: 6.6" x 1.5" x 0.4"
• weight: 2.32oz
• jumper wire set: WJW70 (not included)

BASE SOCKET   BUS STRIP

Packaging — EAN code 54 10329 21984 0
Carton /150 — UPC code 8 36479 00384 2
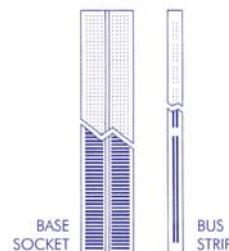
HIGH-Q BREADBOARD - 840 HOLES
SD12N
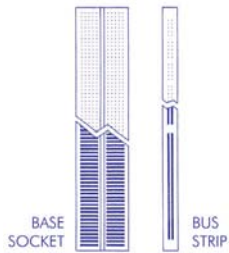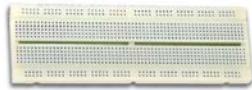
Features:
- base socket (see figure): twin columns of 5 x 64 terminals are separated by a 0.3" center channel
- bus strip (see figure): 4 buses of 25 connected terminals are arranged in 4 rows

Specifications:
- material:
  - external body is made of ABS
  - the internal interconnected clips are made of an alloy of silver and nickel
- base socket: 1
- bus strip: 2
- tie points: 840
- 14-pins IC capacity: 9
- binding post: 0
- dimensions: 6.6" x 2.2" x 0.4"
- weight: 3.4oz
- jumper wire set: WJW70 (not included)

Packaging | EAN code 54 10329 21985 7
Carton /200 | UPC code 8 36479 00385 9

HIGH-Q BREADBOARD - 1680 HOLES
SD24N
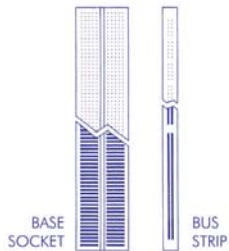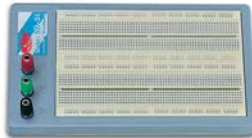
Features:
- base socket (see figure): twin columns of 5 x 64 terminals are separated by a 0.3" center channel
- bus strip (see figure): 4 buses of 25 connected terminals are arranged in 4 rows

Specifications:
- material:
  - external body is made of ABS
  - the internal interconnected clips are made of an alloy of silver and nickel
- base socket: 2
- bus strip: 4
- tie points: 1680
- 14-pins IC capacity: 18
- binding post: 3
- dimensions: 8.7" x 5.0" x 0.7"
- weight: 10.3oz
- jumper wire set: WJW70 (not included)

Packaging | EAN code 54 10329 21986 4
Carton /60 | UPC code 8 36479 00386 6

HIGH-Q BREADBOARD - 2420 HOLES
SD35N
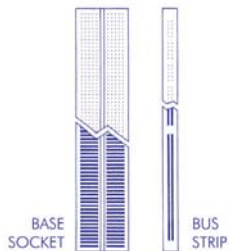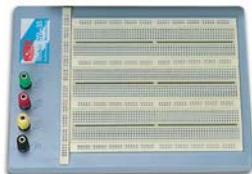
Features:
- base socket (see figure): twin columns of 5 x 64 terminals are separated by a 0.3" center channel
- bus strip (see figure): 4 buses of 25 connected terminals are arranged in 4 rows

Specifications:
- material:
  - external body is made of ABS
  - the internal interconnected clips are made of an alloy of silver and nickel
- base socket: 3
- bus strip: 5
- tie points: 2420
- 14-pins IC capacity: 27
- binding post: 4
- dimensions: 9.3" x 6.9" x 0.7"
- weight: 16.1oz
- jumper wire set: WJW70 (not included)

Packaging | EAN code 54 10329 21987 1
Carton /40 | UPC code 8 36479 00387 3

ASSORTED JUMPER WIRE SET (140pcs)
WJW70

Features:
- save time and enhance the lay-out of your PCBs
- comes in an attractive transparent box
- wires are pre-stripped (6.35mm/0.25") and bent under a 90° angle

Specifications:
- 14 different lengths, ranging from 0.14" to 4.92"
- 10 pieces each
- different colors

Packaging | EAN code 54 10329 22012 9
Carton /200 | UPC code 8 36479 00566 2

ELECTRIC DRILLS

DRILLS & BITS

Specifications:
- for use with the VTHD series

Order Code	Ø	number
DRILL06N	0.024"	10 pcs
DRILL08N	0.031"	10 pcs
DRILL10N	0.039"	10 pcs
DRILL12N	0.047"	10 pcs
DRILL13N	0.051"	10 pcs

DRILL SETS

10 pc ASSORTED MINI DRILL BIT SET
DRILLSET1

Features:
- packed in plastic box

Specifications:
- 10 drill bits: 0.024"/0.028"/0.031"/0.035"/0.039"/0.047"/0.059"/0.071"/0.079"/0.091"
- shaft thickness: 0.092" ± 5%
- length: 1.79" ± 5%

Packaging | EAN code 54 10329 21897 3
Carton /200 | UPC code

DRILL ACCESSORIES

20-PC DIAMOND-MOUNTED POINT SET
VTHDS2

Specifications:
- different shapes
- 20pcs
- shaft Ø: 0.12"
- length: 1.8" max.

Packaging | EAN code 54 10329 21996 3
Carton /200 | UPC code 8 36479 00478 8

DRILL & GRINDER ACCESSORIES - 188 pcs
VTHDS6

Specifications:
- 188 pcs
- contains:
  - sanding bands: 19 pcs
  - collets: 4 pcs
  - dressing stone: 1 pc
  - felt wheels: 3 pcs
  - pointed felt wheel: 1 pc
  - grinding wheels: 14 pcs
  - rubber emery wheels: 2 pcs
  - felt wheels: 8 pcs
  - sanding papers: 30 pcs
  - cloth wheel: 1 pc
  - sanding shanks: 2 pcs
  - mandrels: 3 pcs
  - diamond cutters: 5 pcs
  - HSS cutters: 2 pcs
  - grinding wheels with shank: 9 pcs
  - brushes: 5 pcs
  - cut-off wheels: 67 pcs
  - polishing compound: 1 pc
  - HSS cutting bits: 4 pcs
  - flapwheel: 1 pc
  - wrench: 1 pc
  - fiberglass cut-off wheels: 5 pcs

Packaging	EAN code
	54 10329 39093 8
Carton	UPC code

DRILL & GRINDER ACCESSORIES
VTHDSN

Packaging	EAN code
	54 10329 20391 7
Carton /100	UPC code
	8 36479 00649 2

ELECTRIC PRECISION DRILL & ENGRAVING SET - 66 pcs
VTHD06U

Features:
- contents:
  - electric drill: 8000-18000 rpm / with on/off switch
  - collets: 4 pcs
  - diamond wheel points: 6 pcs
  - cut-off wheels: 10 pcs
  - rubber polishing disc: 1 pc
  - sanding drums: 2 pcs
  - sanding bands: 6 pcs
  - polishing stones: 10 pcs
  - wire brush: 1 pc
  - polishing felts: 7 pcs
  - silicon carbide grindstone: 1 pc
  - grinding discs: 5 pcs
  - mandrels: 4 pcs
  - drills: 5 pcs (1 x 0.5mm, 1 x 1mm, 1 x 2mm, 1 x 2.23mm, 1 x 2.9mm)

Specifications:
- speed: 8000-18000 rpm / with speed adjustment
- power supply: 110VAC/60Hz
- power consumption: 15W

Packaging	EAN code
Carton	UPC code

RECHARGEABLE DRILL WITH 34 ACCESSORIES
VTHD23BU

Features:
- contents:
  - rechargeable drill: 8000-12000rpm / with on-off switch
  - power supply: 1 pc (110V AC)
  - diamond-mounted points: 3 pcs
  - grindstones: 10 pcs
  - flat grindstones: 3 pcs
  - sanding rolls: 2 pcs with holder
  - polishing felts: 3 pcs with holder
  - drills: 5 pcs
- comes in a practical gray case

Specifications:
- power supply: DC 6V 150mA (adapter incl.)

Packaging	EAN code
Carton	UPC code
	8 36479 00726 0

ELECTRIC DRILL & GRINDER 12V
VTHD01

Features:
- contents:
  - electric drill: 12000 rpm / with on/off switch
  - grinder stone: 2 pcs
  - engraving bit: 2 pcs
  - collet: 2 pcs
- direct driven

Specifications:
- power: 4W (no load) / 16W (load) / max. 20W
- speed: 12000rpm
- power supply: 12Vdc / 0.4A (use PS1208USA, not incl.)
- drilling Ø: 0.04"

Packaging	EAN code
	54 10329 37782 3
Carton	UPC code

RECHARGEABLE PRECISION DRILL - 62 pcs
VTHD03U

Features:
- contents:
  - rechargeable electric drill: 10000 rpm / with on/off switch
  - power supply: 1 pc (110V AC)
  - grinder stone: 10 pcs
  - diamond bits: 20 pcs
  - connective posts: 2 pcs
  - nylon brush: 1 pc
  - brass brush: 1 pc
  - steel brush: 1 pc
  - cutting disc: 5 pcs
  - polishing wheel: 4 pcs
  - sanding band: 6 pcs
  - drill bits: 4 pcs
  - collet: 4 pcs
  - engraving bit: 1 pc
  - wet stone: 1 pc

Specifications:
- speed: 10000 rpm
- power supply: 6VDC / 300mA (adapter included)
- charging time: 5h

Packaging	EAN code
Carton	UPC code

POWER TOOL SETS

RECHARGEABLE MINI SCREWDRIVER 4.8V WITH 6 ACCESSORIES
VTRCSU

Features:
- with powerful LED to illuminate work area
- forward and reverse operation
- LED battery level indicator
- accessories:
  - bits:
    - flat 4mm
    - flat 6mm
    - cross 1
    - cross 2
  - drill (3mm)
  - charger

Specifications:
- 200 rpm
- 4.8VAC
- max. torque force: 2.5Nm

Packaging		EAN code	
Carton		UPC code	8 36479 00827 4

MAGNIFIERS

POCKET MAGNIFIER 10x
VTMG11

NEW

Features:
- pocket size
- ideal for reading books, newspapers, maps, stamps,...

Specifications:
- dimensions lens: Ø1.57"
- dimensions magnifier: 2.17" x 2.17"
- weight: 1.06oz.

Packaging		EAN code	54 10329 43136 5
Carton		UPC code	

MAGNIFIER 10x
VTMG12

NEW

Features:
- pocket size
- ideal for hobby, maps, stamps, electronics,...

Specifications:
- dimensions lens: Ø0.98"
- dimensions magnifier: Ø1.97" x 1.77"
- weight: 1.27oz.

Packaging		EAN code	54 10329 43137 2
Carton		UPC code	8 16353 01027 2

HEADBAND MAGNIFIER
VTMG13

NEW

Features:
- adjust the angle of the light box upward or downward freely
- you can also push the pivot left and right to adjust the LED light source
- with detachable light source box and two "AAA" batteries

Specifications:
- dioptre: 1.5 - 3 - 8.5 - 10
- multiplying power of lens: 0.375x - 0.75x - 2.125x - 2.5x
- material of lens: acrylic resin (protected by crack-proof rigid coating)
- size of lens: 89mm x 29mm (3.5"x 1.14")
- single lens diameter: 29mm (1.14")
- power supply: 2 x "AAA" batteries (LR03, not incl.)
- weight: 148g (5.2oz)

Packaging		EAN code	54 10329 45447 0
Carton		UPC code	8 16353 01039 5

ILLUMINATED MAGNIFYING GLASS - 2x/6x
VTMG10

NEW

Features:
- ideal for: reading books, newspapers, maps, stamps...
- with illumination
- dioptre: 2x and 6x
- foldable handle and protective case

Specifications:
- dimensions:
  - glass 2 dioptre: 3 47/64" x 1 31/32"
  - glass 6 dioptre: Ø 25/32"
  - total (closed handle): 4 59/64" x 3 5/32" x 19/32"
- power supply: 2 x 1.5V AAA batteries (LR03C, not incl.)
- light bulb: 2.5V / 0.3A / E10
- weight: 2.89 oz

2 x AA

C

Packaging		EAN code	54 10329 43135 8
Carton		UPC code	

ILLUMINATED MAGNIFYING GLASS
VTMG3N

Features:
- with illumination
- dioptre: 3x and 10x

Specifications:
- Ø: 80mm
- power supply: 2 x 1.5V AA batteries (not incl.)

Packaging		EAN code	54 10329 32528 2
Carton	/100	UPC code	8 36479 00578 5

2 x AA

FOLDING MAGNIFIER - Ø 2.4"
VTMG1

Magnifier with pliable frame. Ideal e.g. for work on printed circuits.

Specifications:
- dioptry: 5x
- Ø: 2.4"

Packaging		EAN code	54 10329 21224 7
Carton	/200	UPC code	8 36479 00511 2

FOLDING MAGNIFIER - Ø 4.0"
VTMG2

Large model, executed in mineral glass. Ideal e.g. for soldering activities on PCB's.
Specifications:
- dioptry: 2.5x
- Ø: 4.0"

Packaging		EAN code	54 10329 21225 4
Carton	/54	UPC code	8 36479 00512 9

HEAD MAGNIFYING GLASS
VTMG4

Specifications:
- single magnifying glass: 2.2x
- double magnifying glass: 3.3x
- weight: 3.5oz

Packaging		EAN code	54 10329 21227 8
Carton	/24	UPC code	8 36479 00514 3

HEAD MAGNIFYING GLASS WITH LIGHT
VTMG6

Features:
- head magnifying glass with dual light
- magnifying glass with adjustable dioptry: 1.8 / 2.3 / 3.7 / 4.8 by making a combination of the glasses

Specifications:
- power supply: 4 1.5V AAA batteries (not incl.)
- dimensions: 7.9" x 2.4" x 5.5"
- weight: 5.3oz

Packaging		EAN code	54 10329 21031 1
Carton	/36	UPC code	8 36479 00609 6

4 x
AAA

GOOSENECK MAGNIFIER
VTMG5

Specifications:
- dioptre: 3x
- arm length: 20.1"
- with mounting bracket
- magnifier diameter: 3.54"

Packaging		EAN code	54 10329 21228 5
Carton	/24	UPC code	8 36479 00515 0

MAGNIFIER(6x) WITH TWEEZERS
VTMG7

Features:
- stainless steel tweezers met magnifying glass

Specifications:
- magnification factor: 6
- dimensions:
  - Ø glass: 1.0"
  - length tweezers: 2.4"
- weight: 1.1oz

Packaging		EAN code	54 10329 21030 4
Carton	/576	UPC code	8 36479 00641 6

MAGNIFIER GLASSES (1.5, 2.5 and 3.5 x)
VTMG8

Features:
- 3 magnifying glasses:
  - 1.5x
  - 2.5x
  - 3.5x
- easily switchable

Packaging		EAN code	54 10329 36852 4
Carton		UPC code	

MAGNIFYING LAMPS

LAMP WITH MAGNIFYING GLASS 5 DIOPTRE - 22W - BLACK
VTLAMP2BNU

This magnifying lamp is designed as an aid for all kinds of precision applications from health care to precision engineering. It's also ideal for home applications. It comes with a 5-dioptre lens (magnification 2.25 x). A well-balanced, universally jointed arm makes for maximum adjustment. Light is provided by a circular fluorescent tube of 22W that encircles the glass. Mount the device on a table with the clamp.

Features:
- also available in white version: VTLAMP2WNU

Specifications:
- dimensions:
  - arm length: 41 11/32"
  - width: 9 29/64"
  - height: 2 23/64"
- color: black
- power supply: 110Vac
- spare lamp: LAMP22

Packaging		EAN code	
Carton		UPC code	8 36479 00854 0

DESK LAMP WITH MAGNIFYING GLASS 3 + 12 DIOPTRE - 12W - WHITE
VTLAMP10U

NEW

This magnifying lamp was designed as an aid for all kinds of precision applications from health care to precision engineering. It's also ideal for home applications. It comes with a three-dioptre lens (1.75 x magnification). A well-balanced, universally jointed arm makes for maximum adjustment. Light is provided by a circular fluorescent tube of 22W that encircles the glass. Use the clamp to mount the device on a table.
Features:
- light source: 12W circular fluorescent lamp
- on/off switch
- table standard
- dioptre: 3 + 12
- supplied with electronic ballast
Specifications:
- dimensions:
  - arm length: 10 3/5 "
  - width: 7 "
  - height: 15 1/3 "
- color: white
- power supply: 110Vac / 50~60Hz
- spare lamp: LAMP12/10
- cable length: 4 '
- weight: 5.4 lbs

Packaging | EAN code
Carton | UPC code 8 36479 00962 2
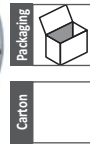
DESK LAMP WITH MAGNIFYING GLASS - 5 DIOPTER - 12W - BLACK
VTLAMP11BU

NEW

Features:
- light source: 12W circular fluorescent lamp
- on/off switch
- table standard
- diopter: 5
- supplied with electronic ballast
Specifications:
- dimensions:
  - arm length: 10.63"
  - width: 7.09"
  - height: 15.35"
- color: black
- power supply: 110Vac / 50~60Hz
- spare lamp: LAMP12/10
- cable length: ±4 ft.
- weight: ±5.4 lbs.

Packaging | EAN code
Carton | UPC code 8 16353 01033 3
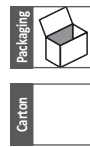
DESK LAMP WITH MAGNIFYING GLASS - 5 DIOPTER - 12W - WHITE
VTLAMP11WU

NEW

Features:
- light source: 12W circular fluorescent lamp
- on/off switch
- table standard
- diopter: 5
- supplied with electronic ballast
Specifications:
- dimensions:
  - arm length: 10 3/5"
  - width: 7"
  - height: 15 1/3"
- color: white
- power supply: 110Vac / 50~60Hz
- spare lamp: LAMP12/10
- cable length: ±4 ft.
- weight: 5.4 lbs

Packaging | EAN code
Carton | UPC code 8 16353 01032 6
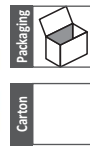
MAGNIFYING LED LAMPS

LAMP WITH MAGNIFYING GLASS 5 DIOPTRE- 22W WHITE
VTLAMP2WNU

This magnifying lamp is designed as an aid for all kinds of precision applications from health care to precision engineering. It's also ideal for home applications. It comes with a 5-dioptre lens (magnification 2.25 x). A well-balanced, universally jointed arm makes for maximum adjustment. Light is provided by a circular fluorescent tube of 22W that encircles the glass. Mount the device on a table with the clamp.
Features:
- also available in black version: VTLAMP2BNU
Specifications:
- dimensions:
  - arm length: 41.3"
  - width: 9.4"
  - height: 2.4"
- color: white
- power supply: 110Vac
- spare lamp: LAMP22

Packaging | EAN code
Carton | UPC code 8 36479 00861 8
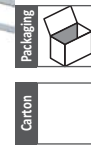
LED DESK LAMP WITH MAGNIFYING GLASS 5 DIOPTRE- 6W - 64 LEDS - WHITE
VTLLAMP1WU

NEW

This magnifying lamp is an aid for all kinds of precision applications at home as well as at work. It comes with a 5-dioptre lens (magnification 2.25 x). A well-balanced, universally jointed arm provides maximum adjustment possibilities. Powerful light is provided by 64 white LEDs that encircle the glass.Very low powerconsumption ; ONLY 6W ! Mount the device on a table with the clamp.
Features:
- 64 white LEDs
- 5 dioptre
- table clamp
Specifications:
- color: white
- number of LEDs: 64
- intensity: 1300mcd/LED
- dioptry: 5x
- dimensions:
  - arm length: 33 4/5"
  - glass: Ø 5 7/10"
- ratings: 110Vac / 6W
- cable length: 5'
- weight: 5.7 lbs

Packaging | EAN code
Carton | UPC code 8 36479 00981 3
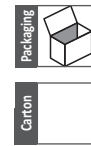
MAGNIFYING LAMPS - ACCESSORIES

CIRCULAR FLUORESCENT TUBE 12W/T4 FOR VTLAMP10
LAMP12/10

NEW

Features:
- for: VTLAMP10
Specifications:
- ratings: 12W / 120~230V

Packaging | EAN code 54 10329 44844 8
Carton | UPC code
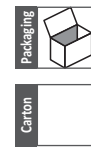
CIRCULAR FLUORESCENT TUBE 22W FOR VTLAMP2
LAMP22

Features:
• for: VTLAMP2 or VTLAMP2W
Specifications:
• ratings: 22W / 120~230V

| Packaging | EAN code | 54 10329 31239 8 |
| Carton | /20 | UPC code |

MINI TABLE VISE WITH STANDARD HEAD
VTTV3N

NEW

Features:
• metal jaws with a max. opening of 1 1/2"
• rubber suction base
• ideal for precision work
Specifications:
• dimensions: 3.3" x 2.6" x 2.6"
• weight: 2.57 oz

| Packaging | EAN code | 54 10329 42216 5 |
| Carton | UPC code | 8 36479 00916 5 |

VISES, HOLDING PRODUCTS AND ACCESSORIES

VISE COMBINATIONS

VACUUM TABLE VISE WITH STANDARD HEAD
VTTV

Turns and rotates in all directions. 3.0" jaws with protective detachable pads. Opening 2.75". With vacuum base : easy to fix on all flat surfaces, can also be fixed with screws.
Specifications:
• spare rubbers for VTTV (2pcs): VTTV/SR

| Packaging | EAN code | 54 10329 21059 5 |
| Carton | /10 | UPC code | 8 36479 00555 6 |

SPARE RUBBERS FOR TABLE VICE VTTV (2 PCS)
VTTV/SR

NEW

Specifications:
• 2pcs
• for VTTV

| Packaging | EAN code | 54 10329 23468 3 |
| Carton | UPC code |

TABLE VISE WITH STANDARD HEAD
VTTV2

Professional quality for this metal vise for table-screw mounting. Jaw opening 3.0". Rotates through 270°. Equipped with a fast fixing system.
Specifications:
• height: 12.0"
• weight: 3.5lb

| Packaging | EAN code | 54 10329 22008 2 |
| Carton | /10 | UPC code | 8 36479 00556 3 |

CLEANING TOOLS

ULTRASONIC CLEANER with TIMER - 0.68 gal
VTUSC3U

Features:
• high-power transducer for superior cleaning results
• large tank capacity for professional cleaning
• with timer function
Specifications:
• ultrasonic frequency: 42kHz
• tank material: stainless steel SUS304
• tank capacity: 0.68 gal
• tank size: 10 25/64" x 6 29/64" x 3 5/32"
• timer: 5 cycles, with digital display
• heater: 149°F
• power consumption: 170W
• power supply: 110VAC / 50-60Hz
• dimensions: 11 27/64" x 8 55/64" x 7 3/32"

| Packaging | EAN code |
| Carton | UPC code | 8 36479 00774 1 |

ULTRASONIC CLEANER
VTUSCU

Features:
• for professional use: jewellers, opticians, dental labs, dentists, doctors, printer head cleaning
• for home use: jewellery, dentures, eyeglasses, cleaning the heads of electric shavers, etc...
Specifications:
• tank: stainless steel
• capacity: 20 fl oz.
• frequency: 42kHz
• auto shut-off: 3 minutes
• power supply: 110VAC/50watt
• dimensions:
  - external: 7 7/8" x 5 1/8" x 5 33/64"
  - internal: 6 7/64" x 3 47/64" x 2 9/16"

| Packaging | EAN code |
| Carton | UPC code | 8 36479 00790 1 |

MEASURING TOOLS

DIGITAL CALIPERS

DIGITAL CALIPER - 6" - 0.0005"
DCA150

Superb precision caliper. Can measure up to 6" with a resolution of 0.0005". Read-out in inches or in mm on a 5-digit LCD display. Comes with battery.

Features:
- material: stainless steel
- for interior - exterior - depth measuring

Specifications:
- measuring length: 6"
- resolution: 0.0005"
- battery: 1 x silver oxide 1.5V SR44W (V13GAC, 2 pcs incl.)

| Packaging | | EAN code | 54 10329 21089 2 |
| Carton | /10 | UPC code | 8 36479 00206 7 |

DIGITAL CALIPER WITH LARGE SCREEN - 6" - 0.0005"
DCA150B

Superb precision caliper. Can measure up to 6" with a resolution of 0.0005". Read-out in inches or in mm on a 5-digit LCD display. Comes with battery.

Features:
- material: stainless steel
- for interior - exterior - depth measuring

Specifications:
- measuring length: 6"
- resolution: 0.0005"
- battery: V13GAC

| Packaging | | EAN code | 54 10329 38472 2 |
| Carton | | UPC code | 8 36479 00873 1 |

SCALES

MINI SCALES 7 oz / 1.5 gr
VTBAL7

Features:
- stainless steel weighing platform
- push button calibration, auto-tare and on/off
- selectable weighing units: gram, ounce, carat, troy ounce, pennyweight, grains...
- steel calibration weight
- comes with tweezers and protection pouch

Specifications:
- capacity: 7 oz
- resolution: 1.5 gr
- tare range: 0 ~7 oz
- operating temperature: 32°F~104°F
- power supply: 2 x 3.0V CR2032 lithium batteries (incl.)
- dimensions: 4 21/64" x 2 9/16" x 25/32"

2 x CR2032

| Packaging | | EAN code | 54 10329 39847 7 |
| Carton | | UPC code | |

TAPE RULES

STEEL TAPE RULE - 16.4ft
VTRM5

Features:
- graduation in cm and inches
- lock button
- material: steel, rubber housing
- magnetic lip

Specifications:
- length: 16.4ft
- width: 0.7"

| Packaging | | EAN code | 54 10329 20047 3 |
| Carton | /40 | UPC code | 8 36479 00728 4 |

MULTIMETERS

ANALOG MULTIMETERS

Features:
- Important safety information

Order Code		AVM360	AVM460
DC voltage		0.1 / 0.5 / 2.5 / 10 / 50 / 250 / 1000V	2.5 / 10 / 50 / 250 / 500V
DC voltage	basic accuracy	3 at FSD	± 5%
DC voltage	input impedance	20Kohm/V	-
DC voltage	maximum input	1000V	500V
AC voltage		10 / 50 / 250 / 1000V	10 / 50 / 500V
AC voltage	basic accuracy	4 at FSD	± 5%
AC voltage	input impedance	9Kohm/V	-
AC voltage	frequency range	+	-
AC voltage	maximum input	1000V	500V
DC current		50µ / 2.5m / 25m / 0.25A	500µ / 10m / 250mA
DC current	basic accuracy	3 at FSD	± 5%
DC current	overload protection	1.5A	-
resistance		x1 / x10 / x100 / x1K / x10K	x1 / x10
resistance	basic accuracy	3 at FSD	± 5%
resistance	overload protection	1.5A	-
continuity buzzer		-	-
transistor test		hFE 0-1000 (with extra connector) / Iceo	-
diode test		yes, If and Ir	-
low battery sign		no	no
maximum display		analog	analog
ranging mode		manual	manual
data hold		no	no
backlight		no	no
dimensions		5.8" x 3.9" x 1.4"	4.7" x 2.4" x 1.2"
weight (with battery)		± 9.9oz.	± 4.4oz.
power supply		9V battery	1.5V AA battery
packing		box	blister
accessories		manual / test leads / battery	manual / test leads / battery
auto power-off		no	no

| Packaging | | EAN code | 54 10329 21083 0 |
| Carton | /40 | UPC code | 8 36479 00022 3 |

AVM360

| Packaging | | EAN code | 54 10329 20317 7 |
| Carton | /50 | UPC code | 8 36479 00023 0 |

AVM460

DIGITAL MULTIMETERS

Order Code		DVM300	DVM645BIU	DVM8264	DVM850BL	DVM860BL	DVM890C	DVM890F	DVM890L	DVM93U
DC voltage		2 / 20 / 200 / 500V	400m / 4 / 40 / 400 / 1000V	200m / 2 / 20 / 200 / 1000V	200m / 2 / 20 / 200 / 600V	200m / 2 / 20 / 200 / 600V	200m / 2 / 20 / 200 / 1000V	200m / 2 / 20 / 200 / 1000V	200m / 2 / 20 / 200 / 1000V	200m / 2 / 20 / 200 / 600V
	basic accuracy	±0.5%	±0.3%	±0.5% + 1 digit, ±0.8% + 2 digits (1000V)	± 0.5% of rdg ± 2 digits for 0.2V range / ± 0.8% of rdg ± 2 digits for 2V~200V range / ± 1.0% of rdg ± 2 digits for 600V range	±0.7%	±0.5%	±0.5%	±0.5% (±0.8% for 1000V range)	±0.5% (±0.8% for 600V range)
	input impedance	-	-	-	1Mohm	10Mohm	10Mohm	10Mohm	10Mohm	10Mohm
	maximum input	500V	1000V	1000V	600V	600V	1000V	1000V	1000V	600V
AC voltage		200 / 500V	4 / 40 / 400 / 750V (true rms)	2 / 20 / 200 / 750V	200 / 600V	200m / 2 / 20 / 200 / 600V	2 / 20 / 200 / 700V	2 / 20 / 200 / 700V	200m / 2 / 10 / 200 / 700V	2 / 20 / 200 / 600V
	basic accuracy	±1.2%	±0.8%	±0.8% + 3 digits, ±1.2% + 3 digits (750V)	± 1.2% of rdg ± 10 digits	±0.8% (±1.0% for 600V range)	±0.8%	±0.8%	±0.8% (±1.2% for 200m and 700V range)	±0.8% (±1.2% for 600V range)
	input impedance	-	-	-	1Mohm	10Mohm	10Mohm	10Mohm	10Mohm	10Mohm
	frequency range	45 to 1000Hz	-	40-400Hz, 40-200Hz (750V)	40 to 400Hz	40-400Hz	40-400Hz	40-400Hz	40-400Hz	40-400Hz
	maximum input	500Vrms	750V	750V	600V	600V	750V	750V	700Vrms or 1000V peak	600V
DC current		200mA	4 / 40 / 400mA / 10A	20m / 200m / 10A	200µ / 2m / 20m / 200m / 10A	200µ / 2000µ / 20m / 200m / 2 / 10A	2m / 20m / 200m / 20A	2m / 20m / 200m / 20A	2m / 20m / 200m / 20A	200µ / 2m / 20m / 200m / 10A
	basic accuracy	±2.0%	±0.8%	±1.5%, ±2.0% (10A)	± 1.0% of rdg ± 2 digits for 200µA~20mA range / ± 1.5% of rdg ± 2 digits for 0.2A range / ± 3.0% of rdg ± 2 digits for 10A range	±1.2% (±2.0% for 2/10A range)	±0.8% (±2.0% for 20A range)	±0.8% (±2.0% for 20A range)	±0.8% (±2% for 20A range)	±0.8% (±2.0% for 10A range)
	overload protection	200mA	-	-	F500mA / 250V - 10A / 250V	200mA (2 / 10A ranges unfused)	0.2A (20A for 20A range)	0.2A (20A for 20A range)	0.2A fuse (20A range not protected by fuse)	F500mA / 250V (10A range: F10A / 250V)
AC current		-	4 / 40 / 400mA / 10A (true rms)	2m / 200m / 10A	-	200µ / 2000µ / 20m / 200m / 2 / 10A	20m / 200m / 20A	20m / 200m / 20A	20m / 200m / 20A	2m / 20m / 200m / 10A
	basic accuracy	-	±1.5%	±1%, ±1.8% (200mA), ±3% (10A)	-	±1.5% (±3.0% for 2 / 10A range)	±0.8% (±3.0% for 20A range)	±0.8% (±3.0% for 20A range)	±2% (±3% for 20A range)	±0.8% (±3.0% for 10A range)
	overload protection	-	-	-	-	200mA (2 / 10A ranges unfused)	0.2A (20A range not fused)	0.2A (20A range not fused)	0.2A fuse (20A range not protected by fuse)	F500mA / 250V (10A range: F10A / 250V)
resistance		2k / 20k / 200k / 2000k	400 / 4k / 40k / 400k / 4M / 40M	200 / 2k / 20k / 200k / 2M / 200M	200 / 2k / 20k / 200k / 2M	200 / 2k / 20k / 200k / 2M / 20M	200 / 2k / 20k / 200k / 2M / 20M / 200M	200 / 2k / 20k / 200k / 2M / 20M / 200M	200 / 2k / 20k / 200k / 2M / 20M / 200M	200 / 2k / 20k / 200k / 2M / 20M
	basic accuracy	±1.0%	±0.5%	±0.8% (±5.0% for 200M range)	± 0.8% of rdg ± 2 digits for 200 ohms~200k range / ± 1.0% of rdg ± 2 digits for 2M range	±1.0%	±0.8% (±5.0% for 200M range)	±0.8% (±5.0% for 200M range)	±0.8% (±5% for 200M range)	±0.8% (±1% for 20M range)
	overload protection	250Vrms	-	-	250VDC or rms AC on all ranges	250V	250V	250V	-	250V
capacitance		-	-	20n / 200n / 2µ / 20µF	-	-	2000p / 20n / 200n / 2µ / 20µF	2000p / 20n / 200n / 2µ / 20µF	2000p / 20n / 200n / 2µ / 20µF	-
	accuracy	-	-	±4%	-	-	± 2.5%	±2.5%	± 2.5%	-
inductance		-	-	-	-	-	-	-	-	-
	accuracy	-	-	-	-	-	-	-	-	-
frequency		-	100 / 1k / 10k / 100k / 600kHz	200kHz	-	-	20kHz	20kHz	-	-
	basic accuracy	-	±0.1%	±1.5%	-	-	± 1.0%	±1.0%	-	-
	overload protection	-	-	380VDC of 380VAC rms	-	-	250F DC / AC	250V DC / AC	-	-
temperature		-	-	-4°F to 1832°F	-	-4°F to 1832°F	-58°F to 1832°F	-58°F to 1832°F	-58°F-752°F / 752°F-1832°F / 32°F-104°F	-
	basic accuracy	-	-	±5%, ±1% (33.8°F-752°F), ±2% (753.8°F-1832°F)	-	-	± 0.75%	±0.75%	±0.75% (±1.5% between 752°F-1832°F)	-
overrange		yes "1"	-	yes "1"	yes "1"	yes "OL"	yes "1"	yes "1"	yes "1"	yes "1"
continuity buzzer		yes	yes	yes	yes	yes	yes	yes	yes	yes
transistor test		no	no	yes	yes	yes 2µA / 1V	yes	yes	yes hFE	yes 10µA / 3V
diode test		yes	yes	yes	yes	yes	yes	yes	yes	yes
low-battery indication		yes	-	yes	yes	yes	yes	yes	yes	yes
maximum display		1999	3999 + BARGRAPH	1999	1999	1999 (3 1/2)	1999	1999	1999	1999
LCD display size		1.4" x 0.6"	-	0.7"	1.8" x 0.7"	0.63" height	1.2" x 2.4"	1.2" x 2.4"	-	1.0" x 2.4"
ranging mode		manual	auto / manual	manual	manual	auto / manual	manual	manual	manual	manual
data hold		no	yes	yes	yes	yes	no	no	no	no
backlight		no	yes	yes	yes	yes	no	no	no	no
dimensions		2.8" x 4.7" x 0.8"	9 3/8" x 9 1 / 16" x 3 17 / 64"	7.5" x 3.3" x 2.2"	2.7" x 5.4" x 1.2"	6.2" x 2.9" x 1.3"	3.5" x 6.7" x 1.5"	3.5" x 6.7" x 1.5"	3.5" x 6.7" x 1.5"	3.3" x 6.5" x 1.3"
weight (with battery)		± 3.4oz.	-	± 12.0oz	13.2275 oz	± 8.82oz	± 12.0oz	± 12.0oz	± 12.0oz	±10.23oz.
power supply		12V battery	110Vac or batteries	9V battery	1 9V 6LR61 battery (incl.)	3 1.5V AA batteries (incl.)	9V battery (incl.)	9V battery	9V battery	9V battery
packing		box	box	box	-	blister	box	blister	-	box
accessories		manual / test leads / battery / cover	-	manual / test leads / holster / battery / temp. probe	-	manual / test leads / batteries / thermocouple / multifunctional test socket	manual / test leads / holster / battery / temp. probe	manual / test leads / holster / battery / temp. probe	manual / test leads / thermocouple / battery	manual / test leads / holster / battery
auto power-off		no		yes	no	yes	yes	yes	yes	no

DVM810	DVM9912	DVM68	DVM1090	DVM1500	DVM1000	DVM345DI	DVM1400	DVM3218	DVM6243	DVM6013
200m / 2000m / 20 / 200 / 500V	400m / 4 / 40 / 400 / 600V	326m / 3.26 / 32.6 / 326 / 1000V	200m / 2 / 20 / 200 / 1000V	400mV / 4v / 40V / 400v / 1000V	0,2V / 2 / 20 / 200 / 1000V	4 / 40 / 400 / 1000V	200m / 20 / 600V	340mV / 3.4V / 34V / 340V / 600V	-	-
±0.5% (±0.25% for 200mV range)	±1.2% + 2 digits, ±0.5% + 2 digits (400mV), ±1.5% + 2 digits (600V)	±0.3%	±0.5%	±0.8% of rdg + 3 digits (±1.0% of rdg + 3 digits for 1000V range)	±(0.8% of rdg + 2 digits) , ±(1.2% + 3digits) for 1000V range	±0.5% (±0.8% for 1000V range)	±0.7% of rdg + 2 digits (±1.0% of rdg + 2 digits for 600V range)	± 0.8% for 340mV range / ± 1.0% for 3.4V~340V range / ± 1.2% for 600V range	-	-
-	7.8M ohms	10Mohm (> 100Mohm for 326mV range)	10Mohm	10Mohm	> 10Mohm	10Mohm	10Mohm	10Mohm	-	-
500V	600V	1000V	1000V	600V	1000V	1000V	600V	1000Vdc	-	-
200 / 500V	400m / 4 / 40 / 400 / 600V	3.26 / 32.6 / 326 / 750V	200m / 2 / 20 / 200 / 700V	4V / 40V / 400V / 750V	0,2V / 2 / 20 / 200 / 700V	4 / 40 / 400 / 750V	200 / 600V	3.4V / 34V / 340V / 600V	-	-
±1.2%	±1.5% + 3 digits, ±1.5% + 15 digits (400mV), ±2.0% + 4 digits (600V)	±0.8%	±1.0%	±1% of rdg + 3 digits (±1.2% of rdg + 3 digits for 750V range)	±(1,2% of reading + 3 digits) for 0.6V range , ±(0,8%+3digits) for 2/20/200V range , ±(1,2%+5digits) for 700V range	±1.2% (±1.5% for 750V range)	±0.8% of rdg + 3 digits (±1.5% of rdg + 5 digits for 600V range)	± 1.2% for 3.4V~340V range / ± 1.5% for 600V range	-	-
-	7.8M ohms	10Mohm	10Mohm	10Mohm <100pF	> 10Mohm	10Mohm	10Mohm	10Mohm <100pF	-	-
45-450Hz	50 - 400Hz	40-1000Hz	40 to 400Hz	40-400Hz	40-400Hz	40-400Hz	40-400Hz	40-400Hz	-	-
500V	600V	750V	700Vrms	750Vac / 1000Vdc	700V	750V	600V AC	1000V	-	-
200μ / 2000μ / 20m / 200m / 10A	400μ / 4m / 40m / 400m / 10A	326μ / 3260μ / 32.6m / 326m / 10A	2m / 20m / 200m / 10A	200μA / 2m / 20m / 200m / 10A	200uA / 2mA / 20mA / 200m / 10A	4m / 400m / 10A	200μ / 200m / 10A	34mA / 340mA	-	-
±1.0% (±2.0% for 10A range)	±1.5% + 3 digits, ±1.0% + 3 digits (4μA), ±2.5% + 5 digits (10A)	±1.2% (±2.0% for 10A range)	±1.0% (±2.0% for 10A range)	±(1.2% of rdg + 5 digits) for 4mA and 400 mA, ±(2% + 8 digits) for 10A range	±(0,8% of reading + 3 digits) for 200u / 2mA / 20mA range , ±(1,5%+2digits) for 200mA range , ±(2%+5digits) for 10A range	±1.2% (±2.0% for 10A range)	40mA & 400mA ±(1.2% of rdg + 3 digits) ; 10A ±(2.0% of rdg + 10 digits)	±1.5%	-	-
200mA 250V fuse (10A-range is not fuse-protected)	0.5A / 250V and 10A / 250V fuse	0.5A (10A for 10A range)	0.2A (10A for 10A range)	0.5A / 250V fuse (10A range not fused)	200mA / 250V fuse for all ranges except 10A	15A / 250V-fuse (for 10A-range)	0.5A / 250V fuse (10A range not fused)	0.4A / 250V fuse	-	-
-	400μ / 4m / 40m / 400m / 10A	326μ / 3260μ / 32.6m / 326m / 10A	2m / 20m / 200m / 10A	4m / 400m / 10A	200uA / 2m / 20m / 200m / 10A	4m / 400m / 10A	40mA / 400mA / 10A	34mA / 340mA	-	-
-	±1.8% + 5 digits, ±1.5% + 5 digits (4μA), ±3.0% + 7 digits (10A)	±1.5% (±3.0% for 10A range)	±1.2% (±3.0% for 10A range)	±(1.5% of rdg + 5 digits) for 4mA and 400mA range, ±(3% + 8 digits) for 10A range	±(2% of reading + 3 digits) for 200u / 2mA / 20mA range , ±(1,8%+3digits) for 200mA range , ±(3%+5digits) for 10A range	±1.5% (±3.0% for 10A range)	40mA & 400mA ±(1.5% of rdg + 5 digits) ; 10A ±(3.0% of rdg + 10 digits)	± 1.8% for 34mA range / ± 2.0% for 340mA range	-	-
-	0.5A / 250V and 10A / 250V fuse	0.5A (10A for 10A range)	0.2A (10A for 10A range)	500mA / 250V fuse for mA ranges, 10A range unfused	200mA / 250V fuse for all ranges except 10A	15A / 250V-fuse (for 10A-range)	0.5A / 250V fast fuse (10A range unfused)	400mA / 250V fuse	-	-
200 / 2000 / 20k / 200k / 2000k	400 / 4k / 40k / 400k / 4M / 40M ohms	326 / 3.26k / 32.6k / 326k / 3.26M / 32M	200 / 2k / 20k / 200k / 2M / 20M	200 / 2k / 200k / 1M	200 / 2k / 20k / 200k / 2M / 20M / 200M	400 / 4k / 40k / 400k / 4M / 40M	200 / 2k / 200k / 1M	340 / 3.4K / 34K / 340K / 3.4M / 34M	-	-
±0.8% (±1.0% for 2000k range)	±1.2% + 2 digits, ±1.2% + 4 digits (400 ohms), ±1.0% + 2 digits (4k ohms), ±2.0% + 3 digits (40M ohms)	±0.8% (±1.2% for 32.6M range)	±1.0%	±(1.2% of rdg + 3 digits) for 400K and 4M range, ±(2.0% + 5 digits) for other ranges	±(0,8% of reading + 3 digits) for 200 Ohm range , ±(0,8%+2digits) for 2K...20M range , ±(5%+10digits) for 200Mohm range	±1.2% (±3.0% for 40M range)	±1.2% of rdg + 2 digits (±2.0% of rdg + 5 digits for 40M range)	±0.8% for 340 Ohm range / ±1.2% for 3.4K~340K range / ±2.0% for 3.4M range / ±3.0% for 34M range	-	-
220Vrms max. for 15 seconds	250VDC	250V	250V	250Vdc or 250Vac rms	250Vdc or 250Vrms	250V DC or 250V rms	15 seconds max. 250V on all ranges	500V	-	-
-	4n / 40n / 400n / 4μ / 40μ / 200μF	326n / 32.6μF	2n / 20n / 200n / 2μ / 20μF	4nF / 40nF / 400nF / 4uF / 40uF / 200uF	-	-	4n / 400nF	4nF / 40nF / 400nF / 40uF / 200uF	2n / 20n / 200n / 2μ / 20μF	200p / 2n / 20n / 200n / 2μ / 20μ / 200μ / 2000μ / 20mF
-	±3.0% + 5 digits, ±5.0% + 50 digits (4nF), ±5.0% + 7 digits (40nF), ±5.0% + 5 digits (200μF)	±3.0%	±4.0%	±(5% of rdg + 5 digits) for 4nF range, ±(3% + 5 digits) for all other ranges	-	-	4nF to 40uF ±(3.0% of rdg + 3 digits) ; 200uF ±(8.0% of rdg + 10 digits)	-	±4.0%	± 0.5% (2000μF range : ± 1.0% / 20mF range : ± 2.0%)
-	-	-	2m / 20m / 200m / 2 / 20H	-	-	-	-	-	2m / 20m / 200m / 2H	-
-	-	-	±4.0%	-	-	-	-	-	±2% (±5% for 2H range)	-
-	10 / 100 / 1k / 10k / 100k / 1M / 10MHz	32kHz / 150kHz	20kHz	9.999Hz / 99.99Hz / 999.9Hz / 9.999KHz / 99.99KHz / 199.9KHz	-	-	9.999Hz / 99.99Hz / 999.9Hz / 9.999KHz / 199.9KHz / >200KHz	-	-	-
-	±1.2% + 3 digits, ±1.5% + 5 digits (10 / 100Hz), ±1.5% + 4 digits (10MHz)	±1.2%	±1.5%	±(0.1% of rdg + 1 digit)	-	-	9.999Hz to 199.99 ±(2.0% of rdg + 5 digits) ; >200KHz for reference only	-	-	-
-	250V	250V	250Vrms	250Vdc or 250Vac rms	-	-	250VDC or rms AC	-	-	-
-	-4°F ~ 1400°F	-	-4°F to +1832°F	-20°c ~ 1000°C (-4°F~1832°F, remark: measurement in °C only)	-	32°F to 752°F / 752°F to 1382°F	-4°F~1832°F	-	-	-
-	1°F	-	±1.0%	-	-	±3.0%	-	-	-	-
yes	yes "OL"	yes "OL"	yes "1"	yes "OL"	yes "1."	yes "OL"	yes "OL"	yes "OL"	yes "1"	yes "1"
-	yes	yes	yes	yes	yes	yes	yes	yes	-	-
yes	-	yes 10μA / 3.4V	yes (hFE value : 0 to 1000)	no	no	yes	no	no	-	-
yes	yes	yes 0.4mA	yes	yes 1.0mA (open circuit voltage = 1.5V DC)	yes	yes	yes 1.0mA (open circuit voltage = 1.5V DC)	yes 1.0mA (open circuit voltage = 3.4V DC)	-	-
yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
3 1/2	-	3999 + bargraph	1999	3999	1999	3 3/4 + bargraph	3999	3400	1999	1999
0.5"	0.94"	1.2" x 2.4"	2.3" x 0.9"	15mm	-	-	-	-	1.2" x 2.4"	-
manual	autoranging	auto / manual	manual	manual or automatic	manual	auto / manual	manual or automatic	manual or automatic	manual	manual
no	yes	yes	yes	yes	yes	no	yes	yes	no	no
no	yes	yes	yes	yes	yes	yes	yes	yes	no	no
-	150 x 70 x 48mm	3.6" x 7.4" x 1.2"	7.3" x 3.3" x 1.5"	1 49 / 64" x 7 3 / 32" x 1 49 / 64"	3 11 / 32" x 7 9 / 32" x 1 49 / 64"	3.1" x 7.3" x 1.4"	3 11 / 32" x 7 3 / 32" x 1 49 / 64"	9" x 1.4" x 0.8"	7.4" x 3.6" x 1.2"	1.2" x 3.6" x 7.4"
-	8.82oz	± 10.9oz	± 10.58oz	approx. 9.9oz (incl. holster)	± 10.6oz	± 10.6oz	approx. 9.9oz (incl. holster)	approx. 7oz	± 10.6oz	8.5oz
12V battery (incl.)	9V battery IEC 6F22 (incl.)	9V battery (incl.)	9V battery	3 x 1.5V AA batteries LR6C	9V battery (incl.)	9V battery (incl.)	9V battery (incl.)	2 x 1.5V LR44 batteries V13GA (incl.)	9V battery (incl.)	9V battery (incl.)
-	box	box	box	box	-	-	box	-	box	box
manual / test leads / 1 GP23GA 12V battery	thermocouple, test leads, pouch	manual / test leads / holster / battery	manual / test leads / holster / battery / thermocouple (K-type) / multifunctional test socket	manual / test leads / battery	user manual / test leads / battery / remote box for cable testing	user manual / test leads / holster / battery / RS-232C cable / 1.44MB-disk / K-type thermocouple	manual / test leads / battery	manual / battery	manual / test leads / holster / battery	manual / test leads / holster / battery
no	yes	no	no	yes	no	no	yes	yes	no	no

Packaging	EAN code	Carton	UPC code	Product
	54 10329 22192 8	/60	8 36479 00222 7	DVM300
		/5	8 36479 00915 8	DVM645BIU
			8 36479 00951 6	DVM93U
	54 10329 20531 7	/100	8 36479 00227 2	DVM810
	54 10329 36189 1			DVM8264
	54 10329 20464 8	/40	8 36479 00229 6	DVM850BL
	54 10329 36886 9			DVM9912
	54 10329 23722 6	/20	8 36479 00226 5	DVM68
	54 10329 30161 3	/40		DVM860BL
	54 10329 20199 9	/20	8 36479 00736 9	DVM890C
	54 10329 21021 2	/30	8 36479 00776 5	DVM1090
	54 10329 39196 6		8 36479 00966 0	DVM1500
			8 36479 00231 9	DVM890F
	54 10329 21594 1	/40	8 36479 00233 3	DVM890L
	54 10329 38523 1		8 36479 00967 7	DVM1000
	54 10329 24170 4	/20	8 36479 00223 4	DVM345DI

with L & C function

CLAMP METERS

Order Code		AC97	DCM266L	DCM268	DCM269
DC voltage		-	1000V	3 / 30 / 300 / 1000V	-
	basic accuracy	-	± 0.8%	±0.8%	-
	input impedance	-	> 9Mohm	-	-
	maximum input	-	1000V	1000V	-
AC voltage		-	750V	3 / 30 / 300 / 1000V	-
	basic accuracy	-	±1.0%	±1.0%	-
	input impedance	-	> 9Mohm	-	-
	frequency range	-	-	-	-
	maximum input	-	750V	-	-
DC current		-	-	300 / 600A	200A
	basic accuracy	-	-	±3.0%	±2.8% +8 digits
	overload protection	-	-	-	-
AC current		0.1 to 300A	200 / 1000A	300 / 1000A	200A
	basic accuracy	±3.0%	±2.0%	-	-
	overload protection	-	1200A for 60 seconds	-	-
resistance		-	200 / 20k (insulation test : 20M / 2000M)	300 / 3k / 30k / 300k / 3M / 30Mohm	-
	basic accuracy	-	±1.0% (±2.0% for insulation test)	±1.5%	-
	overload protection	-	500V	-	-
capacitance		-	-	-	-
	accuracy	-	-	-	-
inductance		-	-	-	-
	accuracy	-	-	-	-
frequency		-	-	30kHz	40-51Hz: ±1.2% + 5 digits; 51-510Hz: ±1.2% + 3 digits; 0.51kHz-1kHz: ±1.2% + 3 digits
	basic accuracy	-	-	±2.0%	-
	overload protection	-	-	-	-
temperature		-	-	-	-
	basic accuracy	-	-	-	-
overrange		-	yes "1"	-	-
continuity buzzer		-	yes	yes	yes
transistor test		-	-	no	no
diode test		-	-	yes	yes
low-battery indication		-	yes "BAT"	-	-
maximum display		-	3 1/2	3200 counts + bargraph	2400 counts
LCD display size		-	-	-	-
ranging mode		-	manual	auto / manual	auto / manual
data hold		-	yes	yes	yes
backlight		-	no	yes	yes
dimensions		3.1" x 6.1" x 1.4"	9.1" x 1.5" x 3.5"	11.1" x 4.1" x 1.9"	6 19 / 64" x 2" x 1 3 / 16"
weight (with battery)		± 7.8oz	± 11.3oz	± 17.6oz	6.17 oz
power supply		-	9V battery (incl.)	1 9V battery (incl.)	2 x AAA/LR03 battery (incl.)
packing		box	-	-	-
accessories		manual / carrying case	manual / test leads / battery / carrying bag	-	-
auto power-off		-	no	-	-

DVM1400

DVM3218

DVM6243

DVM6013

AC97

DCM266L

DCM268

DCM269

FUNCTION GENERATORS & COUNTERS

2.4GHz HIGH RESOLUTION FREQUENCY COUNTER
DVM13MFC2U

Features:
- 8-digits green LED display with annunciators
- two-channel operating mode memory
- adjustable range and gate time
- high-safety design as per IEC 1010, cat. II

Specifications:
- frequency range: 0.01Hz - 2.4GHz
- accuracy: time base error x frequency ± 1 digit
- gate time: 100 msec - 10 sec
- input characteristics:
  - channel A:
    - frequency range:
      | DC couple: 0.01Hz to 100HZ
      | AC couple: 100Hz to 50Mhz
    - sensitivity: 80mVrms
    - impedance: 1 Mohms
    - max. input voltage: 30V
  - channel B:
    - frequency range: from 50Mhz to 2.4Ghz
    - sensitivity: 50mVrms
    - impedance: 50 ohms
    - max. input voltage: 3V
- power supply: 110-220VAC ± 10%
- max. consumption: 5W
- dimensions: 10 3/5" x 8 1/2" x 3 9/10"
- weight: 3.53 lbs

Packaging		EAN code	
Carton		UPC code	8 36479 00828 1

OSCILLOSCOPE PROBE SETS

INSULATED SCOPE PROBE 60MHz
PROBE60S

Features:
- complete probe set
- safety: conform with IEC-1010 cat II
- attenuation: 1:1 or 1:10

Specifications:
- position x1:
  - attenuation: 1:1
  - bandwidth: DC to 15MHz
  - rise time: 23.3ns
  - input resistance: 1Mohm (input resistance scope)
  - input capacitance: 46pF + cap. scope
  - working voltage: 600V DC incl. peak AC derating with frequency
  - position REF: -
- position x10:
  - attenuation: 1:10
  - bandwidth: DC to 60MHz
  - rise time: 5.8ns
  - input resistance: 10Mohm (if scope input = 1Mohm)
  - input capacitance: ±15pF
  - working voltage: 600V DC incl. peak AC derating with frequency
  - compensation range: 10 to 50pF
- cable length: 4ft
- remarks: with insulated BNC connector

Packaging		EAN code	54 10329 22198 0
Carton	/100	UPC code	8 36479 00373 6

OSCILLOSCOPE PROBE 100MHz
PROBE100

Features:
- complete probe set, for measurements up to 100MHz
- attenuation: 1:1 or 1:10
- safety: conform to IEC-1010 cat II

Specifications:
- position x1:
  - attenuation: 1:1
  - bandwidth: DC to 15MHz
  - rise time: 23.3ns
  - input resistance: 1Mohm (input resistance scope)
  - input capacitance: cap. scope 46pF
  - working voltage: 600V DC incl. peak AC derating with frequency
  - position REF: tip disconnected, scope input at ground
- position x10:
  - attenuation: 1:10
  - bandwidth: DC to 100MHz
  - rise time: 3.5ns
  - input resistance: 10Mohm (if scope input = 1Mohm)
  - input capacitance: ±15pF
  - working voltage: 600V DC incl. peak AC derating with frequency
  - compensation range: 10 to 50pF
- cable length: 4ft

Packaging		EAN code	54 10329 31752 2
Carton	/100	UPC code	8 36479 00371 2

OSCILLOSCOPE PROBE 150MHz
PROBE150

Features:
- complete probe set, for measurements up to 150MHz
- attenuation: 1:1 or 1:10
- safety: conform to IEC-1010 cat II

Specifications:
- position x1:
  - attenuation: 1:1
  - bandwidth: DC to 10MHz
  - rise time: 35ns
  - input resistance: 1Mohm (input resistance scope)
  - input capacitance: cap. scope 46pF
  - working voltage: 600V DC incl. peak AC derating with frequency
  - position REF: tip disconnected, scope input at ground
- position x10:
  - attenuation: 1:10
  - bandwidth: DC to 150MHz
  - rise time: 2.33ns
  - input resistance: 10Mohm (if scope input = 1Mohm)
  - input capacitance: 15pF approx.
  - working voltage: 600V DC incl. peak AC derating with frequency
  - compensation range: 10 to 35pF
- cable length: 4ft

Packaging		EAN code	54 10329 31753 9
Carton	/100	UPC code	8 36479 00372 9

OSCILLOSCOPE PROBE 250MHz
PROBE250

Features:
- complete probe set, for measurements up to 250MHz
- attenuation: 1:1 or 1:10
- safety: conform to IEC-1010 cat II

Specifications:
- position x1:
  - attenuation: 1:1
  - bandwidth: DC to 10MHz
  - rise time: 35ns
  - input resistance: 1Mohm (input resistance scope)
  - input capacitance: cap. scope 46pF
  - working voltage: 600Vdc incl. peak AC derating with frequency
  - position REF: tip disconnected, scope input at ground
- position x10:
  - attenuation: 1:10
  - bandwidth: DC to 250MHz
  - rise time: 1.4ns
  - input resistance: 10Mohm (if scope input = 1Mohm)
  - input capacitance: ± 11pF
  - working voltage: 600Vdc incl. peak AC derating with frequency
  - compensation range: 10 to 35pF
- cable length: 4ft

Packaging		EAN code	54 10329 22206 2
Carton	/100	UPC code	8 36479 00594 5

COAX CABLES AND TEST LEADS

COAX CABLES

Order Code	length	connectors	remarks
TLB4	2 1/2 ft	male BNC plug / 2 x crocodile clips	IEC1010

TLB4

EAN code 54 10329 22032 7

TEST LEADS

TEST LEAD SET WITH 2 PROBES 0.7MM (RED + BLACK)
TLM61

NEW

Features:
- 0.7mm straight stainless steel test probes
- 4mm protected right-angle plugs

Specifications:
- contents: 2 x PVC test lead with protection caps
- ratings: 1000V/10A
- inside copper Ø: 18AWG
- length: 39.37"
- remark: CAT III 1000V 10A

EAN code 54 10329 42914 0
UPC code 8 16353 01059 3
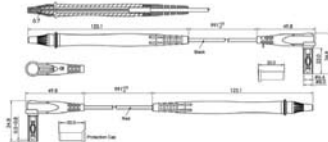
SILICONE CONNECTION LEADS 100cm - 4mm - 2 pcs
TLM62

NEW

Features:
- 4mm protected straight plug at both ends
- 100cm silicone cable

Specifications:
- contents: 2 x PVC test lead with protection caps
- ratings: 1000V/10A
- inside copper Ø: 100 x 0.10mm
- length: 39.37"
- remark: CAT IV

EAN code 54 10329 42915 7
UPC code 8 16353 01060 9
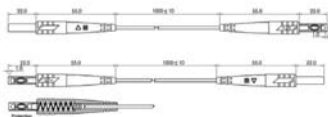
SAFETY TEST LEADS 100cm WITH REPLACABLE TIPS - 2 pcs
TLM63

NEW

Features:
- replacable stainless steel test probes (3 types included)
- 4mm protected right-angle plugs

Specifications:
- contents: 2 x PVC test lead with protection caps, 3 different test probes (x2)
- ratings: 1000V/10A
- inside copper Ø: 18AWG
- length: 39.37"
- remark: CAT III 1000V 10A

EAN code 54 10329 42916 4
UPC code 8 16353 01061 6

SAFETY TEST LEADS 65cm - 4mm TO HOOK CLIP - 2 pcs
TLM64

NEW

Features:
- miniature stainless steel hook clips
- 4mm protected right-angle plugs

Specifications:
- contents: 2 x PVC test lead with protection caps
- ratings: 300V/3A
- inside copper Ø: 18AWG
- length: 25.59"
- remark: CAT III 300V 3A

EAN code 54 10329 42917 1
UPC code 8 16353 01062 3

TEST LEADS
TLM1

Specifications:
- contents: 2 test leads with protection caps
- ratings: 1000V / 15A
- -:-
- length: 30" / 37"
- remark: IEC1010 CLASS II protection

EAN code 54 10329 30977 0
Carton /100
UPC code 8 36479 00424 5

TEST PROBE SET
TLM10

Specifications:
- contents: 4 crocodile clips / 4 x 0.16" pins / 2 x 0.08" pins / 2 forks
- ratings: -
- -:-
- length: 35"
- remark: blister

EAN code 54 10329 27606 5
Carton /100
UPC code 8 36479 00647 8

TEST TWEEZER FOR SMD DEVICES
TLM12

Specifications:
- contents:
- ratings: max. 24V / 1A
- -: -
- cable length: 15 3/4"
- tweezers tip size: tweezers tip size : 3/64" x 1/64"

| Packaging | EAN code | 5 410329 39165 2 |
| Carton | UPC code | |

SET OF TEST LEADS - 2 BANANA PLUGS
TLM2

Specifications:
- contents: 2 test leads (with banana plug) 0.16"
- ratings: -
- -: -
- length: 39.4"
- remark: -

| Packaging | EAN code | 5 410329 30976 3 |
| Carton /250 | UPC code | 8 36479 00648 5 |

SET OF TEST LEADS - BANANA PLUG / BOOTED ALLIGATOR PLUG
TLM3

Specifications:
- contents: 3 test leads (banana plug 0.16" / booted crocodile plug)
- ratings: 0.5A
- -: -
- length: 35.4", overall Ø : 0.11", wire : 16 x 0.0039"
- remark: -

| Packaging | EAN code | 5 410329 30975 6 |
| Carton /250 | UPC code | 8 36479 00166 4 |

SET OF TEST LEADS - 2 HOOKED BANANA PLUGS
TLM4

Specifications:
- contents: 2 test leads (2 hook banana plugs) 0.16"
- ratings: -
- -: -
- length: 35.4"
- remark: -

| Packaging | EAN code | 5 410329 28279 0 |
| Carton /250 | UPC code | 8 36479 00777 2 |

TEST LEADS
TLM6

Specifications:
- contents: 2 test leads pins
- ratings: -
- -: -
- length: 4.9"
- remark: soldertype

| Packaging | EAN code | 5 410329 29276 8 |
| Carton /1 | UPC code | |

VOLTAGE TESTERS

DIGITAL VOLTAGE TESTER - WITH LCD
VTTEST2N

NEW

Specifications:
- voltage tester (AC or DC) between 12V and 220V
- grounding test and testing of broken lines
- with LCD
- size: 0.44ft

| Packaging | EAN code | 5 410329 42785 6 |
| Carton | UPC code | |

VOLTAGE TEST SCREWDRIVER WITH INDICATION THROUGH NEON LAMP
VTTEST12

Specifications:
- voltages: 100 to 250Vac
- tip & blade: 0.14" x 4.0"

| Packaging | EAN code | 5 410329 35909 6 |
| Carton | UPC code | 8 36479 00820 5 |

LAMP & LED TESTERS

LAMP CHECKER
VTTEST8

Features:
- for lamps with one of the following fittings: G13, B15d/G5, G4/GU5.3/GY6.35, E27, E14, E10
- "beep"-signal confirms that lamp functions normally

Specifications:
- power supply: 9V battery (incl.)

| Packaging | EAN code | 5 410329 20343 6 |
| Carton /100 | UPC code | |

1 x 9V

LED TESTER
VTTESTL

Features:
- handy, versatile and portable LED tester
- types of LED:
  - normal LED
  - bi-colour LED (CA and CC)
  - superflux (spider) LED

Specifications:
- normal LED: testrange between 2-30mA
- all others: testrange between 20 and 150mA
- power supply: 9V battery (6F22SC, incl.)
- dimensions: 0.26" x 0.18" x 0.06"
- weight: 2.82oz

| Packaging | EAN code | 5 410329 35255 4 |
| Carton /1 | UPC code | |

1 x 9V

SPECIAL METERS

THERMOMETERS

NON-CONTACT INFRARED POCKET THERMOMETER -20°C TO +270°C (-4°F to +518°F)
DVM77

Features:
- built-in LED pointer
- temperature readout in °C or °F
- LCD display with backlight
- data-hold & auto power off function
- "push-to-scan" temperature function

Specifications:
- range: -20°C to +270°C (-4°F to +518°F)
- accuracy: ± 2% of reading or ± 2°C / ± 4°F
- power supply: 2 x AAA-battery (incl.)
- dimensions: 3.82" x 2.24" x 1.14"
- weight: 2.22oz
- distance-to-spot ratio: D/S = 6/1

Distance (D) to Spot size (S)
D/S=6/1

(Unit: mm)

Packaging		EAN code	54 10329 33852 7
Carton	/100	UPC code	8 36479 00750 5
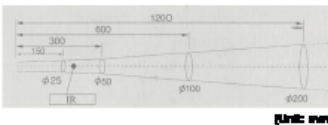
INFRARED THERMOMETER (-20°C TO +420°C / 0 to 788°F)
DVM8869

Features:
- one-handed operation
- laser technology

Specifications:
- range: 0 to 788°F (-20°C to +420°C)
- resolution: 1°F / 1°C
- spectral response: 6-14µm
- response time: 500ms
- accuracy:
  - -4°F to +212°C: ± 3.6°F
  - +213.8°F to +788°F: ± 5.4°F
- operating temperature: 32°F to +122°F
- power consumption: 40mA max.
- power supply: 1 9V-battery (not incl.)
- dimensions: 1.7" x 1.6" x 6.7"
- weight: ± 4.9oz

1 x 9V

Packaging		EAN code	54 10329 30979 4
Carton	/50	UPC code	8 36479 00230 2

NON-CONTACT INFRARED POCKET THERMOMETER -20°C to +270°C (-4°F to +518°F)
DVM77N

Features:
- single dot laser targeting
- ambient temperature measurement
- temperature readout in °C or °F
- LCD display with backlight
- data-hold & auto power-off function
- low battery indication

Specifications:
- range: -20°C to +270°C (-4°F to +518°F)
- accuracy: ± 2% of reading or ± 2°C / ± 4°F
- power supply: 2 x AAA battery (LR03C, incl.)
- over-range indication: OL or -OL
- auto power-off: 20s
- distance-to-spot ratio: 6:1
- laser power: < 1mW
- emissivity: 0.95
- dimensions: 3 45/64" x 2 21/64" x 1 7/64"
- weight: 2.64 oz

2 x AAA

Distance (D) to Spot size (S)
D/S=6/1

(Unit: mm)

Packaging		EAN code	54 10329 39332 8
Carton		UPC code	
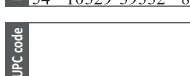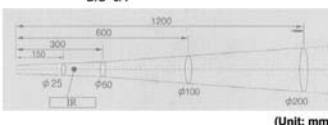
INFRARED THERMOMETER (-31°F ~ 689°F / -35°C ~ 365°C)
DVM439

Features:
- laser sight technology
- temperature readout in °C or °F
- large LCD display with amber backlight
- real-time maximum temperature reading
- last measurement memory recall by pressing °C/°F key while powered off
- auto power-off function

Specifications:
- measurement range: -35°C ~ 365°C (-31°F ~ 689°F)
- operating temperature: -10°C ~ 50°C (32°F ~ 122°F)
- storage temperature: -20°C ~ 65°C (-4°F ~ 149°F)
- accuracy (Tobj = 15°C ~ 35°C,Tamb = 25°C): ± 1.5°C (2.7°F)
- accuracy (Tamb = 23°C ~ 25°C):
  - Tobj = 0°C ~ 365°C: ± 2.5% of rdg + 2 digits
  - Tobj = -35°C ~ 0°C: ± (2.5°C + 0.05/degree)
- resolution (-9.9°C ~ 199.9°C): 0.2°C/0.5°F
- response time (90%): 1 sec
- emissivity range: 0.95 fixed
- wavelength: 5µm - 14µm
- auto switching-off: 15 sec
- distance-to-spot ratio: D/S = 8:1
- power supply: 2 X 1.5V AAA batteries (incl.)
- dimensions: 6 13/16" x 1 27/64" x 2 51/64"
- weight: 5.3 oz

2 x AAA

Packaging	EAN code	54 10329 40258 7
Carton	UPC code	
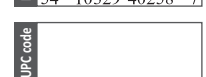
COMPACT INFRARED THERMOMETER WITH DUAL LASER TARGETING
DVM8861

Features:
- rapid detection function
- precise non-contact measurements
- dual laser sighting
- unique flat surface, modern housing design
- automatic data-hold
- °C/°F switch
- emissivity digitally adjustable from 0.10 to 1.0
- max. temperature display
- backlit LCD display
- automatic range selection and display resolution - 0.1ºC/0.1ºF
- trigger lock
- set high and low alarms
- comes with soft carrying case

Specifications:
- measurement range: -50°C ~ 550°C (-58°F ~ 1022°F)
- operating temperature: 0°C ~ 50°C (32°F ~ 122°F)
- storage temperature: -20°C ~ 65°C (-4°F ~ 149°F)
- accuracy (Tobj = 15°C ~ 35°C, Tamb = 25°C): ± 1.5°C (2.7°F)
- accuracy (Tamb = 23°C ~ 25°C):
  - Tobj = -50°C ~ 20°C: 2.5°C (4.5°F)
  - Tobj = 20°C ~ 300°C: ± 1.0% (1.0°C/1.8°F)
  - Tobj = 300°C ~ 550°C: ± 1.5%
- resolution: 0.1°C /0.1°F
- response time (90%): 150ms
- emissivity range: 0.1 ~ 1.0 adjustable
- wavelength: 8µm - 14µm
- auto switching-off: ± 10 sec
- distance-to-spot ratio: D/S = 12:1
- power supply: 1 x 9V battery (incl.)
- dimensions: 5 3/4" x 4 3/32" x 1 11/16"
- weight: 5.75 oz

1 x 9V

Packaging	EAN code	54 10329 40260 0
Carton	UPC code	
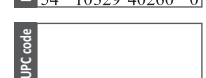
DUAL-CHANNEL DIGITAL THERMOMETER
DVM1322

Features:
• 3 ½-digit LCD
• designed for use with an external K-type thermocouple
• data-hold function
• max-hold function
• temperature read-out in °F or °C
Specifications:
• temperature range: -58°F to 2000°F (-50°C to 1300°C)
• temperature indications are in accordance with IEC584
• 2 "K"-thermocouples are supplied
• resolution: 0.1°C or 0.1°F / 1°C or 1°F
• extra temperature sensor (option): TP01, TP02, TP03
• power supply: 9V-battery
• dimensions: 5.7" x 2.7" x 1.5"
• weight: 7.6oz

1 x 9V

Packaging	EAN code		Carton	/50	UPC code
	54 10329 28102 1				8 36479 00219 7

DECIBELMETERS

ANALOGUE SOUND LEVEL METER
AVM2050

Features:
• 7 sound level ranges: 50 to 126dB
• A and C weighting: for sound analyses
• fast/slow response: allows intermediate and high level measurements
• with battery level indication
• RCA output jack
Specifications:
• range: up to 126dB
• positions: 60, 70, 80, 90, 100, 110, 120dB
• load impedance: 1kohm min.
• distortion: < 2% at 1kHz, 0.5V
• microphone: electret condenser microphone, omnidirectional, directionality increases at higher frequencies
• precision: ± 2dB at 144dB
• weighting: A or C
• response: slow or fast
• output signal: max. 1V deviation at 1kHz for the entire range
• power supply: 1 9V battery (incl.)
• battery test: OK indication between 7 and 10.5V
• battery life: 110 operating hours (alkaline batteries)
• dimensions: 6.3" x 2.4" x 1.7"
• weight: ± 6.53oz

1 x 9V

Packaging	EAN code		Carton	/50	UPC code
	54 10329 31635 8				8 36479 00749 9

DISTANCEMETERS

ULTRASONIC DISTANCE METER WITH LASER
VTUSD2

Features:
• LCD with 1/2" digits
• also calculates the area and the content
• laser pointer for increased accuracy
Specifications:
• range: 91cm (3ft) to 18.28m (60ft)
• accuracy: ± 0.5% (1 digit)
• power supply: 1 x 9V (6LR61C or E-block) (not incl.)
• dimensions: 2.87 x 5.83"
• weight: 5.29lbs
• laser:
  - 1 mW class 2
  - range: 130ft.
  - wavelength: 670nm

Packaging	EAN code		Carton	/36	UPC code
	54 10329 31741 6				

ULTRASONIC DISTANCE METER + LASER
VTUSD3

Features:
• large multifunctional LCD display with white backlight
• measures in Imperial / metric
• calculates the area and volume
• 5 memory groups for storing measurements
• laser pointer for increased accuracy
• auto / manual shutdown
• alarm function for wrong readings
• with carrying pouch
Specifications:
• range: 1.64' to 52.48'
• accuracy: ± 1% + 1 digit
• laser:
  - <1 mW class 2
  - range: 130 ft
  - wavelength: 670nm
• response time: 2 sec
• operating current: <60mA
• operating temperature: 32°F ~ 104°F
• power supply: 1 x 9V 6LR61C battery (incl.)
• dimensions: 1" x 3 11/32" x 2 3/4"
• weight: 7,12oz

1 x 9V

Packaging	EAN code		Carton		UPC code
	54 10329 38808 9				

LAN TESTERS

LAN TESTER FOR RJ45, RJ12, RJ11, RJ10
VTLAN4

This LAN tester for different cable types is indispensable in network installation and maintenance activities. This compact device can be used for testing network or telephone cables (RJ-45, RJ-11,12) and for most types of computer cables.

Features:
• LED indication
• advanced design for easy testing
• ability to test cables from a distance and in places that are not easily accessible
• automatically runs all tests and checks for continuity, open, shorted and crossed wire pairs
• slow and fast test switch
Specifications:
• tests: RJ-45, 10 Base-T, Token Ring, RJ11/12 cables
• power supply: 9V-battery (not incl.)
• max. cable length for testing: ±984ft (0.18 mile)

1 x 9V

Packaging	EAN code		Carton	/100	UPC code
	54 10329 33540 3				8 36479 00767 3

LAN TESTER FOR RJ45, RJ12, RJ11, RJ10 & BNC
VTLAN3

This LAN tester for different cable types is indispensable in network installation and maintenance. This compact device can be used for testing network and telephone cables (RJ-45, RJ-11 and BNC). It can test most types of telephone and computer cables.
Features:
• LED indication
• advanced design for easy testing
• BNC adapter for testing BNC cables
• ability to test cables from a distance and in places that are not easily accessible
• automatically runs all tests and checks for continuity, open, shorted and crossed wire pairs
Specifications:
• tests: RJ-45 (8P8C), RJ12 (6P6C), RJ11 (6P2C), RJ10 (4P4C) USOC & BNC, 10 Base-T, Token Ring & coaxial BNC cables
• power supply: 9V-battery (not incl.)

1 x 9V

Packaging	EAN code		Carton	/60	UPC code
	54 10329 21404 3				8 36479 00665 2

LUXMETERS

DIGITAL LIGHT METER
DVM1300

Features:
- light level measurements: 0.1lux ~ 50000lux
- easy to use with single function switch, light pocket-sized device
- 3 1/2 digit LCD display with low-battery & overrange indication

Specifications:
- light:
  - measuring range: 200, 2000, 20000lux (20000lux range reading x10) and 50000lux (50000lux range reading x100)
  - accuracy:
    - 10000lux: ± 10% of rdg + 10 digits
  - repeatability: ± 2%
  - temperature characteristics: ± 0.1%/°C
  - photo detector: one silicon photo diode with filter
- power supply: 1 12V A23 battery (included)
- measurement rate: 1.5 times per second, nominal
- storage temperature: 14°F to 140°F
- photo detector dimensions: 4.5" x 2.4" x 1.1"
- dimensions: 7.4" x 2.5" x 1.0"
- weight: 5.6 oz.

Packaging	EAN code	54 10329 20524 9
Carton	/50	UPC code 8 36479 00220 3

HUMIDITY METERS

DIGITAL HUMIDITY & TEMPERATURE METER 0% TO 100%RH AND -20°C TO +60°C (-4°F to 140°F)
DVM321

Specifications:
- display: LCD with backlight
- sensor type:
  - humidity: precision capacitance sensor
  - temperature: thermistor (head) and type K thermocouple
- measurement range:
  - humidity: 0%RH - 100%RH
  - temperature: -20°C to 60°C (-4°F to 140°F)
- accuracy:
  - range 5% to 95% RH: +/- 3.5%RH (at 23°C +/- 5°C)
  - range -20°C to 60°C: +/- 2.5°C
  - range -4°F to 140°F: +/- 3.5°F
- response time: 180ms
- sample rate: 2.5 times per second
- polarity: automatic, with negative polarity indication
- overload indication: "OL"
- resolution: 0.1%RH, 0.1°C, 0.1°F
- operating conditions: 0-50°C (32-122°F); <80%RH non-condensing
- storage conditions: -10°C to 60°C (14-140°F); <80%RH non-condensing
- auto power off: device shuts down automatically if no key is pressed for ± 15 min.
- battery: 9V 6LR61battery (incl.)
- dimensions: 8.86 x 1.77 x 1.34"
- weight: 7oz

1 x 9V

Packaging	EAN code	54 10329 33185 6
Carton	/10	UPC code

TACHOMETERS

REFLECTIVE STICKER FOR TACHOMETER (1PC)
DTO-RS

Features:
- for use with: DTO6234, DTO6234N

Specifications:
- dimensions: 0.49" x 7.95"

Packaging	EAN code	54 10329 30896 4
Carton		UPC code

DIGITAL TACHOMETER
DTO6234N

Features:
- accurate RPM measurements
- 5-digit LCD displays the exact RPM
- 2 test modes: rotation speed mode (RPM) and count mode (REV)
- the last value & max/min RPM values are stored automatically
- comes with carrying case
- option: DTO-RS
- for professional usage

Specifications:
- accuracy: 0.05%
- resolution:
  - 2 to 999.9 RPM: 0.1 RPM
  - > 1000 RPM: 1 RPM
- sampling time: 0.5s
- detecting distance: 1 31/32" x 19 11/16"
- power supply: 1 x 9V 6LR61 battery (incl.) or external power adapter 6-9VDC (not incl.)
- power consumption: ± 45mA
- operating temperature: 32 °F~122 °F
- dimensions: 6 19/64" x 2 9/32" x 1 17/32"
- weight: 5.64 oz

1 x 9V

Packaging	EAN code	54 10329 38392 3
Carton		UPC code

ANEMOMETERS

ANEMOMETER
DVM9500

Features:
- wind speed measurements: in mph, km/h or m/s units
- wind speed: in Beauford wind scale bar graph
- wind chill display
- temperature display: in degrees Celsius or Fahrenheit
- data-hold function
- auto power OFF
- LCD backlight
- comes with neckband

Specifications:
- wind speed: min. 0.2m/sec - max. 30m/sec
- power supply: 1 3V CR2032 battery (incl.)
- dimensions: 1.5" x .7" x 3.9"

1 x CR2032

Packaging	EAN code	37 00123 85555 2
Carton	/1	UPC code

SPECIAL METERS - MISCELLANEOUS

4-DIGIT AUTOMOTIVE DMM - 44 RANGES - 10A/FREQUENCY/RPM/DWELL
DVM205AM

Features:
- auto/manual range selection
- auto power off
- data hold + relative function
- backlight
- overload protection on all ranges
- diode / continuity test

Specifications:
- RPM: 500-9999rpm (2cyl/dis/4/5/6/8)
- dwell angle: 2cyl/dis-0-180°/8cyl-0-45°
- AC voltage: 400mV ~ 750V AC
- DC voltage: 400mV ~ 1000V DC
- AC current: 400μA ~ 10A
- DC current: 400μA ~ 10A
- resistance: 400 ohm ~ 40Mohm
- capacitance: 10nF ~ 100μF
- frequency: 9.999Hz ~ 9.999MHz
- duty cycle: 0.1% ~ 99.9%
- period: 2.0 ~ 20.0ms
- pulse width: 2.0 ~ 10.0ms
- temperature: -20°C ~ +760°C (-4°F ~ +1400°F)
- power supply: 1 x 9V battery (incl.)

1 x 9V

Packaging	EAN code	54 10329 27108 4
Carton	/30	UPC code 8 16353 01034 0

DIGITAL ENVIRONMENT METER: °F/dB/LUX/HUM
DVM401

Features:
- display: large 3 1/2-digit LCD displays Lux, °C, °F, %RH, dB-A, dB-C, dB-low and dB-high
- auto power off
- data hold and maximum hold
- comes with: 9V-battery and "K-type" temperature probe, humidity probe, photo detector and carrying bag

Specifications:
- luxmeter:
  - ranges: 20.00, 200.0, 2000, 20000Lux (x10 Lux)
  - resolution: 0.1Lux
  - accuracy: ± (5% + 10d)
- temperature measurement:
  - ranges: -20.0°C ~ 200.0°C, -4.0°F ~ 200.0°F, -20°C ~ 750°C, -4°F ~ 1400°F
  - resolution: 0.1°C / 0.1°F
  - accuracy: ± (3% + 2°C)
- humidity meter:
  - range: 25% ~ 95% RH
  - resolution: 0.1% RH
  - accuracy: ± 5% RH at 25°C
- sound level meter:
  - ranges: Lo = 35 ~ 100dB, Hi = 65 ~ 130dB (frequency weighting : A, C)
  - resolution: 0.1dB
  - accuracy: ± 3,5 dB at 94 dB sound level , 1Khz sine wave
- power supply: 9V-battery (incl.)
- dimensions:
  - unit: 9.9" x 2.5" x 1.3"
  - photo detector: 4.5" x 2.4" x 1.1"
- weight:
  - unit: 11.6 oz.
  - photo detector: 2.8 oz.

°C | 💧 | ☀ | dB | 1 x 9V

Packaging		EAN code	54 10329 20536 2
Carton	/10	UPC code	

DETECTOR FOR LIVE WIRING AND METAL AND WOODEN STUDS
VTMVS2

This detector uses electronic signals to locate the exact position of studs, ceiling joist AC wires and metal through drywall, concrete and other common wall materials. Once the edge of a stud has been detected, the VTMVS2 emits audio and visual signals (LED display) that allows you to easily pinpoint its center position. Utilising the procedure of scanning and marking from two sides, the VTMVS2 will find the center of wood or metal studs or live wires through 3/4 inch surfaces with 1/8 inch accuracy.

Specifications:
- power supply: 1 x 9V battery 6LR61, 6LR61C or 6LR61SC (not incl.)
- water-resistant
- operating temperature: 14°F - 122°F
- dimensions: 8.78 x 3.62 x 1.77"
- weight (with battery): 8.82oz

1 x 9V

Packaging		EAN code	54 10329 32772 9
Carton	/24	UPC code	8 36479 00671 3

CABLE TRACKER WITH TONE GENERATOR
VTTEST11

Features:
- network tester: consists of a tone generator and a probe
- method: use the tone generator and the probe to determine where a cable is going and whether or not (and where) the cable is interrupted
- signal viewing in 3 modes: lamp (L), speaker (SP) or both (S&L)
- tone generator output (square waveform): single (900Hz) or dual (900 - 1000Hz)
- comes with: soft carrying bag

Specifications:
- tone generator:
  - working voltage: DC 9V ±15% (battery not incl.)
  - working current: 10mA (intermittent tone) / 20mA (continuous tone)
  - output wave form: square wave signals ±10Vpp
    · single audio frequency: ± 900Hz
    · dual audio frequency: ± 900Hz - 1000Hz
  - dimensions: 4.5" x 2.4" x 1.1"
  - weight: ± 4.59oz
- probe:
  - working voltage: DC 9V ±15% (battery not incl.)
  - working current: 25mA (L) / 80mA (max. SP volume) / 100mA (max S&L volume)
  - max. reception sensitivity: > 30mV
  - maximum output volume: ±120dB
  - dimensions: 8.1" x 1.6" x 1.5"
  - weight: ±2.82oz

Packaging		EAN code	54 10329 30386 0
Carton	/50	UPC code	8 36479 00742 0

SOUND LEVEL METER (resolution 0.1dB)
DVM1351

Features:
- ranges from 35dB to 130dB for frequencies between 31.5Hz and 8kHz
- 0.1dB resolution
- both AC and DC signals are available on an single standard 3.5mm coaxial socket, suitable for frequency analysers, level recorders, FFT analysers, graphic recorders, etc.

Specifications:
- comes with wind screen, screwdriver and carrying bag
- dimensions: 9.45 x 2.68 x 0.98"
- weight: 7.4oz (with batteries)

Packaging		EAN code	
Carton		UPC code	

DIGITAL HUMIDITY & TEMPERATURE METER (10% TO 95% AND -20°C TO +60°C)
DVM1360

Specifications:
- measuring ranges:
  - humidity: 10% to 95% (±3%)
  - temperature: -4°F - 140°F
- comes with carrying bag
- dimensions: 10.6" x 2.7" x 1.0"
- weight: 7.1oz

Packaging		EAN code	
Carton		UPC code	8 36479 00221 0

3 1/2-DIGIT DMM - 20 RANGES - 10A - SOUND LEVEL / LIGHT / HUMIDITY / TEMPERATURE
DVM501

Features:
- automatic polarity function
- low-battery indication
- transistor and diode test
- voltage measurements: AC 750V and DC 1000V max.
- current measurements: max. 10A
- resistance measurements: 2Mohm max.
- sound level measurements: 35-100dB
  - resolution: 0.1dB
  - typ. instrument frequency: 30Hz to 10kHz
  - frequency weighting: C
  - accuracy: ± 3.5dB at 94dB sound level (1kHz sine wave)
  - microphone: electric condenser
- light measurements: up to 20000lux
  - accuracy: ±5%
  - temperature characteristics: ±0.1%/°C
  - photodiode: 1 silicon photo-diode with filter
- humidity measurements: 25%~95% RH
  - resolution: 0.1% RH
  - accuracy: ±5% RH (35%~95% RH) / ±6% RH (10%~35% RH)
- temperature measurements: -4°F to +2372°C

Specifications:
- DC voltage: 200m/20/600V
  - basic accuracy: ±0.5%
  - input impedance: 1Mohm
  - maximum input: 600V
- AC voltage: 200/600V
  - basic accuracy: ±1.2%
  - input impedance: 1Mohm
  - frequency range: 45 to 450Hz
  - maximum input: 600V AC
- DC current: 200µ/200m/10A
  - basic accuracy: ±1.0%
  - overload protection: 0.2A / 250V fuse (10A range not fused)
- resistance: 200/2k/200k/1M
  - basic accuracy: ±0.8%
  - overload protection: 15 seconds max. 250V on all ranges
- temperature: -4°F to +2372°C
  - basic accuracy: ±3% (-4°F to +392°F) / ±3.5% (-4°F to +2372°F)
- overrange: yes "OL"
- continuity buzzer: yes
- transistor test: yes 0~1000 (approx. 10µA DC at Vcd=2.8V DC)
- diode test: yes 1.4mA (open circuit voltage = 2.8V DC)
- low-battery indication: yes "BAT"
- maximum display: 1999
- ranging mode: manual
- data hold: no
- backlight: no
- dimensions: 4.8" x 2.4" x 1.6"
- weight (with battery): approx. 9.9oz (incl. holster)
- power supply: 9V battery
- packing: blister
- accessories: manual / test leads / battery
- auto power-off: no

Packaging		EAN code	54 10329 27960 8
Carton	/40	UPC code	8 36479 00590 7

LAN TESTER FOR RJ45, RJ12, RJ11, RJ10 & BNC
VTLAN2

This multi-cable tester is and indispensable tool for networking installation and maintenance. This compact unit is designed specifically for on-site working staff. It can be used in testing network and telephone type cables (RJ-45, RJ-11 and BNC). It satisfies the majority of the telephone and computer cable testing requirements.

Features:
- informative status lights
- advanced design for easy testing
- BNC adapter for testing BNC cables
- ability to test remote locations or installed locations with remote unit
- automatically runs all tests and checks for continuity, open, shorted and crossed wire pairs

Specifications:
- tests RJ-45-EIA 568A/568B (AT&T 258A), 10 Base-T, Token Ring, RJ11/12 USOC & Coaxial BNC cables
- deluxe carrying bag included
- power supply: 9-volt battery (not incl.)

1 x
9V

Packaging		EAN code	54 10329 20168 5
Carton	/15	UPC code	8 36479 00637 9

TEMPERATURE PROBES

TEMPERATURE PROBE- FLEXIBLE TYPE (-58 TO 392°F)
TP01

Specifications:
- flexible type
- temperature: -58 to 392°F

Packaging		EAN code	54 10329 30972 5
Carton	/50	UPC code	8 36479 00425 2
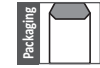
TEMPERATURE PROBE - FOR LIQUIDS - LONG SENSOR (-58° TO +572°F)
TP02

Specifications:
- long type - for liquids
- temperature: -58° to +572°F

Packaging		EAN code	54 10329 30869 8
Carton	/30	UPC code	8 36479 00426 9

TEMPERATURE PROBE - SURFACE TYPE (-58 TO 932°F)
TP03

Specifications:
- surface type
- temperature: -58 to 932°F

Packaging		EAN code	54 10329 31472 9
Carton	/1	UPC code	8 36479 00427 6

PANEL METERS

PANEL METERS - ANALOG

ANALOG CURRENT PANEL METERS

ANALOG DC CURRENT PANEL METERS

Moving coil panel meters for use in electronic instruments, switchboards, vehicles,... With zero adjusting screw. Class 2.5.

Order Code	range	dimensions
AIM60005	50µA	2.4" x 1.9"
AIM601		
AIM60100	100mA	2.4" x 1.9"
AIM6010A	10A	2.4" x 1.9"
AIM603000	3A	2.4" x 1.9"
AIM6030A	30A	2.4" x 1.9"
AIM6050	50mA	2.4" x 1.9"
AIM60500	500mA	2.4" x 1.9"
AIM605000	5A	2.4" x 1.9"
AIM705000	5A	2.8" x 2.4"

Packaging | EAN code 54 10329 28281 3 | Carton /100 | UPC code 8 36479 00009 4
AIM60005

Packaging | EAN code 54 10329 33912 8 | Carton
AIM601

Packaging | EAN code 54 10329 27560 0 | Carton /50 | UPC code 8 36479 00010 0
AIM60100

Packaging | EAN code 54 10329 28280 6 | Carton /100 | UPC code 8 36479 00011 7
AIM6010A

Packaging | EAN code 54 10329 30693 9 | Carton /100 | UPC code 8 36479 00012 4
AIM603000

Packaging | EAN code 54 10329 28088 8 | Carton /100 | UPC code 8 36479 00013 1
AIM6030A

Packaging | EAN code 54 10329 31599 3 | Carton /50 | UPC code 8 36479 00014 8
AIM6050

Packaging | EAN code 54 10329 31622 8 | Carton /100 | UPC code 8 36479 00015 5
AIM60500

Packaging | EAN code 54 10329 27522 8 | Carton /50 | UPC code 8 36479 00016 2
AIM605000

Packaging | EAN code 54 10329 31621 1 | Carton /100 | UPC code 8 36479 00017 9
AIM705000

ANALOG VOLTAGE PANEL METERS

ANALOG DC VOLTAGE PANEL METERS

Moving coil panel meters for use in electronic instruments, switchboards, vehicles,... With zero adjusting screw. Class 2.5.

Order Code	range	dimensions
AVM6015	15V DC	2.4" x 1.9"
AVM6030	30V DC	2.4" x 1.9"
AVM7015	15V DC	2.8" x 2.4"
AVM7030	30V DC	2.8" x 2.4"

Packaging | EAN code 54 10329 28090 1 | Carton /100 | UPC code 8 36479 00024 7
AVM6015

Packaging | EAN code 54 10329 28100 7 | Carton /100 | UPC code 8 36479 00026 1
AVM6030

Packaging | EAN code 54 10329 30992 3 | Carton /100 | UPC code 8 36479 00028 5
AVM7015

Packaging | EAN code 54 10329 30514 7 | Carton /100 | UPC code 8 36479 00029 2
AVM7030

ANALOG AC VOLTAGE PANEL METERS

Moving coil panel meters for use in electronic instruments, switchboards, vehicles,... With zero adjusting screw. Class 2.5.

Order Code	range	dimensions
AVM60150	150V AC	2.4" x 1.9"
AVM60300	300V AC	2.4" x 1.9"

Packaging | EAN code 54 10329 33530 4 | Carton /100 | UPC code 8 36479 00025 4
AVM60150

Packaging | EAN code 54 10329 30944 2 | Carton /100 | UPC code 8 36479 00027 8
AVM60300

PANEL METERS - DIGITAL

PRECISION RESISTOR SET FOR PMLED/PMLCD
PM/RES

Features:
- a set of 5 precision resistors to determine the measuring range
- for: PMLCD, PMLCDL, PMLED & PMLED/5

Packaging | EAN code 54 10329 40164 1 | Carton /1 | UPC code 8 36479 00366 8

DIGITAL PANEL METER LCD - 9V DC
PMLCD

Features:
• 3 1/2 LCD panel meter
• single 9V DC operation
• power consumption: 1mA DC
• high input impedance: > 100Mohm
• optional resistor set: PM/RES

Specifications:
• display: 3 1/2-digit LCD
• input sensitivity: 200mV FS
• power supply: 9V DC (7 - 12V DC)
• decimal point selection: with wire jumper
• automatic polarity indication
• figure height: 0.52"
• sampling rate: 2 - 3 readings / sec.
• guaranteed zero reading for 0V input
• high input impedance: > 100Mohm
• accuracy: ± 0.5%
• power consumption: 1mA DC
• size: 2.7" x 1.7"

Packaging — EAN code: 54 10329 24115 5
Carton /100 — UPC code: 8 36479 00367 5

DIGITAL PANEL METER LCD - ECONOMIC
PMLCDL

Features:
• low-cost version
• single 8/12V DC (1mA) operation
• high input impedance: > 100Mohm
• dimensions: 2.7" x 1.7"
• optional resistor set: PM/RES

Specifications:
• display: 3 1/2-digit LCD
• input sensitivity: 200mV FS
• power supply: 9V DC (7 - 12V DC)
• decimal point selection: with wire jumper
• automatic polarity indication
• figure height: 0.52"
• sampling rate: 2 - 3 readings / sec.
• guaranteed zero reading for 0V input
• high input impedance: >100Mohm
• accuracy: ± 0.5%
• power consumption: 1mA DC
• size: 2.7" x 1.7"

Packaging — EAN code: 54 10329 27571 6
Carton /100 — UPC code: 8 36479 00368 2

DIGITAL PANEL METER LED - 9V DC
PMLED

Features:
• 3 1/2 LED digital panel meter
• single 9V DC-operation
• high input impedance: > 100Mohm
• optional resistor set: PM/RES

Specifications:
• display: 3 1/2 digit LED
• input sensitivity: 200mV FS
• power supply: 9V DC
• decimal point selection: with wire jumper
• automatic polarity indication
• figure height: 0.56"
• sampling rate: 2 - 3 readings / sec.
• guaranteed zero reading for 0V input
• high input impedance: > 100Mohm
• accuracy: ± 0.5%

Specifications:
• power consumption: 50 - 60mA
• size: 2.7" x 1.7"

Packaging — EAN code: 54 10329 30159 0
Carton /100 — UPC code: 8 36479 00369 9

DIGITAL PANEL METER LED - 5V DC
PMLED/5

Features:
• 3 1/2 LED digital panel meter
• single 5V DC operation
• high input impedance: > 100Mohm
• optional resistor set: PM/RES

Specifications:
• display: 3 1/2 digit LED
• input sensitivity: 200mV FS
• power supply: 5V DC
• decimal point selection: with wire jumper
• automatic polarity indication
• figure height: 0.56"
• sampling rate: 2 - 3 readings / sec.
• guaranteed zero reading for 0V input
• high input impedance: > 100Mohm
• accuracy: ± 0.5%
• power consumption: 50 - 60mA
• size: 2.7" x 1.7"

Packaging — EAN code: 54 10329 30160 6
Carton /100 — UPC code: 8 36479 00370 5

PEREL HAND TOOLS

BALLPOINT HEX KEY WRENCH SET - 9 pcs
HHEXPRO

Specifications:
• hex: 0.06"x0.18", 0.08"x0.19", 0.10"x0.21", 0.12"x0.23", 0.16"x0.26", 0.20"x0.29", 0.24"x0.32", 0.31"x0.37", 0.39"x0.44"
• chrome-vanadium steel

Packaging — EAN code: 54 10329 38956 7
Carton — UPC code:

STAR KEY SET - 9 pcs
HSTARPRO

Specifications:
• 'star': T10x5.5, T15x6.0, T20x7.1, T25x7.6, T27x8.4, T30x9.4, T40x10.6, T45x11.9, T50x13.4
• chrome-vanadium steel

Packaging — EAN code: 54 10329 38957 4
Carton — UPC code:

ADJUSTABLE SPANNER 8''
HAW8

Features:
• dropforged, high carbon steel
• insulated handle with ergonomic design

Specifications:
• dimensions: 20cm (8")

Packaging — EAN code: 54 10329 39116 4
Carton — UPC code:

ADJUSTABLE SPANNER 10''
HAW10

Features:
• dropforged, high carbon steel
• insulated handle with ergonomic design
Specifications:
• dimensions: 25cm (10")

Packaging		EAN code	54 10329 39117 1
Carton		UPC code	

ADJUSTABLE SPANNER 12''
HAW12

Features:
• dropforged, high carbon steel
• insulated handle with ergonomic design
Specifications:
• dimensions: 30cm (12")

Packaging		EAN code	54 10329 39118 8
Carton		UPC code	

CLAMP & HAND SAW SET (10pcs) IN CASE
3699-10

Features:
• 4 bar clamps 300mm/150mm/100mm (x2)
• 2 ratchet clamps 100mm
• 1 metal hand saw 400mm
• 1 aluminium hacksaw 150mm
• 1 cutter with 5 spare blades
• 1 carpenter pencil

Packaging		EAN code	54 11257 11335 4
Carton	/3	UPC code	

COMBINATION PLIERS 6.5" / 165mm
HP01

Features:
• dropforged, hardened and tempered high carbon steel
• heavy-duty handle with soft grips
Specifications:
• length: 165mm (6.5")

Packaging		EAN code	54 10329 37632 1
Carton		UPC code	

COMBINATION PLIERS 8" / 200mm
HP02

Features:
• dropforged, hardened and tempered high carbon steel
• heavy-duty handle with soft grips
Specifications:
• length: 200mm (8")

Packaging		EAN code	54 10329 38947 5
Carton		UPC code	

DIAGONAL CUTTING PLIERS 6.5" / 165mm
HP03

Features:
• dropforged, hardened and tempered high carbon steel
• heavy-duty handle with soft grips
Specifications:
• length: 165mm (6.5")

Packaging		EAN code	54 10329 38948 2
Carton		UPC code	

COMBINATION PLIERS 8" / 200mm
HP04

Features:
• dropforged, hardened and tempered high carbon steel
• heavy-duty handle with soft grips
Specifications:
• length: 200mm (8")

Packaging		EAN code	54 10329 38949 9
Carton		UPC code	

LONG NOSE PLIERS 6.5" / 165mm
HP05

Features:
• dropforged, hardened and tempered high carbon steel
• heavy-duty handle with soft grips
Specifications:
• length: 165mm (6.5")

Packaging		EAN code	54 10329 38950 5
Carton		UPC code	

LONG NOSE PLIERS 8" / 200mm
HP06

Features:
• dropforged, hardened and tempered high carbon steel
• heavy-duty handle with soft grips
Specifications:
• length: 200mm (8")

Packaging		EAN code	54 10329 38951 2
Carton		UPC code	

BENT NOSE PLIERS 6.5" / 165mm
HP07

Features:
• dropforged, hardened and tempered high carbon steel
• heavy-duty handle with soft grips
Specifications:
• length: 165mm (6.5")

Packaging		EAN code	54 10329 38952 9
Carton		UPC code	

WIRE STRIPPER 6.5" / 165mm
HP08

Features:
• dropforged, hardened and tempered high carbon steel
• heavy-duty handle with soft grips
Specifications:
• length: 165mm (6.5")

Packaging | EAN code 54 10329 38953 6
Carton | UPC code

WATERPUMP PLIERS 10" / 250mm
HP09

Features:
• dropforged, hardened and tempered high carbon steel
• cushion grip handles for extra comfort
Specifications:
• dimensions: 9 27/32"

Packaging | EAN code 54 10329 39109 6
Carton | UPC code

CARPENTERS' PINCERS 8" / 200mm
HP11

Features:
• dropforged, hardened and tempered high carbon steel
• cushion grip handles for extra comfort
Specifications:
• dimensions: 8" / 200mm

Packaging | EAN code 54 10329 39112 6
Carton | UPC code

CARPENTERS' PINCERS 10" / 250mm
HP12

Features:
• dropforged, hardened and tempered high carbon steel
• cushion grip handles for extra comfort
Specifications:
• dimensions: 10" / 250mm

Packaging | EAN code 54 10329 39113 3
Carton | UPC code

TOWER PINCERS 8" / 200mm
HP13

Features:
• dropforged, hardened and tempered high carbon steel
• cushion grip handles for extra comfort
Specifications:
• dimensions: 8" / 200mm

Packaging | EAN code 54 10329 39114 0
Carton | UPC code

TOWER PINCERS 10" / 250mm
HP14

Features:
• dropforged, hardened and tempered high carbon steel
• cushion grip handles for extra comfort
Specifications:
• dimensions: 10" / 250mm

Packaging | EAN code 54 10329 39115 7
Carton | UPC code

VISE GRIP PLIERS 7" / 175mm
HP15

Features:
• made of forged steel
Specifications:
• dimensions: 175mm (7")

Packaging | EAN code 54 10329 39119 5
Carton | UPC code

VISE GRIP PLIERS 10" / 250mm
HP16

Features:
• made of forged steel
Specifications:
• dimensions: 250mm (10")

Packaging | EAN code 54 10329 39120 1
Carton | UPC code

SCREWDRIVER & BIT SET - 86 pcs
HSET05

Each screwdriver features a comfortable handle, a CVS shaft and a magnetic tip.
Features:
• contains:
  - screwdrivers:
    · flat: 6 x 38, 5 x 75, 6 x 100, 7 x 150mm
    · cross: PH2 x 38, PH1 x 75, PH2 x 100, PH3 x 150mm
    · reversible ratchet screwdriver with bit holder
  - ratchet screwdriver
  - 38mm sockets (10 pcs): 4, 5, 5.5, 6.5, 7, 8, 9, 10, 11, 13mm
  - 25mm screwdriver bits (25 pcs):
    · flat: 3, 4, 5 (x2), 6.5 (x4), 7, 8mm
    · cross: PH0 (x2), PH1 (x3), PH2 (x2), PH3 (x3)
    · Pozidriv: PZ0 (x2), PZ1 (x3), PZ2 (x3), PZ3 (x2)
    · hex: 2, 2.5, 3, 3.5, 4 (x2), 5 (x2), 6 (x2)
    · star: T10, T15, T20, T25, T27, T30, T40
    · square: S0, S1, S2, S3
  - 50mm screwdriver bits (14 pcs):
    · flat: 4, 5, 6.5mm
    · cross: PH1, PH2, PH3
    · Pozidriv: PZ1, PZ2, PZ3
    · star: T10, T15, T20, T25, T30
  - magnetic bit holder (60mm)
  - adapter hex - square (50mm)

Packaging | EAN code 54 10329 38845 4
Carton | UPC code

ALUMINIUM SPIRIT LEVEL - 23 1/2"
HL60

Features:
- 3-vial aluminium level: horizontal, vertical and adjustable vial for angle measuring
- shock absorbing endcaps
- ergonomic rubber grips for additional stability and easy handling

Specifications:
- dimensions: 23 5/8" x 2 23/64" x 15/16"
- weight: 14.8 oz

Packaging		EAN code	54 10329 39771 5
Carton		UPC code	8 36479 00844 1

ALUMINIUM SPIRIT LEVEL - 31 1/2"
HL80

Features:
- 3-vial aluminium level: horizontal, vertical and adjustable vial for angle measuring
- shock absorbing endcaps
- ergonomic rubber grips for additional stability and easy handling

Specifications:
- dimensions: 31 1/2" x 2 23/64" x 15/16"
- weight: 21oz

Packaging		EAN code	54 10329 39772 2
Carton		UPC code	8 36479 00845 8

COUNTER DISPLAY WITH 8 x PICK-UP TOOL WITH MAGNETIC TIP & LED LIGHT
NEW
HPUT1D

Features:
- telescopic: extendable to 2.6 ft.
- strong magnet that can carry up to 2.2kg/5lbs
- with LED light: turn head clockwise for LED illumination
- comfortable hand grip

Specifications:
- length:
  - not extended: 7 43/64"
  - fully extended: 31 1/2"
- power supply: 3 x LR44/AG13 button cell (included)
- weight: 3 oz.

Packaging		EAN code	54 10329 41424 5
Carton		UPC code	

CHARGERS WITH USB OUTPUT

2 IN 1 CIGARETTE LIGHTER PLUG USB ADAPTER (5V 1A)
CARSUSB2

NEW

Features:
- small, lightweight USB adapter
- overload and short-circuit protected
- dual output
- blue LED power indicator
- Micro USB, Mini USB and 4mm x 1.7mm plugs included

Specifications:
- input voltage: 12VDC to 24VDC (car cigar lighter plug)
- output voltage: 5VDC
- current: 1A max.
- dimensions: 4.33" x Ø 0.79"
- weight: 1.76oz.

Packaging		EAN code	54 10329 43053 5
Carton		UPC code	

CIGARETTE LIGHTER PLUG USB ADAPTER (5V 1A)
CARSUSB1

NEW

Features:
- small, lightweight USB adapter
- overload and short-circuit protected

Specifications:
- input voltage: 12VDC to 24VDC (car cigar lighter plug)
- output voltage: 5VDC
- current: 1A max.
- dimensions: 1 13/16" x Ø 1"
- weight: 0.42 oz.

Packaging		EAN code	54 10329 42918 8
Carton	/120	UPC code	

COMPACT SWITCHING POWER SUPPLIES

COMPACT SWITCHING POWER SUPPLIES WITH USB OUTPUT

3-IN-1 USB CHARGER SET
PSSMV11U

This travel charger offers a convenient way of recharging your mobile phone battery, MP3 player, PDA, GPS and other devices using a conventional indoor AC outlet, car plug or the USB port of your PC.

Features:
- ultimate 3-in-1 kit:
  - AC adapter
  - car charger
  - USB charger
- comes with 5 adapters to suit different mobile phones
- lightweight and compact design is ideal for travelers
- maintains constant voltage when charging
- comes with 5 plugs for: Nokia, Sony/Ericsson, Motorola, Siemens and Samsung
- e13 approved

Specifications:
- input voltage:
  - mains plug: 100-240VAC / 50Hz
  - car plug: 12 or 24VDC
- static current: 6mA
- output voltage: 5VDC
- output current: 500mA
- operating temp: <104°F

Packaging		EAN code	
Carton	/50	UPC code	8 36479 00744 4

USB SWITCHING POWER ADAPTER - 5VDC / 1A
PSSUSB4U

Features:
- very compact
- extreme low power consumption when not charged (0.13W @ 110V)
- designed for a wide range of mobile phones, media players, portable game devices, GPS, ...
- short-circuit protected

Specifications:
- output voltage: 5VDC
- output current: 1A
- output power: 5W
- ripple: < 0.5V
- zero load power consumption: 0.13W @ 110V
- connection type: female USB, 3 ft cable with 8 various plugs included
- power supply: 100 - 240VAC, 50/60Hz
- dimensions: 2 23/32" x 1 39/64" x 1 1/8" (+ plug)

Packaging		EAN code	
Carton	/48	UPC code	8 36479 00887 8

USB POWER STATION/CHARGER & TRAVEL PLUGS
PSSEUSB6A

NEW

Features:
- emergency power station: built-in battery for mobile use
- with 4 travel plugs suitable for almost worldwide use
- over discharge protection
- included plugs: (countries including but not limited to)
  - CEE 7/16: Europlug (Europe, except UK/Ireland/Cyprus/Malta)
  - NEMA 1-15: North/Central America, Japan
  - AS 3112: Australia/New Zealand/Tokelau/Papua New Guinea/Fiji/Argentina/China
  - BS 1363: United Kingdom/Ireland/Cyprus/Malta/Malaysia/Singapore/Hong Kong/Saudi Arabia

Specifications:
- power input: AC100V~240V, 50/60Hz
- power output:
  - AC powered: 5.0VDC / 1A
  - internal battery: 5.0VDC / 700mA
- dimensions (without power plug): 1 3/16" x 1 31/32" x 2 61/64"
- weight (without power plugs): 3.10 Oz.

Packaging		EAN code	54 10329 44242 2
Carton		UPC code	

COMPACT SWITCHING POWER SUPPLIES SELECTABLE OUTPUT

UNIVERSAL SWITCHING MODE REGULATED ADAPTER - OUTPUT: 12 TO 22VDC + 5V USB OUTPUT (110W)
PSSE17U

NEW

Features:
- with 9 detachable DC plugs for most common laptop brands
- additional 5V/500mA USB output
- for notebook computers & digital electronic devices
- selectable stabilised output, low ripple & noise
- high efficiency & low energy consumption
- power LED

Specifications:
- supply voltage: 100 ~ 240VAC 50/60 Hz
- power: 110W + 2.5W (USB)
- selectable output voltages:
  - 5VDC 500mA (USB - plug)
  - 12VDC (6.5A regulated)
  - 15 - 16 - 18 - 18.5 - 19 - 19.5VDC (6A regulated)
  - 22VDC (5A regulated)
- dimensions: 1 3/16" x 2 23/64" x 5 45/64"
- plugs: see 'Files' for a graphical overview
- spare plugs: PLUGSPSET2

Packaging		EAN code	
Carton	/20	UPC code	8 16353 01104 0

COMPACT SWITCHING POWER SUPPLY WITH 8 SELECTABLE OUTPUTS : 5 TO 12VDC - 60W
NEW
PSSE6U

Features:
- 8 different DC plugs can be mounted
- for notebook computers & digital electronic devices
- stabilised output, low ripple & noise
- very high efficiency & low energy consumption
- stand-by power consumption meets the EUP regulation

Specifications:
- supply voltage: 100 ~ 240VAC
- power: 60W
- 8 selectable output voltages: 5 to 12 VDC in steps of 1V
- max. output currents: @ 5V-8V / 5.2A, @ 9V-12V / 5A
- plugs: (1.35 x 3.5) (1.75 x 4.0) (1.75 x 4.8) (2.1 x 5.5) (2.5 x 5.5) (3.0 x 6.3) (EIAJ-4, 5.0, 1.0 inner pin) (EIAJ-5, 6.5, 1.5 inner pin)
- dimensions: 5 1/10" x 2 3/5" x 7/10"
- weight: 8.47oz.

Packaging		EAN code	
Carton		UPC code	8 36479 00953 0

5V 6V 7V 8V 9V 10V 11V 12V
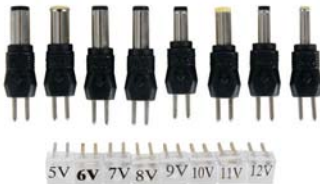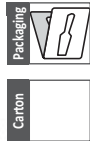
COMPACT SWITCHING POWER SUPPLY WITH 15 SELECTABLE OUTPUTS : 12 TO 24VDC - 70W
NEW
PSSE7U

Features:
- 8 different DC plugs can be mounted
- for notebook computers & digital electronic devices
- stabilised output, low ripple & noise
- very high efficiency & low energy consumption
- stand-by power consumption meets the EUP regulation

Specifications:
- supply voltage: 100 ~ 240VAC
- power: 70W
- 15 selectable output voltages: 12 to 24 VDC
- max. output currents: 12V/5A , 13V/4.8A , 14V/4.7A , 15V/4.5A , 16V/4.3A , 17V/4.1A , 18V/3.9A , 18,5V , 19V/3.7A ,19,5V/3.7A , 20V/3.5A , 21V/3.35A , 22V/3.2A , 23V/3.1A , 24V/3A
- plugs: (1.35 x 3.5) (1.75 x 4.0) (1.75 x 4.8) (2.1 x 5.5) (2.5 x 5.5) (3.0 x 6.3) (EIAJ-4, 5.0, 1.0 inner pin) (EIAJ-5, 6.5, 1.5 inner pin)
- dimensions: 5 1/10" x 2 3/5" x 7/10"
- weight: 8.47oz.

Packaging		EAN code	
Carton		UPC code	8 36479 00954 7

12V 13V 14V 15V 16V 17V 18V 19V 20V 21V 22V 23V 24V
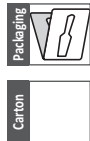
COMPACT SWITCHING POWER SUPPLY WITH SELECTABLE OUTPUT 3 TO 7VDC- 2,5A Max - 13W
PSSMV10U

Features:
- with 6 detachable plugs

Specifications:
- supply voltage: 110 ~240VAC 50/60Hz
- power: 13VA
- output voltages: 3, 4.5, 5, 6, 6.5, 7VDC
- output current: 1900mA (regulated), 2.5A max.
- plugs (6 pcs): 5.5 x Ø2.5, 5.5 x Ø2.1, 4.75 x Ø1.70, 4.00 x Ø1.70, 3.50 x Ø1.40, 2.35 x Ø0.70
- dimensions: 3.15 x 1.77 x 0.99"
- weight: 7.05oz

Packaging		EAN code	
Carton	/48	UPC code	8 36479 00781 9
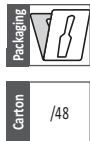
UNIVERSAL SWITCHING MODE ADAPTER - 10 DC PLUGS - 90W
PSSMV19U

FLAT INPUT

Features:
- 10 detachable DC plugs
- output voltage will be selected automatically according to the used plug
- for notebook computers & digital electronic devices
- stabilised output, low ripple & noise
- LED display indicates the output voltage depending on the used plug
- high efficiency & low energy consumption
- overload and short-circuit protected
- power LED

Specifications:
- supply voltage: 100 ~ 240VAC / 47 ~ 63Hz
- power: 90W max.
- efficiency: min. 83%
- power consumption at no load: < 1.5W
- dimensions: 5 1/2" x 2 23/64" x 1 29/64"
- plugs: voltages and dimensions
  - A: 19V / 4.8 x 1.7 x 10.7mm (HP®, Compaq®, NEC®, Asus®)
  - B: 15V / 6.3 x 3.0 x 10.7mm (Toshiba®, NEC®)
  - C: 19V / 5.5 x 2.1 x 10.7mm (Acer®, Liteon®, NEC®)
  - D: 19V / 5.5 x 2.5 x 10.7mm (HP®, Compaq®, Acer®, Gateway®, IBM®, Asus®, Liteon®, NEC®)
  - F: 19V / 5.5 x 3.0 x 10.7mm pin 1.0 (Samsung®)
  - G: 16V / 6.0 x 4.3 x 10.7mm pin 1.0 (Sony®, Fujitsu®)
  - H: 19.5V / 6.0 x 4.3 x 10.7mm pin 1.0 (Sony®, Fujitsu®)
  - I: 19V / 5.5 x 1.7 x 10.7mm (Acer®,Toshiba®)
  - J: 19.5V / 7.4 x 5.0 x 12.5mm pin 0.6 (Dell®)
  - K: 20V / 7.3 x 7.4 (Dell®)

Packaging		EAN code	
Carton	/20	UPC code	8 36479 00876 2
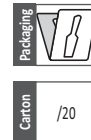
COMPACT SWITCHING POWER SUPPLY 36W WITH SELECTABLE OUTPUT
PSSMV7U

Features:
- with 8 detachable DC plugs
- for notebook computers & personal digital electronic devices
- stabilized output, low ripple & interference
- short-circuit & overload protection
- high efficiency & low energy consumption

Specifications:
- supply voltage: 100 ~ 240V AC
- power: 36W
- efficiency: >= 70%
- 20 selectable outputs: 5 to 24V DC in steps of 1V (from 4.3 to 1.5A)
- output plugs: 2.5mm mono, 3.5mm mono, 1.0x3.0mm, 1.35x3.5mm, 1.7x4.0mm, 2.1x5.0mm, 2.5x5.5mm, 1.5x5.5mm
- dimensions: 3.5" x 1.8" x 1.2"

Packaging		EAN code	
Carton	/1	UPC code	8 36479 00657 7

COMPACT SWITCHING POWER SUPPLY 10W WITH SELECTABLE OUTPUT
PSSMV1USA

Specifications:
- supply voltage: 100 ~ 230V AC ± 15%
- power: 10W
- efficiency: > 80%
- output voltages: 3, 4.5, 6, 7.5, 9, 12V DC
- output current: 800mA (regulated) / 1.5A max.
- plugs: 2.5mm mono, 3.5mm mono, 1.0x3.0mm, 1.35x3.5mm, 1.7x4.0mm, 2.1x5.0mm, 2.5x5.5mm, 1.5x5.5mm
- dimensions: 2.6" x 1.1" x 2.9"
- weight: 3.0 oz

Packaging		EAN code	
Carton	/1	UPC code	8 36479 00381 1
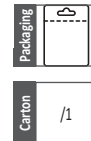
COMPACT SWITCHING POWER SUPPLY WITH SELECTABLE OUTPUT
PSSMV3

Features:
- 7 different DC plugs can be mounted
- 4 x mains power plugs: USA / UK / Europe / Taiwan / China

Specifications:
- input voltage: 100-240Vac 50/60Hz 0.48A
- efficiency: >= 70%
- output:
  - 3/4.5/6/7.5/9/12Vdc: 2A
- plugs: 2.5mm, 3.5mm, 2.1x5.0mm, 2.5x5.5mm, 1.35x3.5mm, 1.7x4.0mm, 0.75x2.35mm
- dimensions: 4.6" x 2.4" x 3.3"

| Packaging | | EAN code | 54 10329 24165 0 |
| Carton | /40 | UPC code | 8 36479 00382 8 |

UNIVERSAL REGULATED SWITCHING MODE ADAPTER 120W WITH SELECTABLE OUTPUT 15 TO 24VDC
PSSMV8U

Features:
- with 6 detachable DC plugs
- for notebook computers & digital electronic devices
- stabilized output, low ripple & interference
- short-circuit & overload protection
- high efficiency & low energy consumption
- power LED

Specifications:
- supply voltage: 100 ~ 240VAC
- power: 120W max.
- selectable output voltages: 15 - 16 - 18 - 19 - 20VDC (6A regulated) / 22 - 24VDC (5A regulated)
- output plugs: 6.5x4.5, 6.3x3.0, 4.75x1.7mm (straight types) / 5.5x2.5, 5.5x2.1mm (right-angled types) / special computer connector
- dimensions: 6.9" x 2.6" x 1.6"

| Packaging | | EAN code | |
| Carton | | UPC code | 8 36479 00740 6 |

UNIVERSAL SWITCHING MODE REGULATED ADAPTER - OUTPUT: 9,5 TO 0VDC + 5V USB OUTPUT - 63W
NEW
PSSE4U

Features:
- with 9 detachable DC plugs
- additional 5V/0.6A USB output
- for netbook computers and digital electronic devices
- stabilised output, low ripple and noise
- very high efficiency and low energy consumption
- replaceable power cord
- power LED

Specifications:
- supply voltage: 100 ~ 240VAC 50/60 Hz
- power: 63W
- selectable output voltages:
  - 5VDC, 0.6A (USB)
  - 9.5 - 12V, 4.5A
  - 15V, 4A
  - 18 - 19V, 3.16A
  - 20VDC, 3A
- plugs: see 'Files' for a graphical overview
  - bent plugs: 2 pcs
    - (A): ID: 2.1mm, OD: 5.5mm
    - (R): ID: 1.7mm, OD: 5.5mm
  - straight plugs: 9 pcs
    - (C): ID: 1.7mm, OD: 4.75mm
    - (D): ID: 3.0mm, OD: 6.3mm
    - (E): ID: 1.4mm, OD: 6.5mm
    - (F): special Dell 3-pin plug
    - (G): ID: 1.0mm, OD: 5.0mm
    - (H): ID: 1.9mm, OD: 5.5mm
    - (I): ID: 2.5mm stereo plug, OD: 6mm
    - (J): ID: 3.5mm stereo plug, OD: 9.3mm
    - (K): ID: 0.6mm, OD: 7.4mm
- additional plugs: PLUGSPSET2
- dimensions: 1 31/32" x 1 3/16" x 4 21/64"

| Packaging | | EAN code | |
| Carton | /20 | UPC code | 8 16353 01048 7 |

COMPACT SWITCHING ADAPTERS 70W

Get rid of those bulky power-hungry heat-producing mains adapters.

These adaptors use state-of-the-art switching power supplies and feature some major advantages such as:

- cooler running

- stabilized output

- short-circuit and overload protection

- compact design

- very low idling consumption

Features:
- continuous short circuit protection
- high effiency: 85% typ.
- meets UL, CSA, TUV, CE
- ideal for spare power supply for portable PC

Specifications:
- ripple & noise: 1%
- voltage accuracy: ± 2%
- line regulation: ± 1%
- input characteristics:
  - voltage: 90 ~ 264V AC
  - frequency: 47 to 63Hz
  - inrush current: 50A max. @ 264V AC
  - input to output insulation: 4242V DC
  - leakage current: 0.25mA
- output characteristics:
  - short circuit protection: continuous
- operating temperature: 32°F to 104°F
- connector: 2.1x5.5mm
- cable length: ±6.2ft
- dimensions: 5.2" x 2.3" x 1.3"

Order Code	output voltage	output current	load regulation			
PSS1255	12V	5.8A	± 5%			
PSS1546	15V	4.6A	± 3%			
PSS1839	18V	3.9A	± 2%	32°F to 104°F	2.1x5.5mm	±6.2ft	5.2" x 2.3" x 1.3"
PSS2430	24V	3.0A	± 2%	32°F to 104°F	2.1x5.5mm	±6.2ft	5.2" x 2.3" x 1.3"

PSS1255   PSS1546

PSS1839   PSS2430

NON-REGULATED VOLTAGE ADAPTERS

NON-REGULATED SINGLE-VOLTAGE ADAPTERS

NON-REGULATED SINGLE-VOLTAGE ADAPTERS AC INPUT DC OUTPUT

Specifications:
• input: 230Vac / 50Hz
• thermal cut-off
• non-regulated
• DC plug: 2.1 x 5.5mm
• cord: 6ft.

Order Code	voltage	max. current	dimensions	fig.
PS905	9Vdc	500mA	68 x 50 x 80mm	1
PS910	9V DC	1000mA	3.4" x 2.3" x 2.0"	1
PS1208	12V DC	800mA	3.4" x 2.3" x 2.0"	1

PS905

PS910

PS1208

NON-REGULATED SINGLE-VOLTAGE ADAPTERS 115V AC INPUT DC OUTPUT

Specifications:
• input: 115Vac / 60Hz
• thermal cutoff
• non-regulated
• short-circuit protection
• DC plug: 0.22" / 0.08" ((+) inside)
• cord: 6ft

Order Code	voltage	current
PS1208USA	12V DC	800mA max.
PS905USA	9V DC	500mA max.
PS910USA	9V DC	1000mA max.

NON-REGULATED SINGLE-VOLTAGE ADAPTER AC INPUT DC OUTPUT 15VDC/800mA
PS1508U

Specifications:
• input: 110V
• thermal cut-off
• non-regulated
• voltage: 15Vdc
• max. current: 800mA
• dimensions: 2 29/32" x 2 9/32" x 3 5/16"

Packaging		EAN code	
Carton		UPC code	8 36479 00943 1

NON-REGULATED UNIVERSAL VOLTAGE ADAPTERS

NON-REGULATED UNIVERSAL VOLTAGE ADAPTERS

Designed for nearly all applications : radios, calculators, minicomputers, portable phones, keyboards, toys, cassette players/recorders, rechargeable appliances and other electronic products.
Features:
• thermal cut-off
Specifications:
• input: 230Vac / 50Hz
• plugs: 2.5mm, 3.5mm, 2.1x5.0mm, 2.5x5.5mm, 1.35x3.5mm, 1.7x4.0mm, 0.75x2.35mm

Order Code	output voltages	max. current	power	dimensions
PSU03	3 - 4.5 - 6 - 7.5 - 9 - 12Vdc	300mA	3.6VA	3.23" x 2.20" x 3.31"

PSU03

NON-REGULATED VOLTAGE ADAPTER 300mA
PSU03U

NEW

Specifications:
• output voltages: 1.5 - 3 - 4.5 - 6 - 7.5 - 9 - 12Vdc
• current: 300mA max.
• power: 3.6VA
• dimensions: 3 5/8" x 2 1/4" x 3 5/16"

Packaging		EAN code	00 80558 97061 1
Carton		UPC code	8 16353 01020 3

REGULATED VOLTAGE ADAPTERS

REGULATED UNIVERSAL VOLTAGE ADAPTER 600mA - PULSE WIDTH MODULATION
PS0906RP

Specifications:
• voltage: 9Vdc
• max. current: 600mA

Packaging		EAN code	54 10329 31661 7
Carton	/30	UPC code	

SWITCHING MODE IN-CAR REGULATED DC-DC POWER ADAPTERS

SWITCHING MODE ADAPTER FOR PDA - 500mA
CARS0500

Specifications:
• input voltage: 12VDC (car cigarette lighter plug)
• output voltage: 5VDC
• current: 500mA
• 3 adapter plugs included for use with:
  - Sony Clie T/NR (NR/70V/H, T615C/G, TG50/H, SJ22/H, SJ33/H, SJ20/H, SJ30/H, T665C/H)
  - Compaq (iPAQ 38XX/39XX Series -- H3830, H3835, H3850, H3870, H3950, H3970, H5455)
  - Palm (Palm m130, m500, m505, m515, i705, Tungsten T, Tungsten W, Tungsten C, Zire 71)

Packaging		EAN code	54 10329 35704 7
Carton		UPC code	

SWITCHING MODE CAR ADAPTER 2000mA REGULATED / 1.5-12V / 12-24Vdc IN
CARS2000

Features:
- with LED power indicator / fuse protection

Specifications:
- input voltage: 12/24V DC
- output voltages: 1.5 - 3 - 4.5 - 6 - 7.5 - 9V DC (for 12/24V inputs)
  12V DC (only for 24V input)
- current: 2000mA
- power: 24W
- plugs: 0.75x2.35, 2.5, 3.5, 1.35x3.5, 1.7x4.0, 2.1x5.0, 2.5x5.5mm

Packaging	EAN code	54 10329 22280 2
Carton	/50	UPC code	8 36479 00672 0

REGULATED SWITCHING MODE CAR ADAPTER 45W + USB
CARS4500

NEW

Operate your favourite electronic gear in your car. Connect almost any device to a car's cigarette plug (with negative ground).

Features:
- for notebook computers & digital electronic devices
- comes with 5 adapter plugs
- additional USB output

Specifications:
- input voltage: 13.8VDC
- output voltages: 9.5 - 12 - 15 - 16 - 18 - 19 - 20VDC
- power: 45W
- replacement fuse: 6FF5N (5A)
- voltage plugs:
  - P: 2.5/5.5 x 12mm
  - G: 1.0/5.0 x 11.5mm
  - C: 1.7/4.75 x 9.5mm
  - V: 1.7/4.0 x 11.5mm (hooked)
  - R: 1.7/5.5 x 10mm (hooked)

Packaging	EAN code	54 10329 43068 9
Carton		UPC code	

REGULATED SWITCHING MODE CAR ADAPTER 120W
CARS6000S

Features:
- for notebook computers & digital electronic devices
- brands supported: code marked on the included plug
  - Ami: NAB
  - Apple: NG
  - Compaq: NAB, NE
  - Dell: NAA, NH
  - Epson: NAB
  - Fujitsu: NAA
  - Hitachi: NAA, NG
  - HP: NAB, NE, NJ
  - IBM: NG
  - Micron: NE
  - NEC: NE
  - Panasonic: NAA
  - Samsung: NAA
  - Sharp: NAB, NH
  - Sony: NAA
  - Toshiba: NE

Specifications:
- input voltage: 12 ~ 13,8Vdc
- output voltages: 15 - 16 - 18 - 19 - 20 - 22 - 24Vdc
- current: 6A max. (for 15 - 16 - 18 - 19 - 20Vdc output) / 5A max. (for 22 - 24Vdc output)
- power: 120W
- plugs: Compaq / Toshiba / HP / IBM / Gateway / Sharp / Acer

Packaging	EAN code	54 10329 35214 1
Carton	/40	UPC code	8 36479 00829 8

TRAVEL CONVERTERS FOR CAR PLUG

Features:
- for 12V neg. ground systems only
- thermal protection

Order Code	input voltage	output voltage	current	dimensions	weight
PSC1305EU	110VAC	12Vdc	500mA max.	3.66 x 1.97 x 3.19"	10.58lbs.
PSC1310EU	110VAC	13.8Vdc	1000mA max.	4.13 x 2.17 x 3.27"	1.02lbs.

Packaging	EAN code		Packaging	EAN code
Carton	UPC code 8 36479 00787 1		Carton	UPC code 8 36479 00788 8

PSC1305EU | PSC1310EU

CAR BATTERY PROTECTOR

CAR BATTERY PROTECTOR 12V-12V / MAX. 10A
PSPC10BP

e13
020272

The battery protector prevents appliances (e.g. cooler) from draining the battery of your car. The device continuously monitors the voltage and charge status of your car battery.

Specifications:
- input voltage: DC 12V
- connected voltage: 12.5V ± 0.3V
- cutoff voltage: 11.2V ± 0.3V
- maximum operating current: 10A

Packaging	EAN code	54 10329 32108 6
Carton	/40	UPC code	

110V TO 230V CONVERTERS

STEP-UP VOLTAGE CONVERTER 45W
PSUC45

Specifications:
- input voltage: 110Vac/60Hz
- output voltage: 230Vac / 50Hz (VDE plug)
- load: 45W max.
- dimensions: 3.50" x 2.44" x 3.54"

Packaging	EAN code	
Carton	/20	UPC code	8 36479 00769 7

STEP-UP VOLTAGE CONVERTER 100W
PSUC100

Specifications:
- input voltage: 110Vac/60Hz
- output voltage: 230Vac / 50Hz (VDE plug)
- load: 100W max.
- dimensions: 4.53" x 3.30" x 2.76"

Packaging	EAN code	
Carton	/20	UPC code	8 36479 00770 3

ADAPTERS & POWER SUPPLIES

>> www.vellemanusa.com   111

MODIFIED SINE WAVE POWER INVERTERS

SOFT- AND AUTO-RESTART MODIFIED SINE WAVE POWER INVERTERS - 150W

Applications: portable radio and television sets, lighting fixtures, heating devices...

Features:
• compact dimensions
• modified sine wave
• output is short-circuit protected
• battery-low alarm
• battery-low shutdown
• thermal + overload protection
• child-safe

Features:
• output is overload protected, inverter will restart automatically
• resists power surges of up to 200% the rated power (0.5s)
• with soft-start
• wrong polarity protection
• fused car plug included

Specifications:
• output voltage: 110VAC/60Hz

Order Code	input voltage	zero-load consumption	operating temperature	rated output	dimensions	weight
PSI300U	12VDC (10-15VDC)	< 300mA	50°F ~ 86°F	300W	6 11/16" x 4 9/64" x 2 23/64"	25.57 oz
PSI60024U	24VDC	< 400mA		600W	8 17/64" x 4 9/64" x 2 23/64"	38.8oz
PSI600U	12VDC (10-15VDC)	< 400mA		600W	8 17/64" x 4 9/64" x 2 23/64"	38.8oz
PSI30024U	24VDC	< 300mA	50°F ~ 86°F	300W	7 3/32" x 4 9/64" x 2 23/64"	28.2 oz
PSI150U	12VDC (10-15VDC)	< 250mA	50°F ~ 86°F	150W	6 11/16" x 4 9/64" x 2 23/64"	25.57 oz
PSI15024U	24VDC	< 250mA	50°F ~ 86°F	150W	6 11/16" x 4 9/64" x 2 23/64"	25.57 oz

PSI300U

PSI60024U

PSI600U

PSI30024U

PSI150U

PSI15024U

CONVERTERS 24V DC TO 12V DC

24VDC TO 12VDC CONVERTER 5A
PSDC05

Features:
• compact design for in-car use
Specifications:
• input voltage: 20-30Vdc
• output voltage: 12Vdc
• max. current: 5A
• cigarette lighter plugs
• fuse-protected

Packaging	EAN code	54 10329 21359 6
Carton	/20	UPC code

24VDC TO 12VDC CONVERTER, 20A
PSDC20

Features:
• compact design for in-car use
Specifications:
• input voltage: 24V DC
• output voltage: 12V DC
• max. current: 20A (1 min)
• continuous current: 7A
• banana plugs
• fuse protected
• dimensions: 8 15/32" x 2 23/64" x 7 31/64"

Packaging	EAN code	54 10329 21074 8
Carton	/10	UPC code	8 36479 00376 7

LABORATORY POWER SUPPLIES

LABORATORY POWER SUPPLY (0-30VDC + 5VDC + 12VDC) WITH ANALOG DISPLAY
PS603U

Features:
• analog current and voltage indicator
Specifications:
• power supply: 110Vac / 60Hz

Packaging	EAN code	
Carton	UPC code	8 36479 00784 0

LABORATORY POWER SUPPLY (0-30VDC + 5VDC + 12VDC) WITH LCD DISPLAY
PS613U

Features:
• digital current and voltage indicator
Specifications:
• power supply: 110Vac / 60Hz

Packaging	EAN code	
Carton	UPC code	8 36479 00785 7

PROFESSIONAL FIXED POWER SUPPLIES

FIXED POWER SUPPLY 13.8V / 3A
PS1303U

Features:
• protection mode: current-limiting
Specifications:
• output voltage: 13.8V fixed
• output current: 3A (5A peak)
• ripple voltage: 100mV
• dimensions: 4 5/16" x 5" x 2 3/4"
• weight: 3.75 lbs.

Packaging	EAN code
Carton	UPC code 8 36479 00782 6

PROFESSIONAL LABORATORY POWER SUPPLIES

LAB POWER SUPPLY 0-15V / 2A ANALOG DISPLAY
PS1502AU

Features:
• analog display for voltage and current
• protection mode: current-limiting
Specifications:
• output voltage: 0-15V adjustable
• output current: 2A
• ripple voltage: 5mV
• regulation: 1%
• dimensions: 5 31/32" x 4 5/16" x 9 63/64"
• weight: 5.3 lbs.

Packaging	EAN code
Carton	UPC code 8 36479 00035 3

DC LAB POWER SUPPLY 0-15V / 3A DIGITAL DISPLAY WITH BACKLIGHT
PS1503SBU

Features:
• LCD display with backlight for voltage and current
• adjustment of voltage and current
Specifications:
• output voltage: 0-15V adjustable
• output current: 0-3A adjustable
• ripple voltage: 1.0mV(rms)
• dimensions: 8 7/16" x 6 3/64" x 3 3/4""
• weight: 7.75 lbs.

Packaging	EAN code
Carton	UPC code 8 36479 00162 6

LAB POWER SUPPLY 2 x 0-30V / 2 x 0-3A DUAL ANALOGUE DISPLAY
PS23003AU

Features:
• analogue display for voltage and current
• protection mode: current-limiting
Specifications:
• output voltage: 2 x 0-30V adjustable
• output current: 2 x 0-3A adjustable
• ripple voltage: 1mV
• ripple current: 5mA
• dimensions: 13" x 7.88" x 6.11"
• weight: 20.5lbs

Packaging	EAN code
Carton	UPC code 8 36479 00783 3

LAB POWER SUPPLY 0-30V / 0-3A DUAL LCD DISPLAY
PS3003U

Features:
• LCD display for voltage and current
• fine adjustment of voltage and current
• protection mode: current-limiting
Specifications:
• output voltage: 0-30V adjustable
• output current: 0-3A adjustable
• ripple voltage: 1mV
• dimensions: 5.12" x 8.47" x 5.91"
• weight: 10.80lbs

Packaging	EAN code
Carton	UPC code 8 36479 00711 6

FIXED LAB POWER SUPPLY 0-30V / 0-3A DUAL LCD DISPLAY - CUL APPROVED
PS3003NU

Features:
• LCD display for voltage and current
• protection mode: current-limiting
• fuse-protected
• housing: plastic front panel / other panels made of steel
• color: white-grey
Specifications:
• output voltage: 0-30V adjustable
• output current: 0-3A adjustable
• riple voltage: 1mV
• dimensions: 5 1/8" x 8 15/32" x 5 29/32"
• weight: 10.8lbs.

Packaging	EAN code 54 10329 39079 2
Carton	UPC code

INDUSTRIAL SWITCHING POWER SUPPLIES

Features:
• with screw connections
• protections:
  - short circuit
  - overload
• auto recovery
• 100% full load burn-in test
• high reliability
• according to EMC standard: FCC part 15
• according to safety standard: UL1012

Specifications:
• input voltage: 85 ~ 264VAC, 47 ~ 63Hz (L , N and Ground connections)
• input rush current: 15A @ 110V
• setup, rise and hold-up time: 200ms, 100ms, 300ms at full load and 230VAC
• working temperature:
  - -10°C ~ 0°C: 80% load
  - 0°C ~ 50°C: 100% load
  - 50°C ~ 60°C: 60% load
• operating humidity conditions: 20% ~ 90%RH
• overload protection: 105% ~ 150% fold back current limiting with auto-recovery
• withstand voltage (max. 1min):
  - I/P - O/P: 1.5kVAC
  - I/P - FG: 0.5kVAC
• DC adjustment range: ± 10% rated output voltage (V adj)
• efficency: 74%
• connection: 5, 7 or 9 pole terminal block, pitch 9.5mm

Order Code	output voltage	output current	ripple and noise	power output	dimensions	weight
PSIN06012	12VDC ± 1%	0.0 ~ 5.0A	120mV	60W	6 19/64" x 3 13/16" x 1 3/8"	15.5 oz
PSIN06024	24VDC ± 1%	0.0 ~ 2.5A	120mV	60W	160 x 97 x 35mm	440g
PSIN10012	12VDC ± 1%	0.0 ~ 8.5A	200mV	100W	7 7/8" x 3 13/16" x 1 3/8"	20.45 oz
PSIN10024	24VDC ± 1%	0.0 ~ 4.5A	200mV	100W	7.87" x 3.82" x 1.46"	20.46oz

Packaging | EAN code | 54 10329 40580 9
Carton | UPC code

PSC1305EU

Packaging | EAN code | 54 10329 40580 9
Carton | UPC code

PSC1305EU

Packaging | EAN code | 54 10329 40580 9
Carton | UPC code

PSC1305EU

Packaging | EAN code | 54 10329 40580 9
Carton | UPC code

PSC1305EU

DC CONNECTORS AND PLUGS

SPARE PLUGS

PDA DC PLUG SET
PLUGSPSET4

Specifications:
• plugs included for:
  - Sony Clie S/N (N710C/G, N760C/G, ...): 31 x 35 x 9.5mm
  - Sony Clie T/NR (T665C/H, TG50/H, ...): 41 x 30 x 9.5mm
  - Compaq (iPAQ 38xx/39xx/H3970, H5455, ...): 36 x 26 x 10mm
  - Palm V: 37 x 30 x 11mm
  - Palm & Tungsten T, Zire 71, ...: 36 x 32 x 12mm
• for use in combination with adapter e.g. CARS0500

Packaging | EAN code | 54 10329 35698 9
Carton | UPC code

SPARE PLUG 2.4x0.75mm
PLUGSP6

Features:
• for: Sony, etc...
Specifications:
• dimensions: 2.4 x 0.75mm

Packaging | EAN code | 54 10329 29280 5
Carton | UPC code

SPARE PLUG 3.0 x 1.0mm
PLUGCI

NEW

Specifications:
• dimensions: 1.0 x 3.0mm

Packaging | EAN code | 54 10329 31537 5
Carton | UPC code

SPARE PLUG 3.5 x 1.4mm
PLUGSP2

Specifications:
• dimensions: 3.5 x 1.4mm

Packaging | EAN code | 54 10329 30329 7
Carton | UPC code

SPARE PLUG 4.0 x 1.7mm
PLUGII

NEW

Specifications:
• dimensions: 1.7 x 4.0mm

Packaging | EAN code | 54 10329 31847 5
Carton | UPC code

SPARE PLUG 5.5 x 1.5mm
PLUGNI

NEW

Specifications:
• dimensions: 1.5 x 5.5mm

Packaging | EAN code | 54 10329 28464 0
Carton | UPC code

SPARE PLUG 5.0 x 2.1mm
PLUGSP3

Specifications:
• dimensions: 5.0 x 2.1mm

| Packaging | ⌂ | EAN code | 54 10329 30046 3 |
| Carton | | UPC code | |
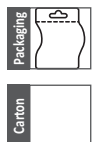
SPARE PLUG 5.5 x 2.1mm
PLUGSP7

Specifications:
• dimensions: 5.5 x 2.1mm

| Packaging | ⌂ | EAN code | 54 10329 28463 3 |
| Carton | | UPC code | |
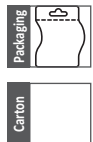
SPARE PLUG 5.5 x 2.5mm
PLUGSP4

Specifications:
• dim.: 5.5 x 2.5mm

| Packaging | ⌂ | EAN code | 54 10329 31585 6 |
| Carton | | UPC code | |
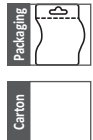
SPARE PLUG 6.5 x 1.4mm
PLUGSP8

Specifications:
• dimensions: 6.5 x 1.4mm

| Packaging | ⌂ | EAN code | 54 10329 24106 3 |
| Carton | | UPC code | |
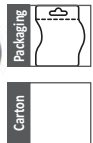
SPARE PLUG 2.5mm MALE
PLUGSP5

Specifications:
• dimensions: 2.5mm

| Packaging | ⌂ | EAN code | 54 10329 30095 1 |
| Carton | | UPC code | |
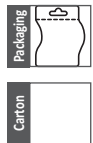
SPARE PLUG 3.5mm MALE
PLUGSP1

Specifications:
• dimensions: 3.5mm

| Packaging | ⌂ | EAN code | 54 10329 23865 0 |
| Carton | | UPC code | |
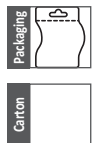
SPARE PLUG SET
PLUGSPSET1

Features:
• set of 16 detachable plugs in giftbox
Specifications:
• consists of following plugs:
  - 2.5mm
  - 3.5mm
  - 3.0 x 1.0mm
  - 5.0 x 2.1mm
  - 5.5 x 2.1mm
  - 5.0 x 2.5mm
  - 5.5 x 2.5mm
  - 3.5 x 1.35mm
  - 4.0 x 1.7mm
  - 4.75 x 1.75mm
  - 5.0 x 1.5mm
  - 5.5 x 1.5mm
  - 5.5 x 2.8mm
  - 6.3 x 3.0mm
  - 7.0 x 1.0mm
  - 2.35 x 0.78mm

| Packaging | | EAN code | 54 10329 32259 5 |
| Carton | | UPC code | |
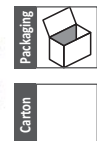
NOTEBOOK COMPUTER DC PLUG SET
PLUGSPSET3

Specifications:
• for use with:
  - Compaq / Toshiba / Dell: 5.5 x 2.5mm
  - Dell: 6.5 x 1.0mm
  - HP / IBM / Gateway: 5.5 x 2.1mm
  - Sharp / Dell: 3.5 x 1.35mm
  - Acer: 5.5 x 1.75mm
  - Toshiba: 4.75 x 1.75mm

| Packaging | ⌂ | EAN code | 54 10329 35694 1 |
| Carton | | UPC code | |
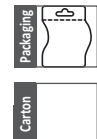
DC PLUG SET WITH COMPUTER PLUGS
PLUGSPSET2

Features:
• fits on: CARS6000, CARS7500, PSSMV13, PSSMV15, PSSMV8, PSSMV17, PSSMV21
Specifications:
• plugs:
  - bent plugs: 2 pcs
    · (A): ID: 2.1mm, OD: 5.5mm
    · (B): ID: 2.5mm, OD: 5.5mm
  - straight plugs: 9 pcs
    · (C): ID: 1.7mm, OD: 4.75mm
    · (D): ID: 3.0mm, OD: 6.3mm
    · (E): ID: 1.4mm, OD: 6.5mm
    · (F): special Dell 3-pin plug
    · (G): ID: 1.0mm, OD: 5.0mm
    · (H): ID: 1.9mm, OD: 5.5mm
    · (I): ID: 2.5mm stereo plug, OD: 6mm
    · (J): ID: 3.5mm stereo plug, OD: 9.3mm
    · (K): ID: 0.6mm, OD: 7.4mm

| Packaging | | EAN code | 54 10329 35691 0 |
| Carton | | UPC code | |

2.1mm power plug with 6 ft wire
CD014

Features:
• comes with 6ft cable

| Packaging | | EAN code | 54 10329 37002 2 |
| Carton | /250 | UPC code | |

DC PLUG 5.5x2.5MM FEMALE TO SCREW TERMINAL (5pcs)
CD015

NEW

Features:
• female to removable screw
Specifications:
• max. voltage: 25V
• max. current: 4A
• max. operating temperature: 30°C

Packaging		EAN code	5 4 10329 44849 3
Carton		UPC code	

DC PLUG 5.5x2.1MM MALE TO SCREW TERMINAL (5pcs)
CD020

NEW

Features:
• male to removable screw
Specifications:
• max. voltage: 25V
• max. current: 4A
• max. operating temperature: 30°C

Packaging		EAN code	5 4 10329 44966 7
Carton		UPC code	

DC PLUG 5.5x2.5MM MALE TO SCREW TERMINAL (5pcs)
CD016

NEW

Features:
• male to removable screw
Specifications:
• max. voltage: 25V
• max. current: 4A
• max. operating temperature: 30°C

Packaging		EAN code	5 4 10329 44850 9
Carton		UPC code	

DC PLUG 5.5x2.1MM FEMALE TO SCREW TERMINAL (5pcs)
CD021

NEW

Features:
• female to fixed screw terminal
Specifications:
• max. voltage: 25V
• max. current: 4A
• max. operating temperature: 30°C

Packaging		EAN code	5 4 10329 44967 4
Carton		UPC code	

DC PLUG 5.5x2.5MM FEMALE TO SCREW TERMINAL (5pcs)
CD017

NEW

Features:
• female to fixed screw terminal
Specifications:
• max. voltage: 25V
• max. current: 4A
• max. operating temperature: 30°C

Packaging		EAN code	5 4 10329 44851 6
Carton		UPC code	

DC PLUG 5.5x2.1MM MALE TO SCREW TERMINAL (5pcs)
CD022

NEW

Features:
• male to fixed screw
Specifications:
• max. voltage: 25V
• max. current: 4A
• max. operating temperature: 30°C

Packaging		EAN code	5 4 10329 44968 1
Carton		UPC code	

DC PLUG 5.5x2.5MM MALE TO SCREW TERMINAL (5pcs)
CD018

NEW

Features:
• male to fixed screw
Specifications:
• max. voltage: 25V
• max. current: 4A
• max. operating temperature: 30°C

Packaging		EAN code	5 4 10329 44852 3
Carton		UPC code	

DC PLUG 2.1 x 5.5 x 9.5mm
CD003H

Specifications:
• solder connections
• dimensions: 2.1 x 5.5 x 9.5mm

Packaging		EAN code	5 4 10329 39792 0
Carton		UPC code	

DC PLUG 5.5x2.1MM FEMALE TO SCREW TERMINAL (5pcs)
CD019

NEW

Features:
• female to removable screw
Specifications:
• max. voltage: 25V
• max. current: 4A
• max. operating temperature: 30°C

Packaging		EAN code	5 4 10329 44965 0
Carton		UPC code	

DC PLUG 2.5 x 5.5 x 9.5mm
CD010H

Specifications:
• solder connections
• dimensions: 2.5 x 5.5 x 9.5mm

Packaging		EAN code	5 4 10329 39797 5
Carton		UPC code	

DC SOCKET 2.1mm / 5.5mm, CHASSIS MOUNTING
DC/CHASS

Specifications:
- for chassis mounting
- solder connections
- with switch
- dimensions: 2.1mm / 5.5mm

Packaging		EAN code	54 10329 24244 2
Carton		UPC code	

CAR PLUGS AND CABLES

12V TWIN CIGARETTE PLUG WITH LED
PLUGC3

Features:
- comes in blister

Specifications:
- with LED voltage indicators

Packaging		EAN code	54 10329 23972 5
Carton	/200	UPC code	8 36479 00753 6

4-IN-1 CIGARETTE PLUG + CAR BATTERY TESTER
PLUGC4F

This model is designed to convert your car's existing cigarette lighter socket into : 1x cigarette lighter socket + 3x 12V dc socket.

Features:
- comes in blister

Specifications:
- fuse-protected DC jack: 10A
- with 3-LED battery meter: indicates the charging level of the car battery (high, medium or low)
- cable length: 5 ft.

Packaging		EAN code	54 10329 21960 4
Carton		UPC code	8 36479 00819 9

CAR PLUG EXTENSION CORD
PLUGC5

Specifications:
- cable length: ± 5 ft.
- for detachable plugs (PLUGSP-series)

Packaging		EAN code	54 10329 24200 8
Carton		UPC code	8 36479 00838 0

AC CONNECTORS AND RECEPTACLES

AC CONNECTORS & RECEPTACLES

ECC CONNECTORS

FEMALE POWER SOCKET, CHASSIS TYPE
PSCF1
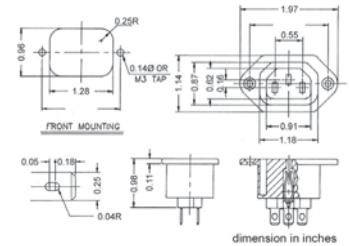
dimension in inches

Features:
- solder model

Specifications:
- insulation resistance: 1000Mohm min.
- dielectric strength: 2000V min.
- approvals:
  - 15A / 250V: UL, CSA
  - 10A / 250V: VDE, SEMKO, SEV, FIMKO

Packaging		Carton	/1000	EAN code	54 10329 31991 5	UPC code	

MALE POWER SOCKET, CHASSIS TYPE
PSCM1

dimensions in inches

Features:
- solder model

Specifications:
- insulation resistance: 1000Mohm min.
- dielectric strength: 2000V min.
- approvals:
  - 15A / 250V: UL, CSA
  - 10A / 250V: VDE, SEMKO, SEV, FIMKO

Packaging		Carton	/1000	EAN code	54 10329 23630 4	UPC code	
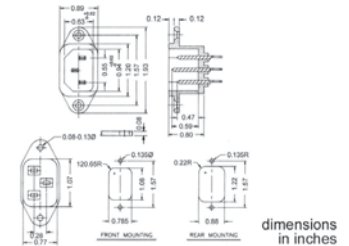
MALE POWER SOCKET, CHASSIS SCREW TYPE WITH FUSE
PSCM2
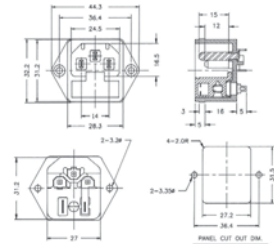
Features:
- solder model

Specifications:
- AC inlet receptacle with fuse holder
- insulation resistance: 1000Mohm min.
- dielectric strength: 2000V min.
- approvals:
  - 6A / 250V: UL, CSA
  - 10A / 250V: VDE, SEMKO, SEV, FIMKO

Packaging		Carton	/1000	EAN code	54 10329 24248 0	UPC code	

ADAPTERS & POWER SUPPLIES

POWER CORDS

NET POWER BLOCKS

ACCESSORIES

NET PLUG PROTECTOR CASE
NETPP

Features:
• protects connections against humidity, rain, etc...
• easy to use in- and outdoors
• child-protected

| Packaging | EAN code | 54 10329 21108 0 |
| Carton | /50 | UPC code |

TRAVEL ADAPTERS

MAINS PLUG ADAPTER FOR EUROPEAN SOCKET
MU-5

SCHUKO adapter plug with 2 round pins, Ø.16". Can be used with every type of plug, with the exception of UK plugs.
Specifications:
• ratings: 6A 125V

| Packaging | EAN code | 54 10329 22309 0 |
| Carton | /1700 | UPC code |

TRAVEL ADAPTER
WTA9N

Features:
• with child protection
• not for use with British Standard and similar plugs
Specifications:
• ratings: 16A / 250V

| Packaging | EAN code | 54 10329 37192 0 |
| Carton | | UPC code |

MAINS PLUG ADAPTER FOR AMERICAN SOCKET
MF-7

Adapter plug with 2 flat pins. Can be used with every type of plug, with the exception of UK plugs.
Specifications:
• ratings: 1A 125V

| Packaging | EAN code | 54 10329 24043 1 |
| Carton | /1500 | UPC code |

TRAVEL ADAPTER WITH DOUBLE OUTLET
WTA62

Features:
• suitable for Taiwan, Japan, Canada, China, USA
Specifications:
• ratings: 15A / 125V or 10A / 250V

| Packaging | EAN code | 47 15706 10327 1 |
| Carton | /100 | UPC code |

TRAVEL ADAPTER
WTA7

Features:
• suitable for England, UAE, Hong Kong
Specifications:
• ratings: 13A / 250V

| Packaging | EAN code | 54 10329 30911 4 |
| Carton | /250 | UPC code |

INDIVIDUAL TRAVEL ADAPTERS

TRAVEL ADAPTER
WTA5

| Packaging | EAN code | 54 10329 33872 5 |
| Carton | /100 | UPC code |

TRAVEL ADAPTER
WTA9

Specifications:
• ratings: 16A / 250V

| Packaging | EAN code | 54 10329 27679 9 |
| Carton | /250 | UPC code |

POWER SOURCES FOR LED LIGHTING

LED DRIVER FOR 1 LED 1W - 350mA CURRENT SOURCE
LET11
NEW

Features:
- ideal for LED lighting
- can also be used as small 6Vdc power supply for currents up to 300mA

Specifications:
- input voltage: 100-240VAC / 50Hz
- input current: max 0.04A
- max. no-load output voltage: 6V +/- 10% (remains stable for currents up to 650mA)
- full-load output voltage: 0.5~4V depending on the used LED
- output current: 350mA +/- 7%
- power efficiency: > 60% @ 200VAC
- overcurrent protection
- short-circuit protection
- operating temperature: 32°F ~ 122°F
- protection class: IP65
- weight: 1.30 oz
- dimensions: 1 1/2" x 1 1/32" x 53/64"

Packaging | EAN code 54 10329 41295 1
Carton | UPC code

LED DRIVER FOR 1 LED 3W - 700mA CURRENT SOURCE
LET13
NEW

Features:
- ideal for LED lighting
- can also be used as small 6Vdc power supply for currents up to 650mA

Specifications:
- input voltage: 100-240VAC 50/60Hz
- input current: max 0.08A
- max. no-load output voltage: 6V +/- 10% (remains stable for currents up to 650mA)
- full-load output voltage: 0.5~4V, depending on the used LED
- output current: 700mA +/- 7%
- power efficiency: > 60% @ 200VAC
- overcurrent protection
- short-circuit protection
- operating temperature: 32 ~ 122°F
- protection class: IP65
- weight: 1.31 oz.
- dimensions: 1.50" x 1.02" x 0.83"

Packaging | EAN code 54 10329 40435 2
Carton | UPC code

LED DRIVER FOR 1 TO 3 LEDS 1W - 350mA CURRENT SOURCE
LET31
NEW

Features:
- ideal for LED lighting
- can also be used as small 12Vdc power supply for currents up to 300mA

Specifications:
- input voltage: 100-240VAC 50/60Hz
- input current: max 0.08A
- max. no-load output voltage: 12V +/- 10% (remains stable for currents up to 300mA)
- full-load output voltage: 0.5~10V, depending on the used LED
- output current: 350mA +/- 7%
- power efficiency: > 60% @ 200VAC
- overcurrent protection
- short-circuit protection
- operating temperature: 32 ~ 122°F
- protection class: IP65
- weight: 1.31 oz.
- dimensions: 1.50" x 1.02" x 0.83"

Packaging | EAN code 54 10329 41291 3
Carton | UPC code

SECURITY SYSTEMS

HOME & PERSONAL ALARMS

PORTABLE DOORBELL/ALARM WITH PIR DETECTOR
HAM9011

Features:
- passive IR sensor provides the most reliable form of detection 24hrs a day
- functions : doorbell or siren
- position can be adjusted through 120° following installation
- unique, compact, portable, can be mounted on a wall or placed on a desk
- sensors are easy to install

Specifications:
- dimensions: 2.6" x 4.1" x 1.4"
- power supply: 3 x 1.5V AA batteries LR6C (not incl.)
- detection area: max. 32ft / angle 89°
- switch positions:
  - (1): chime-ding-dong
  - (2): off
  - (3): alarm-siren is activated for 40 seconds and is automatically reset afterwards
- battery life: approx. 120 days (detection only)
- operating temperature: 14°F to 104°F
- accessories: mounting bracket, screws, wall anchors

Packaging	EAN code	Carton	UPC code
	54 10329 30758 5	/90	8 36479 00334 7

ALARM FOR DEMO SAMPLES
HAM10N

Features:
- simple, efficient and low-cost protector of valuables, personal items or expensive demo products
- alarm sounds when the cable is cut or the sensor is removed

Specifications:
- operating voltage: 2Vdc - 3.5Vdc
- standby current: 3μA (at 3Vdc)
- current: 26mA (at 3Vdc)
- battery: 1 x 3V-battery (incl.)
- operating temperature: 14°F ~ 140°F
- material: ABS

Packaging	EAN code	Carton	UPC code
	54 10329 38460 9		

MINI PIR SENSOR WITH ALARM
HAM1011

Features:
- wide detection range / easy installation
- "ding-dong" and alarm
- can be used indoors at home and on trips, can be installed horizontally or vertically or used as a freestanding device
- the detection range can be adjusted freely after installation

Specifications:
- power supply: 9V battery (6LR61C, not incl.)
- detection range: 26ft max.
- detection angle: 60°
- operation modes: alarm / off / "ding-dong"
- working temperature: -4°F to +104°F
- working humidity: 10s
- alarm volume: > 80dB

1 x
9V

Packaging	EAN code	Carton	UPC code
	54 10329 22213 0	/100	

PIR DETECTORS

MINI PIR MOTION DETECTOR - BUILD IN
PIR415U

NEW
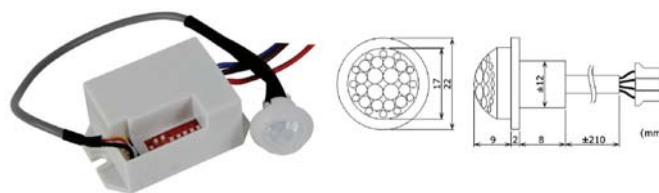
Features:
- with automatic day/night identification
- light sensitivity and ON-time adjustable
- for building-in

Specifications:
- detection angle: 100°
- detection range: 26 ft.
- rated load: load, 150W fluorescent load (120V)
- power supply: 120V/50-60Hz
- working temperature: 14°F~104 °F
- working humidity: <93%RH
- time-delay switch: 5 s, 30 s, 1 min, 3 min, 5 min, 8 min
- light control: < 3 Lux to 2000 Lux
- dimensions:
  - visible part: Ø55/64" x 25/64"
  - hidden part (controller): 2 11/64" x 1" x 1 3/8"
- weight: 1.44 oz.

Packaging	Carton	EAN code	UPC code
			8 16353 01070 8

CEILING-MOUNTED PIR DETECTOR
HAA50

The HAA50 ceiling-mounted passive infrared detector is designed for use with modern residential and commercial security systems. This device is fitted with pulse-counting circuitry and employs a pyroelectric sensor equipped with 2 elements that provide substantial immunity against false alarms due to environmental factors.

Specifications:
- detection pattern: 360° conical pattern, Ø 35ft when installed at a height of 12ft
- operation voltage: DC 8 - 16V
- quiescent current: 15mA typical at DC 12V
- relay output: normally closed (fail-safe) dry relay contact, 18ohm resistor is connected in series with the contact
- alarm activation delay: 2 - 3 seconds
- tamper output: normally closed contact
- LED: walk-test enabled or disabled with internal link
- pulse counter: single- or double-pulse detection through alternating signal polarity
- mounting height: 12ft max.
- dimensions: 3.4" x 1.0"
- operating temperature range: 0 °C to 70 °C
- not suited for outdoor use

Packaging	EAN code	Carton	UPC code
	54 10329 23343 3	/100	
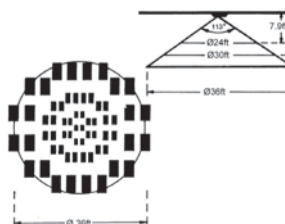
PIR SENSOR WITH DOUBLE TWIN OPTICS
HAA54
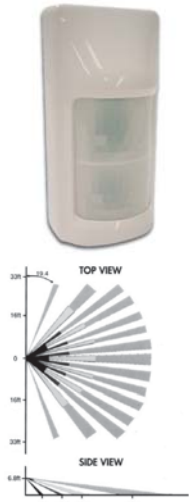
Features:
- double-twin-optics detection technology
- SMD-technology for greater EMI and RFI immunity
- detects the real intruders, not the pets or rodents
- automatic temperature compensation
- fast or pulse count response for difficult environments
- with tamper switch

Specifications:
- detection method: alternating polarity, 2 pyro-optic elements, passive infrared
- power-up delay: 2 minutes with flashing LED indication
- alarm activation delay: 2-3 seconds
- pulse count: instant response or 2 pulses within 12 seconds
- walk test LEDs: CH1, CH2 and alarm indicators
- alarm output: relay NC 28V DC 0.1A
- power supply: DC 12V (DC 9-16V) / 15mA typ.
- operating temperature: 14°F to 131°F with temperature compensation
- dimensions: 5" x 2.5" x 1.8"

Packaging	EAN code	54 10329 21230 8
Carton /100	UPC code	8 36479 00331 6

WIRED HOME ALARM ACCESSORIES

VIBRATION SENSOR
HAA15
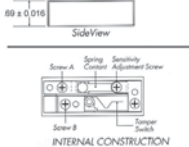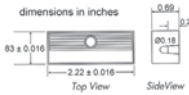
Specifications:
- two in one: NC & NO contacts
- tamper switch for NC circuit
- gold-plated contact
- spring is made of quality phosphor bronze
- all conducting metals are nickel-plated
- strong ABS housing
- color: ivory
- operating temperature: -4°F to 140°F

Packaging	EAN code	54 10329 23325 9
Carton /250	UPC code	8 36479 00322 4

EMERGENCY BUTTON (PANIC)
HAA60

Specifications:
- NC & NO alarm circuit connection
- screw connectors
- momentary contact (off / on)
- contact rating: DC 24V / 0.5A max.
- color: ivory
- dimensions: 3.0" x 0.9" x 0.6"

Packaging	EAN code	54 10329 23344 0
Carton /400	UPC code	8 36479 00653 9

REED ALARM SWITCHES

MAGNETIC SWITCH - 0.5A @ 100V DC - NC
HAA301

NEW

MC-01Terminal block wiring connection
Features:
- screw terminals for quick installation
- concealed terminals
- wider gap than regular switches
- Oki reed switch

Specifications:
- colour: white
- contact: closed loop, normal closed
- gap width: 0.98"
- mount: surface/screw terminals
- contact rating: 0.5A@100VDC
- lifetime (resistive loads): 1.000.000 (6VDC,10mA)
- operating temperature: 14°F to 140°F

Packaging	EAN code	54 10329 43180 8
Carton	UPC code	

MAGNETIC SWITCH - 0.5A @ 100V DC - NC - LEAD WIRES
HAA302

NEW

Features:
- screw terminals for quick installation
- concealed terminals
- wider gap than regular switches
- Oki reed switch

Specifications:
- colour: white
- contact: closed loop, normal closed
- gap width: 0.98"
- wire length: ±9.84"
- mount: surface/screw terminals
- contact rating: 0.5A@100VDC
- lifetime (resistive loads): 1.000.000 (6VDC,10mA)
- operating temperature: 14°F to 140°F
- weight: 1oz.

Packaging	EAN code	54 10329 43181 5
Carton	UPC code	

MAGNETIC SWITCH - 0.5A @ 100V DC - NC - LEAD WIRES
HAA303

NEW

Features:
- recessed mount
- Oki reed switch
- ideal for steel doors

Specifications:
- colour: white
- contact: closed loop, normal closed
- gap width: 0.98"
- wire length: ±9.84"
- mount: recessed mount Ø 3/4", press fit
- contact rating: 0.5A@100VDC
- lifetime (resistive loads): 1.000.000 (6VDC,10mA)
- operating temperature: 14°F to 140°F
- weight: 0.6oz.

Packaging	EAN code	54 10329 43182 2
Carton	UPC code	

MAGNETIC SWITCH - 0.5A @ 100V DC - NC - LEAD WIRES
HAA304

NEW

Features:
- recessed mount
- Oki reed switch
- install into doors/doorframes, windows/window frames...

Specifications:
- colour: white/brown
- contact: closed loop, normal closed
- gap width: 0.6"
- wire length: ±9.84"
- mount: flush mount Ø 3/8", press fit
- contact rating: 0.5A@100VDC
- lifetime (resistive loads): 1.000.000 (6VDC,10mA)
- operating temperature: 14~140°F
- weight: ±0.7oz.

Packaging	EAN code	54 10329 43183 9
Carton	UPC code	

MAGNETIC SWITCH - 0.5A @ 100V DC - NC
HAA305

NEW

Features:
- screw terminals for quick installation
- concealed terminals
- wider gap than regular switches
- Oki reed switch
- open/short testing points

Specifications:
- colour: white
- contact: closed loop, normal closed
- gap width: 0.98"
- mount: surface/screw terminals
- contact rating: 0.5A@100VDC
- dimensions (LxWxH): 2.09" x 0.61" x 0.63"
- weight: 0.92oz.

Packaging	EAN code	54 10329 43184 6
Carton	UPC code	

MAGNETIC SWITCH - 0.5A @ 100V DC - NC - LEAD WIRES
HAA306

NEW

Features:
- recessed mount
- Oki reed switch

Specifications:
- colour: white
- contact: closed loop, normal closed
- gap width: 0.59"
- wire length: ±9.84"
- mount: recessed mount Ø 1/3", press fit
- contact rating: 0.5A@100VDC
- dimensions: Ø0.35" x 0.57"
- weight: 0.25oz.

Packaging	EAN code	54 10329 43186 0
Carton	UPC code	

MAGNETIC SWITCH - 0.5A @ 100V DC - NC - LEAD WIRES
HAA307

NEW

Features:
- recessed mount
- Oki reed switch

Specifications:
- colour: white
- contact: closed loop, normal closed
- gap width: 0.79"
- wire length: ±9.84"
- mount: recessed mount Ø 3/4", press fit
- contact rating: 0.5A@100VDC
- dimensions: Ø0.77" x 0.31"
- weight: ±0.7oz.

Packaging	EAN code	54 10329 43187 7
Carton	UPC code	

MAGNETIC SWITCH - 0.5A @ 100V DC - NC - LEAD WIRES
HAA308

NEW

Features:
- surface mount
- Oki reed switch

Specifications:
- colour: white
- contact: closed loop, normal closed
- gap width: 0.59"
- wire length: ±9.84"
- mount: surface mount
- contact rating: 0.5A@100VDC
- dimensions (LxWxH): 0.93" x 0.56" x 0.24"
- weight: 0.32oz.

Packaging	EAN code	54 10329 43188 4
Carton	UPC code	

MAGNETIC SWITCH - 0.5A @ 100V DC - NC
HAA309

NEW

Features:
- screw terminals for quick installation
- concealed terminals
- wider gap than regular switches
- Oki reed switch

Specifications:
- colour: white
- contact: closed loop, normal closed
- gap width: 0.98"
- mount: surface/screw terminals
- contact rating: 0.5A@100VDC
- dimensions (LxWxH): 2.09" x 0.61" x 0.63"
- weight: 0.95oz.

Packaging	EAN code	54 10329 43189 1
Carton	UPC code	

OVERHEAD DOOR CONTACT
HAA23N

Features:
- adjustable aluminium bracket
- zinc case with magnetic contact
- ABS casing for magnet

Specifications:
- armoured cord: 24" (61cm)
- max. opening: 2" (50mm)
- contact type: NC
- switching voltage: 100VDC / 0.5A
- min. breakdown voltage:
  - > 25°C: 250Vdc
  - < 25°C: 220Vdc
- max. contact rating: 10W
- dimensions: 4 11/64"x1 11/16"x1/2" / 3 35/64"x2"x1 7/64"
- cable length: 2.46ft
- operating temp: -13°F ~ 113°F

Packaging	EAN code	54 10329 34237 1
Carton /50	UPC code	

ROUND REED SWITCH
HAA24

Specifications:
- magnetic switch for flush mounting in doors & windows
- with mounting screws
- NC contact
- mounting hole: 0.37"
- operating gap: 0.8" max.
- voltage: 125VAC / 0.5A
- cable length: 260mm
- length of the plastic housing: 30mm

Packaging	EAN code	54 10329 23331 0
Carton /50	UPC code	8 36479 00394 1

LOW COST REED SWITCH FOR ALARM
HAA25

Specifications:
- magnetic switch, standard type
- housing: white ABS
- mounting with screws or double-sided tape
- operating gap: max. 0.6"
- operating distance: 20mm
- connections: 5
- reeds: 1
- fixing centres: 52mm
- dimensions: 2.6" x 0.5" x 0.5"

Packaging	EAN code	54 10329 23332 7
Carton /600	UPC code	8 36479 00604 1

MAGNETIC SWITCH
HAA26

Specifications:
- for flush mounting
- normally closed contact
- magnetic contact with cylindrical head & cables
- simple installation
- cable length: 2 x 10.8"
- color: white
- dimensions: Ø0.2" x 1.2"
- contact rating: 12VDC / 0.3A

Packaging	EAN code	54 10329 23333 4
Carton /10	UPC code	8 36479 00365 1

REED SWITCH FOR ALARM
HAA27
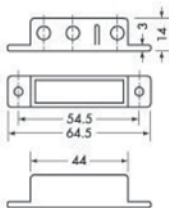
Specifications:
- standard type magnetic switch: NO & NC
- housing: white ABS
- mounting with screws or double-sided tape
- contact rating: DC 100V / 0.5A
- operating gap: 1.2" max.
- dimensions: 2.5" x 0.5" x 0.5"

Packaging	EAN code	54 10329 23334 1
Carton /500	UPC code	8 36479 00323 1

MINI REED SWITCH
HAA28
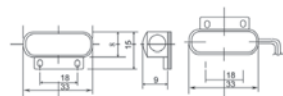
Features:
- housing: gray ABS
- miniature magnetic switch NC
- screw mounting

Specifications:
- contact: NC
- switching voltage (max): AC/DC 100V
- switching current (max.): 0.5W
- contact capacity (max.): 10VA
- initial contact: 0.2 ohm max.
- carry current (max.): 1A
- breakdown voltage: DC 200V
- insulation resistance: 100M ohm min.
- switch cycle: 5 x 10 (7) at DC 30V 0.1A
- with leads (on switch): 12"
- operating gap: max. 0.9"
- dimensions: 1.3" x 0.6" x 0.3"

Packaging	EAN code	54 10329 23335 8
Carton /40	UPC code	8 36479 00605 8

MINI REED SWITCH
HAA300

NEW
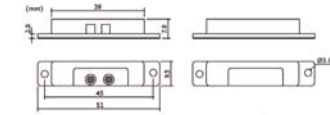
Features:
- housing: white ABS
- miniature magnetic switch NC
- screw mounting

Specifications:
- contact: NC
- switching voltage (max): AC/DC 100V
- switching current (max.): 0.5W
- contact capacity (max.): 10VA
- initial contact: 0.2 ohm max.
- carry current (max.): 1A
- breakdown voltage: DC 200V
- insulation resistance: 100M ohm min.
- switch cycle: 5 x 10 (7) at DC 30V 0.1A
- with leads (on switch): 12"
- operating gap: max. 0.79"
- dimensions: 1.3" x 0.6" x 0.3"
- operating temperature: -20 ~ 60°C

Packaging	EAN code	54 10329 43079 5
Carton	UPC code	

ROLLER BALL CONTACT
HAA29

Specifications:
- rollerball reed contact
- NO contact
- mounting hole: 0.8"
- operating gap: 0.14" max.
- contact resistance: 0.3 ohm
- switching current: 0.5A
- DC switching voltage: 100V
- AC switching voltage: 125V
- wire: 24 AWG / 90°C (194°F)
- dimensions: 1.59" x 0.85" x 1.81"

Packaging	EAN code	54 10329 21277 3
Carton /200	UPC code	8 36479 00324 8

STROBES FOR HOME SECURITY DEVICES

MINI STROBE LIGHTS DC 12V

Features:
• for alarm systems, discos, personal use, warning in case of danger, etc...

Specifications:
• long-life xenon tube
• protected against polarity reversal
• fully sealed and waterproof
• power output: 1W
• power supply: DC 12V
• current consumption: 150mA @ 12VDC
• max. current: 180mA @ 13.8VDC
• flash rate: 80-100/min.
• life expectancy: ± 3 x 1000000 flashes
• operation temperature: -40°F to +176°F
• black ABS / acrylic cover
• dimensions: 2.8"(Ø) x 2.5"
• IP rating: IP54
• cable length: 17.62" ±0.39"
• screw: M5

Order Code	lens color
HAA40A	amber
HAA40B	blue
HAA40G	green
HAA40R	red
HAA40W	clear

HAA40A
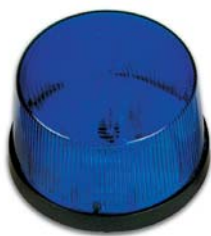
HAA40B

HAA40G

HAA40R

HAA40W

ELECTRONIC FLASHLIGHTS DC 12V

Specifications:
• flat lens
• supply voltage: DC 12V
• input current: 85mA/1W
• flash rate: 1.5Hz
• life expectancy: about 3 x 1000000 flashes
• operation temperature: -40°F to +176°F
• screw mounting, both indoors and outdoors
• dimensions: Ø3.9" x 3.1"

Order Code	lens color
HAA100A	amber
HAA100B	blue
HAA100R	red
HAA100W	clear

HAA100A

HAA100B

HAA100R

HAA100W

OVAL ELECTRONIC FLASHLIGHTS 12VDC

Features:
• weather-resistant
• xenon flash tube
• easy installation

Specifications:
• flash rate: ±50/min
• power consumption: <1W
• supply voltage: 12VDC
• dimensions: 3.54" x 1.73" (4.53" x 2.17")
• weight: 0.2oz

Order Code	colour
HAA110W	white

HAA110W

PHOTOELECTRIC SENSORS

POLARIZED RETROREFLECTIVE PHOTOELECTRIC SENSOR
PEM10D2

NEW
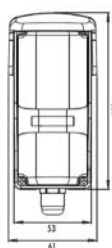
Features:
- waterproof
- LED indicator for beam alignment
- tamper switch
- anti-fog/dew/rain cover
- comes with mounting accessories
- application: entrance detection for shops, warehouses, offices, parking lots ..
- spare front cover: PEMH

Specifications:
- cover: PMMA (Polymethyl methacrylate)
- housing: ABS (Acrylonitrile butadiene styrene)
- IP-rating: 66
- input voltage: 12 - 250V AC or DC
- transmitter: infrared LED, wavelength 750nm
- range: up to 32 ft.
- beam spreading angle: 1.5°
- contact capacity: 0.5A / 120VAC (1A / 30VDC)
- response time: 10ms
- delay time of relay: 100ms
- operating temperature: -13 ~ 140°F
- storage temperature: -31 ~ 176°F
- dimensions:
  - transmitter: 4.8" (H) x 2.36" (W) x 2.44" (T)
  - reflector: Ø3.5" x 0.28"
- weight: ±7 oz.

Packaging		EAN code	54 10329 43341 3
Carton		UPC code	

MINI INFRARED SECURITY SYSTEM, 7m
PEM7D

Features:
- easy to install
- adjustable timer & volume
- applications:
  - entry detection
  - automatic alarm warning
  - present detection
- includes:
  - 1 x retro-reflection IR photoelectric beam sensor
  - 1 x power supply 110V / 9V DC / 250mA
  - 1 x alarm speaker (timer & volume adjustable)
- optional counter for PEM7D: PEM7D/C

Specifications:
- nominal detection range: 23ft
- light source: IR LED
- speaker:
  - power supply: DC 9-15V
  - speaker output: chime / off / alarm (selection through by switch)
  - duration audio signal: about 1 sec. for chime, 30 sec. for alarm
  - timer adjustable: 3 - 30sec. before alarm activation
  - volume adjustable: yes (from 0 to max)
- working temperature: -4°F to +122°F
- power supply: DC 9-15V regulated (adapter included)
- total current consumption: < 130mA
- standby current: 25mA
- IP rating: IP44

Packaging		EAN code	54 10329 30446 1
Carton	/20	UPC code	8 36479 00771 0

COUNTER FOR MINI IR SECURITY SYSTEM PEM7D
PEM7D/C

Features:
- sensing type: counter for access control system PEM7D
- applications: garage door, entrance, supermarket, restaurant, warehouse, ...
- contents:
  - one 4-digit counter
  - one cable (10m) to connect the speaker output of the PEM7D with the input of the 4-digit counter PEM7D/C
  - one mounting bracket (black finish) and mounting screws
  - manual

Specifications:
- input voltage: 9-15Vdc
- max. display: 9999 (4 digits)
- addition: push "+" to add 1
- subtraction: push "-" to subtract 1
- manual operation: yes, hold + or - for 1 sec.
- reset: press reset button ('0000')
- monitor colour: red
- casing material: ABS
- current consumption: 48.7 mA ±10% (when '0000')
- standby current: 25mA max.
- light source: IR LED
- ambient temperature: -20°C~45°°C (-4°F~122°F)
- response time of speaker: chime: 1 sec - - alarm: 30sec (adjustable)
- external chime output: NPN output
- speaker output: chime/off/alarm (selected by slide switch)
- included: mounting bracket, screw and cable (10m) with twin plugs

Packaging		Carton	/40	EAN code	54 10329 33443 7	UPC code	

TWIN PHOTO BEAM DETECTORS, 60m
PEM300D

Features:
- easy and accurate adjustment thanks to the built-in laser
- range:
  - outdoor: 30m (100ft)
  - indoor: 60m (200ft)

Specifications:
- power supply: DC 10 ~ 30V (not incl.)
- detection system: simultaneous breaking of 2 IR-beams
- response time: 50ms ~ 700ms (variable)
- alarm output: NC/NO 1A/120VAC
- tamper output: NC 1A/120VAC
- LED indicators:
  - alarm LED (receiver): red LED on - when transmitter and receiver are not aligned or when beam is broken
  - signal LED (receiver): yellow LED on - when receiver's signal is weak or when beam is broken
  - power LED (transmitter & receiver): green LED on - indicates that device is ON
- wave length: 650nm
- laser output power: max. 5mW
- IP rating: IP55
- alignment range:
  - horizontal: ± 90°
  - vertical: ± 15°C
- operating temperature: -13°F to +131°F
- dimensions: 6.7" x 3.0" x 2.8"
- weight: 2.4 lbs

0.7m ~ 1.0m

Protection distance

Spread (at 30m)

Packaging		EAN code	54 10329 22027 3
Carton	/10	UPC code	8 36479 00674 4
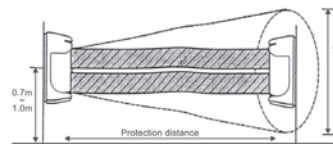
SECURITY KEYPADS

REMOTE CONTROL PANEL SWITCH
HAA80

Features:
• on/off key (1p)
• complete with plastic case for surface mounting
• 2 status indicators (built-in LED)
• tamper switch built-in
• built-in connection terminal
Specifications:
• contact rating: 250Vac - 1.5A max.
• dimensions: 4.6" x 2.9" x 1.7"

Packaging		EAN code	
		54 10329 20212 5	
Carton	/50	UPC code	
		8 36479 00681 2	

MULTIPURPOSE SECURITY KEYPAD - WATERPROOF
HAA85WP

SELF-CONTAINED SYSTEM WITH THREE OUTPUTS - WATERPROOF - FOR DOOR OPENER AND OTHER SECURITY CONTROL APPLICATIONS
The EEPROM memory protects the system's programmed data in case of power failure. Over 100 million combinations are possible for the three independent user codes (code 1, code 2 & code 3) and the master code (which also acts as the super user code). User code 1 can be altered to act as a duress code for reporting duress to an alarm system or to a telephone dialer. Other security features include door sensing for the door auto re-lock function and a built-in tamper switch. An egress button can also be connected in order to provide the user with an easy exit from the protected area. The plastic case of the keypad unit is precisely engineered, in which, the front panel and the mounting box is sealed with a water-resistant gasket, making the keypad suitable for both indoor and outdoor installation.
Features:
• 3 LEDs for status indication
• audible key operation
• tamper switch
• backlight
Specifications:
• relay outputs:
  - output 1: 5 Amp
  - output 2: 1 Amp
  - output 3: 1 Amp
• duress output: 150mA sink / DC 12V open collector that switches to ground
• current drain: 15 - 150mA
• operation codes: User code 1, 2 & 3, Super User code, Master code, Duress code and Accelerated code
• code combinations: 111111100 (EEPROM)
• operation voltage: AC/DC 12V
• dimensions: 5.1" x 3.3" x 1.6"
• weight: 7.8oz net

Packaging		EAN code	
		54 10329 23360 0	
Carton	/50	UPC code	
		8 36479 00333 0	

SELF-CONTAINED DIGITAL ACCESS CONTROL KEYPAD WITH BACKLIGHT
HAA85BL

The HAA85BL is a self-contained security keypad and is a reliable and cost-effective solution for residential and commercial installations. It is compatible with virtually any electric locking device and can be used as a control for security systems, automatic operators and machinery. Over 100 million combinations are possible for the user codes (multi-user mode). Programmed data stored in the system is non-volatile. Comes with tamper switch and plastic case. Audible key operation.
Features:
• backlit keyboard: dim in stand-by, brightens for 10 seconds at the press of a key
Specifications:
• outputs:
  - output 1: 5A, N.C. & N.O. dry contacts, 30Vdc max
  - output 2: 1A, N.C. & N.O. dry contacts, 30Vdc max
  - output 3: NPN transistor open collector output for aux. control purposes
• 3 LED lamps showing external system status
• interlock facility: yes
• output 1 locking control: yes
• door propped-up warning: yes
• auto or manual code entry: yes
• relay activation announcment: yes
• pacifier tone on/off options: yes
• key activation output: yes
• door auto relock: yes
• alarm output: yes
• duress output: yes
• with onboard LED indication for showing keypad operation status
• operating voltage: 12-24V (AC or DC)
• duress output: NPN transistor with open collector output, switches to ground (-) when activated, 100mA/25VDC max
• available codes: user1 & 2, super user, master, duress and accelerated codes
• code combinations: 111.111.100 possibilities
• dimensions: 4 41/64" x 2 29/32" x 1 57/64"
• weight: 6.70 oz

Packaging	Carton	EAN code		UPC code
		54 10329 41332 3		

STAND-ALONE PROXIMITY ACCESS CONTROL
HAA86C

with built-in cardreader

This system uses the transponder technique, which means that the exchange of data between the badge and the reader is carried out via a magnetic field (without physical contact). The reader is also equipped with a keypad, allowing conventional use of the device.
Features:
• single door proximity system
• maximum reading range from 5.5"-7.9" (under normal environment)
• access control unit includes built-in reader and programming keypad
• data is protected even after power failure
• programmable alarm loop enable/disable through command code
• access code could be added or deleted through command code
• 4 operating modes: there are 3 operating Mode-Card only, Card with Keypad or free access mode (Facility Code only)
• frequency: 125kHz
• could be used by: 0.07"-0.03" EM card or key tag
• card capacity: 1000000 cards (key tags)
• built-in tamper switch: detects when case is forced open or destroy (Alarm signal output (A.B. point))
• programmable door release time from 1~254 seconds through command code
• optional access card: HAA86C/TAG
• only for indoor use
Specifications:
• keypad: 3 x 4 keys
• power requirement: DC 12V 1A
• environment:
  - operating temperature: 32°F to 122°F
  - humidity: 20% to 90% RH
• dimensions: 5.1" x 3.4" x 1.0"
• relays: 2 relay contacts (max. DC 12V 1A)

Packaging		EAN code	
		54 10329 23361 7	
Carton	/50	UPC code	

OPTIONAL ACCESS CARD FOR HAA86C & HAA87
HAA86C/TAG

Features:
- ABS plastic material which strong and flexible for resistance to cracking and breaking
- with EM chip
- for:
  - MK179
  - VM179

Specifications:
- dimensions: 3.4" x 2.1" x 0.07"

Packaging	EAN code	54 10329 23362 4
Carton /300	UPC code	

OPTIONAL ACCESS BADGE FOR HAA86C & HAA87
HAA86C/TAG2

Features:
- keyhanger model
- for:
  - MK179
  - VM179

Specifications:
- dimensions: 1.7" x 0.9" x 0.2"

046950

Packaging	EAN code	54 10329 23363 1
Carton /200	UPC code	

REMOTE RECEIVERS AND TRANSMITTERS

2-CHANNEL TRANSMITTER
600-2N-310

Works with AM6621-310.
Specifications:
- 2 channels
- keychain housing
- power supply: 12V battery (incl.) (V23GA)
- transmission frequency: 310MHz
- dimensions: 1.9" x 1.3" x 0.5"

Packaging	EAN code	
Carton	UPC code	

UNIVERSAL REMOTE-CONTROLLED RECEIVER
AM6621-310

This universal receiver allows you to switch any electrical load e.g. garage door.
Features:
- relay output: 10A
- 4 different switch modes
- self-learning code
- complete with cables

Specifications:
- power supply: 12Vdc (PS1203)
- current consumption (receiver): 10mA max.
- frequency: 310MHz
- works with transmitter 600-2N
- can accommodate up to 6 transmitters
- dimensions: 2.8" x 2" x 1"

Packaging	EAN code	54 10329 37889 9
Carton	UPC code	

ACCESSORIES FOR CAR & MOTORCYCLE ALARMS

POWER DOOR LOCK INTERFACE
802

This central unit drives door lock motors e.g. our AM900.
Features:
- can be activated by a remote control
- adjustable pulse cycle to prevent overheating of the motor
- complete with connections

Specifications:
- voltage supply: 12Vdc
- dimensions: 3.94 x 2.83 x 1.18"

Packaging	EAN code	54 10329 23294 8
Carton	UPC code	

12V RED FLASHING LED W/LEADS
821B

Specifications:
- flashing LED DC 12V + wire
- with plastic push-in housing
- dimensions: Ø0.3" x 0.7"
- cable length: 3.3"

Packaging	EAN code	54 10329 23295 5
Carton /500	UPC code	

MOTOR FOR CENTRAL DOOR LOCK
AM900

Specifications:
- 1 per door
- dimensions: 4 23/32" x 2 23/64" x 1 7/64"

Packaging	EAN code	54 10329 21759 4
Carton	UPC code	

COLOR CAMERAS

COLOR CAMERAS WITH HOUSING

COLOR CAMERAS WITH HOUSING, WITH AUDIO

MINI HIGH RESOLUTION VIDEO, PICTURE AND AUDIO CAPTURE COLOR CAMERA
NEW
CAMCOLVC2N

Features:
- very small digital video recorder camera
- recording on micro SD-card (not incl.)
- no flash memory built in
- only 2 operation switches
- picture, audio and video recording
- comes with USB cable

Specifications:
- pick-up element: colour CMOS sensor
- lens angle: 58° (diagonal)
- storage capacity: max. 8GB micro SD card (not incl.)
- video recording:
  - recording format: AVI (audio and video)
  - video resolution: 640 x 480 pixels
  - frame rate (fps): 29
  - recording capacity: ±40MB/min
- audio recording:
  - recording format: WAV
  - audio sample rate: 8kHz
  - recording capacity: ±500kB/min
- image recording:
  - recording format: JPEG
  - image resolution: 1280 x 960 pixels
- power supply: built-in Li-battery (recharge via USB)
- battery capacity: 1.5h
- charging time: 2h
- current consumption: max. 140mA
- dimensions: 2 7/8" x 25/32" x 7/16"
- weight: 0.74 oz
- operating temperature: 32°F ~ 122°F

Packaging		EAN code	
		54 10329 42290 5	
Carton		UPC code	

MINI COLOR CMOS CAMERA WITH AUDIO + POWER ADAPTER
CAMCOLMBLAHU

Specifications:
- pick-up element: 1/3" colour CMOS
- number of pixels: 628 x 582
- scanning system: NTSC
- resolution: 380 TV lines
- min. illumination: 1.5 Lux / F2.0
- S/N ratio: >48dB
- electronic shutter: 1/50 to 1/15000 sec
- gamma correction: 0.45
- automatic adjustments:
  - exposure
  - gain
  - gamma correction
  - white balance
- standard board lens: f6mm
- viewing angle: 52°
- video output: 1.0Vpp composite, 75 ohms (yellow connector)
- audio output: RCA connector
- power supply: 8VDC / 80mA PS0801R (regulated, power adapter incl.)
- operating temperature: 14°F ~ 113°F
- storage temperature: -22°F ~140°F
- dimensions: 1 21/32" x 1 1/2" x 1 7/64"
- weight: 2.12oz
- cable length: 9 27/32"

Packaging		EAN code	
Carton	/25	UPC code	8 36479 00746 8

COLOUR PINHOLE CAMERA
CAMCOLMHA4N

Features:
- spare cable: SP/CAM12

Specifications:
- pick-up element: 1/3" colour CMOS image sensor
- number of pixels: 512(H) x 586(V) -PAL-
- scanning system: 2:1 interlace
- synchronisation: internal
- resolution: 350 TV lines
- S/N ratio: > 46dB
- min. illumination: 5 lux at F1.4
- electronic shutter: 1/50 - 1/100000
- sync. frequency: 15625kHz(H) / 50Hz -PAL-
- backlight compensation: automatic
- white balance: automatic
- automatic exposure/gain with 16-zone control
- video output: 1Vpp / 75ohm composite video
- lens: 5.0mm (0.2")
- lens angle: 45°
- audio output: 20-16000Hz, S/N ratio : > 58dB
- power supply: DC 5-12V / 80mA (regulated) (use PS1205R not incl.)
- weight: 3.17oz
- dimensions: 1.57" x 1.57"

Packaging		EAN code	
		54 10329 37431 0	
Carton		UPC code	

COLOUR CAMERAS WITH BUILT-IN RECORDER

VIDEO CAPTURE CAMERA WATCH - 2GB
NEW
CAMCOLVC10

Wristwatch with integrated camera and recorder.

Features:
- for audio and video recording
- 2GB integrated flash memory
- up to 150 minutes of recording time (depending on settings)
- two pushers
- USB 2.0 plug and play device
- USB cable included

Specifications:
- pick-up element: colour CMOS sensor
- video resolution: 640 x 480
- lens angle: 58°
- storage capacity: 2GB built-in flash memory
- recording format: AVI
- frame rate (fps): 25
- video recording mode: continuous until memory full or manually off
- recording capacity: < 15MB/min
- power supply: built-in Lithium-ion battery (recharged via USB)
- battery life: up to 90 minutes
- dimensions: Ø 1 11/16" x 19/32"
- weight: 4.40 Oz.

Packaging		EAN code	
		54 10329 42937 9	
Carton		UPC code	

VIDEO CAPTURE PEN CAMERA - 2GB
CAMCOLVC9

NEW

Pen with integrated camera and recorder.
Features:
• for audio and video recording
• 2GB integrated flash memory
• only one operation switch
• USB 2.0 plug and play device
• USB cable included
Specifications:
• pick-up element: color CMOS sensor
• video resolution: 640 x 480 (CIF)
• lens angle: 58°
• storage capacity: 2GB built-in flash memory
• recording format: AVI
• frame rate (fps): 15~30
• video recording mode: continuous until memory full or manually off
• recording capacity: < 40MB/min
• power supply: built-in Lithium-ion battery (recharged via USB)
• dimensions: 5 29/32" x 19/32" x 19/32"
• weight: 1.58 oz

Packaging		EAN code	54 10329 42897 6
Carton		UPC code	

RF REMOTE CONTROL SHAPED COLOR CAMERA
CAMCOLVC8N

NEW

Features:
• very small digital video recorder camera
• recording on micro SD-card (not incl.)
• no flash memory built in
• only 2 operation switches
• picture, audio and video recording
• comes with USB cable
• no remote control function
Specifications:
• pick-up element: color CMOS sensor
• lens angle: 65°
• storage capacity: max. 16GB micro SD card (not incl.)
• video recording:
  - recording format: AVI (audio and video)
  - video resolution: 720 x 480 pixels
  - frame rate (fps): 30
  - recording capacity: <70MB/min
• image recording:
  - recording format: JPEG
  - image resolution: 1280 x 1024 pixels
• power supply: built-in Li-battery (recharge via USB)
• battery capacity: 1h
• charging time: 2h
• current consumption: max. 170mA
• dimensions: 2 3/64" x 1 17/64" x 15/32"
• weight: 0.7 oz.
• operating temperature: 32°F ~104°F

Packaging		EAN code	54 10329 44056 5
Carton		UPC code	

PROFESSIONAL CCD CAMERAS

COLOR CAMERAS WITH HOUSING

WEATHERPROOF 1/3" IR COLOR CCD CAMERA WITH B/W NIGHT VISION
CAMCOLBUL14U

Features:
• weatherproof, suited for outdoor use
• day and night use
• comes with bracket and 100ft cable (video & power supply on the same cable)
Specifications:
• pick-up element: 1/3" Sharp CCD
• scanning area: 3/16"(H) X 2/16"(V)
• scan frequency: 60Hz
• number of pixels: 510(H) X 492(V) NTSC
• resolution: 420 TV lines
• min. illumination: 0.8 lux / F1.2 (IR Off)
• IR LEDs: 12 pcs
• effective range: 49ft
• S/N ratio: > 48dB
• electronic shutter: 1/50 to 1/100000 sec
• white balance: ON/OFF (selectable)
• video output: 1.0Vpp composite, 75 ohms, RCA
• IP rating: -
• power supply: 12Vdc adapter
• power consumption: max. 5W
• operating temperature: -4°F~176°F
• dimensions: Ø2 9/16" x 3 5/32" (without bracket)
• weight: 16.22oz

Packaging		EAN code	
Carton		UPC code	8 36479 00847 2

COLOUR MICROCAMERA
CAMCOLH2U

Features:
• optional microphone: CAMCOLH2/MIC
Specifications:
• image sensor: 1/4" Sony CCD
• horizontal resolution: 420 TV lines
• effective pixels: 510(H) X 492(V) NTSC
• scanning system: 2:1 internal
• synchronisation: internal
• S/N ratio: >48dB
• gamma correction: R=0.45
• min. illumination: 0.5 lux
• video out signal: 1.0Vp-p / 75 ohms
• BLC: auto
• lens: 3.7mm super cone pinhole lens
• horizontal view angle: 63.5°
• power supply: 12VDC adapter
• current consumption: 120mA max.
• gain control: auto
• white balance: auto
• AGC: auto
• electronic shutter: 1/50-1/100000 sec
• operating temperature: 14°F~140°F
• cable: 31 1/2"
• dimensions: 15/32" x 15/32" x 25/32"
• weight: 2.68 oz

Packaging		EAN code	
Carton		UPC code	8 36479 00846 5

COLOUR BULLET CAMERA
CAMCOLBUL3S

Features:
- weatherproof (IP 57)
- high-quality picture
- built-in auto electronic shutter
- comes with housing and bracket

Specifications:
- IP rating: IP57
- pick-up element: 1/3" Sony color superHAD CCD
- number of pixels: 512(H) x 582(V) -PAL-
- resolution: 350 TV lines
- min. illumination: 1 lux / F2.0
- S/N ratio: more than 48dB (AGC off)
- electronic shutter: 1/50 to 1/100000 sec.
- white balance: auto
- video output: 1.0Vpp composite, 75 ohm
- standard board lens: f3.6mm/F2.0
- lens angle: 92°
- power source: DC 12V ± 10% / 80mA (regulated) (use PS1205R, not incl.)
- dimensions: Ø1" x 3.43"
- weight: 10.58oz

Packaging		EAN code	54 10329 35703 0
Carton	/30	UPC code	

CAMERA ACCESSORIES

VIDEO TRANSCEIVER

UTP VIDEO CABLE TRANSMISSION SET WITH POWER TRANSFER
CV027

Features:
- transmits a monochrome (max. 75m) video signal or colour (max. 50m) video signal
- passive, no power required
- no coaxial cable necessary
- with power supply connector to power your camera via the UTP cable

Specifications:
- connector: male BNC / female RJ45
- max. distance:
  - black/white video signal: ± 75m (250ft)
  - colour video signal: ± 50m (165ft)

Packaging		EAN code	54 10329 32583 1
Carton	/100	UPC code	
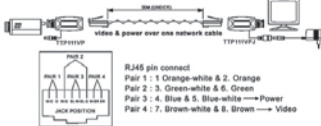
VIDEO/AUDIO/POWER BALUN - PAIR
CV035

Features:
- allows transmission of video signals via a CAT5 UTP cable (max. 150m for colour and 200m for black/white) instead of coaxial cable
- excellent for long-distance security and surveillance applications

Specifications:
- camera:
  - connector: BNC male / RJ45 female
  - audio in: RCA male
  - power: 12V power out female
- monitor/DVR:
  - connector: RJ45 female
  - video out: BNC male
  - audio out: RCA male
  - power: 12V power out male
- impedance:
  - BNC: 75 ohms
  - RJ45: 100 ohms
- operating temp.: 14°F~149°F
- dimensions: 55/64" x 53/64" x 1 11/16"
- weight: 1.23 oz

Packaging		EAN code	54 10329 38622 1
Carton		UPC code	

ACCESSORIES FOR CCD CAMERAS

FIXED IRIS LENSES

CCTV LENS TELE
CAML3B

Specifications:
- format: 1/3"
- mounting: CS mount
- focal length: 8.0mm
- aperture: 2.0mm
- viewing angle: 40°

Packaging		EAN code	54 10329 20358 0
Carton	/1	UPC code	

BOARD LENSES

CCD & CMOS BOARD LENS 2.5mm/F2.0
CAML4

Specifications:
- focal length: 2.5mm
- iris / aperture: fixed F2.0
- viewing angle:
  - 1/3" CCD or CMOS sensor: hor : 112° / vert : 94° / diag. 140°
  - 1/4" CCD or CMOS sensor: hor : 84° / vert : 70.5° / diag. 104°

Packaging		EAN code	54 10329 21188 2
Carton		UPC code	

CCD & CMOS BOARD LENS 6.0mm/F2.0
CAML5

Specifications:
- mount: M12 x 0.5
- BFL: 0.24"
- focal length: 0.24"
- iris / aperture: fixed F2.0
- viewing angle:
  - 1/3" CCD or CMOS sensor: 53°
  - 1/4" CCD or CMOS sensor: 41°
- dimensions: Ø 0.55" x 0.61"

Packaging		EAN code	54 10329 21647 4
Carton	/1	UPC code	

CCD & CMOS BOARD LENS 8.0mm/F2.0
CAML6

Specifications:
- mount: M12 x 0.5
- BFL: 0.21"
- focal length: 0.31"
- iris / aperture: fixed F2.0
- viewing angle:
  - 1/3" CCD or CMOS sensor: 41°
  - 1/4" CCD or CMOS sensor: 31°

Packaging		EAN code	54 10329 21648 1
Carton	/1	UPC code	

CCD & CMOS BOARD LENS 12.0mm/F2.0
CAML7

Specifications:
- mount: M12 x 0.5
- BFL: 8.38mm
- focal length: 0.47"
- iris / aperture: fixed F2.0
- viewing angle:
  - 1/3" CCD or CMOS sensor: 28°
  - 1/4" CCD or CMOS sensor: 21°
- dimensions: Ø 14 x 10.83mm

Packaging		EAN code	54 10329 21646 7
Carton	/1	UPC code	

DUMMY CAMERAS

DUMMY ROTATING CAMERA WITH LED
CAMD3

Features:
- excellent imitation of a real security camera
- with motion sensor
- motorised pan movement
- LED lights when the device is turned on
- no wiring needed

Specifications:
- power supply: 3 1.5V AA batteries (not incl.)
- height: ca. 6.7"

Packaging		EAN code	69 37790 21958 6
Carton	/48	UPC code	8 36479 00738 3

DUMMY "DOME" CAMERA
CAMZWDH1

Specifications:
- with plastic dummy camera
- dimensions: Ø3.43" x 2.24"
- weight: 2.33lbs

Packaging		EAN code	54 10329 34241 8
Carton	/100	UPC code	

VIDEO MONITORING SYSTEMS

VIDEO MONITORING SYSTEMS FOR HOME USE

B/W VIDEO INTERCOM DOORPHONE
CAMSET16U

Features:
- camera with IR LEDs for night vision (up to 6 1/2 ft)
- 1 camera can connect max. 4 indoor monitors
- two-way audio intercom
- door can be unlocked through the monitor

Specifications:
- 4-wire telephone cable (length 50ft, incl.)
- input signal: 1Vpp @ 75 ohms
- picture resolution:
  - monitor: 420 TV lines
  - CCD-camera: 380 TV lines
- display time:
  - calling only: 30 sec
  - monitoring: 10 sec
  - picking up the phone to talk: 2 min
  - alarm key: 10 sec
- camera viewing angle: 92°
- power supply: 23.5VDC / 1A (incl.)
- dimensions:
  - monitor: 8 47/64" x 7 21/64" x 2 11/64"
  - camera: 5" x 3 47/64" x 1 3/16"
- weight:
  - monitor: 47.4 oz
  - camera: 29.4 oz
- optional extra monitor: CAMSET16/MON

Packaging		EAN code	
Carton		UPC code	8 36479 00940 0

OPTIONAL CAMERAS

OPTIONAL CAMERA FOR CAMSET5A
CAM11

Features:
- for: CAMSET5A
- in option:
  - spare cable: CAMSET/SPC2
  - extension cable: CAMSET/SPC1

Specifications:
- see: CAMSET5A
- 66ft cable included

Packaging		EAN code	54 10329 20102 9
Carton	/10	UPC code	

OPTIONAL CAMERA FOR CAMSET2C WITH IR LEDS
CAM16

Features:
- for: CAMSET2C

Specifications:
- see CAMSET2C

Packaging		EAN code	54 10329 30265 8
Carton	/16	UPC code	

VIDEO CAMERA & TV ACCESSORIES

ANTENNAS & AMPLIFIERS

SATELLITE FINDER WITH 22KHZ AND H/V INDICATOR, 900-2400Mhz
ANTSF1N

NEW

Features:
- pocket size and light-weight
- high sensitivity for easy and prescise adjustment
- 22KHz detection LED
- H/V LED, indicates when the LNB is switching polarisation
- backlight
- with audio tone function

Specifications:
- frequency range: 900 - 2400MHz
- input level: -52 - 60dB
- sensitivity: 7μV @ 55dB
- power supply: 13-18VDC (from receiver)
- dimensions: 3.23 x 2.48 x 1.26"
- weight: 3.50oz

Packaging	EAN code 54 10329 41078 0
Carton	UPC code 8 36479 00925 7

WIRELESS A/V TRANSMISSION

WIRELESS CAMERA WITH USB RECEIVER - 2.4GHz
CAMSETW13U

FC | 3 x AAA

Features:
- built-in microphone
- IR LEDs
- 3 main functions: instant viewing, alarm function, night vision
- recording function, image capture, task planning
- baby monitoring function: recording with a detection of a sound or PIR (programmable per channel)
- image viewing via notebook, PC or TV

Specifications:
- camera:
  - sensor: CMOS
  - resolution: 510 X 492
  - viewing angle: 55°
  - min. illumination: 5 lux (F1.2, IR off)
  - transmission frequency: ISM 2400MHz - 2483MHz
  - transmission power: 10mW
  - modulation type: FM
  - bandwidth: 18MHz
  - power supply: 8VDC / 300mA (adapter incl.) or 3 x 1.5V AAA batteries (LR03C, not incl.)
  - motion detection distance: 8m
  - motion detection area: 120° (horizontal), 15-25° (vertical)
  - sound sensitivity: > 50dB
  - power consumption: 180mA (IR off), 230mA (IR on)
  - transmission range: max. 260 ft in open field
  - night vision range: 16 ft
  - dimensions: 3 11/32" x 4 19/64" x 4 3/8"
  - weight: 6 oz
  - 4 channels selectable: 2414, 2432, 2450, 2468MHz
- receiver:
  - receiving frequency: ISM 2400 - 2483MHz
  - intermediate frequency: 480MHz
  - demodulation type: FM
  - sensitivity: < -85dBm
  - transmission interface: USB 2.0
  - dimensions: 4 9/64" x 55/64" x 2 23/32"
  - weight: 3 oz
- system requirements:
  - CPU: 2.0GHz or higher
  - memory: 256MB RAM
  - USB 2.0 port
  - HDD: 30GB or more
  - CD-ROM drive
  - colour monitor or LCD display
  - audio/video card supporting DirectX 9.0 or later

- Windows® XP
- recording:
  - compression: MPEG4
  - file format: AVI
  - image size: 720 x 576, 352 x 576, 352 x 288
  - frame rate: 5, 10, 15, 20, 25 fps

Packaging	Carton	EAN code	UPC code 8 36479 00848 9

VIDEO APPLICATIONS

ANALOGUE VIDEO APPLICATIONS

2-CHANNEL VIDEO WEB SERVER
VWS2

The Video Web Server can be connected to the internet. You do not need a PC because the VWS2 has its own IP address. It enables you to remote monitor and control most of your CCTV series products via the internet. The software package is extensive and user-friendly.

Features:
- compatible with most CCTV products: use any video source through the VWS2
- Auto Network Reconnection (ANR)
- duplex function: simultaneous recording and playback possible
- firmware upgradeable through FTP site
- auto e-mail warning in case of external alarm
- intelligent non-stoppable recording after ANR
- direct connection or connection via LAN or internet
- unique video system
- user-friendly interface
- advantages:
  - upgrade traditional CCTV system to IP surveillance
  - easy to install and use via the internet
  - easy to watch and record images
  - can be used from anywhere via network or the internet
  - advanced image compression facilitates transmission and storage
  - real-time image watching and recording
  - simultaneous remote monitoring and controlling by multiple users
- applications:
  - transport facilities: airports, train stations, ports, ...
  - high security areas: research centre, nuclear facility, ...
  - construction sites
  - POS (Point of Sale) and live promotion
  - medical emergency sites and hospitals
  - banks
  - traffic control management
  - nursery and retirement homes
  - parking lots
  - production facilities such as factories
- software and manual included on cd
- good knowledge of network and internet applications required

Specifications:
- channels: 2 channels for analogue & digital devices
- video input: 1.0Vpp, 75 ohm, composite, BNC connector
- connection: RS-485 port for alarm (I/O)
- network interface: Ethernet (10/100 Base-T)
- image compression: jpg
- video adjustments: brightness, contrast, saturation, quality level adjustment
- network function: supports static PPPoE, DHCP, DDNS, TCP
- hardware:
  - CPU: 32 bits RISC processor
  - ROM: 2Mb FlashROM
  - RAM: 16Mb SDRAM
  - 1 x RJ-45 for 10/100 Mbps Ethernet
  - LEDs to indicate Link/Act status
  - GPIO with e-mail trigger
- resolution: VGA : 704x576 / CIF : 352x288
- performance:
  - video throughput: up to 15 frames / second
  - network throughput: up to 700kb/s
- trigger & action:
  - triggered by GPIO input
  - action: image is e-mailed to specified addresses
- software upgrade: via FTP site
- security: 3-layer password protection
- power supply: DC 12V / 500mA (adapter 230V-12V incl.)

Packaging	EAN code 54 10329 32516 9
Carton /12	UPC code

132

DISCO LIGHTS

HOME DJ LIGHTING

MAGIC PLASMA LIGHT 8"
VDL8PLU

2 functions : continuously on or music-controlled operation (the lightening flashes to the rhythm of the music).
Specifications:
- power supply: 12V AC/DC adapter (incl.)
- power consumption: 12W
- dimensions: 7.09" x 7.09" x 11.82"
- weight: 1.98lbs

Packaging | EAN code
Carton | UPC code 8 36479 00765 9

MODULAR RUNNING LIGHT
VDL660RLU

Modular system with built-in microphone. Six 60W lamps included.
Features:
- music-controlled
- controls: sound (sensitivity), speed (velocity)
Specifications:
- lamp: 6 x LAMP60 (E27 60W/230V R80, incl.)
- spare lamps: LAMP60B2 (blue), LAMP60G2 (green), LAMP60O2 (orange), LAMP60R2 (red)
- power supply: 110Vac
- dimensions: 14.18" x 14.18" x 4.73"
- weight: 6.17lbs

Packaging | EAN code
Carton /2 | UPC code

DECORATIVE LIGHTING & PARTY LIGHTS

ELECTROLUMINESCENT ACCESSORIES

PORTABLE EL WIRE SET

Features:
- electroluminesence (EL) wire, extremely flexible
- usage: on a bike, in a car, decoration, party, theatre, decoration, computer, safety, ...
- 3 functions: continuous on, slow flash, quick flash
Specifications:
- wire specifications: Ø0.09" / length : 3.3ft
- power supply: 2 1.5V AA batteries (not incl.)
- current consumption: 100mA

Order Code	color
NWRB15	blue
NWRG15	green
NWRR15	green

Packaging | EAN code 54 10329 28324 7
Carton /192 | UPC code
NWRB15

Packaging | EAN code 54 10329 28326 1
Carton /192 | UPC code
NWRG15

Packaging | EAN code 54 10329 28325 4
Carton /192 | UPC code
NWRR15

COLD-CATHODE FLUORESCENT LAMPS

COLD-CATHODE FLUORESCENT LAMPS 12"

Specifications:
- dimensions: 12" x Ø0.16"
- tube voltage: 180 ~ 800V
- average brightness: 15000cd/m²
- average life: 15.000hrs
- for use with: FLPS power supply

Order Code	color	wavelength
FLB	blue	-
FLG	green	-
FLW	white	-

FLB

FLG

FLW

POWER SUPPLIES FOR COLD-CATHODE FLUORESCENT LAMPS 12"

POWER SUPPLY FOR 12" COLD-CATHODE FLUORESCENT LAMPS
FLPS

Features:
- for use with cold-cathode fluorescent lamps of 12"
Specifications:
- input voltage: 12V
- output voltage: 180-800V
- current consumption: approx. 375mA
- dimensions: 2.40" x 0.83" (height: 0.59")

Packaging | EAN code 54 10329 21749 5
Carton /500 | UPC code 8 36479 00257 9

COLD-CATHODE FLUORESCENT LAMPS, 4"

Specifications:
• dimensions: 3.9" x Ø0.16"
• tube voltage: 180 ~ 800V
• average brightness: 15000cd/m²
• average life: 15000hrs
• for use with: FLPS1 power supply

Order Code	color
FLB1	blue
FLBL1	blacklight
FLP1	pink
FLW1	white
FLY1	yellow
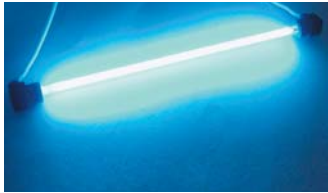
FLB1

FLBL1
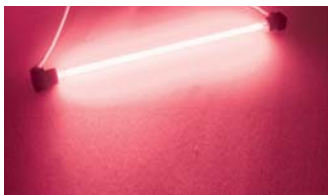
FLP1

FLW1
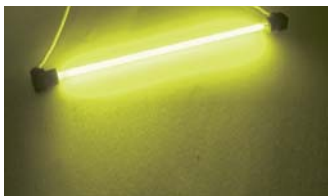
FLY1

POWER SUPPLIES FOR COLD-CATHODE FLUORESCENT LAMPS 10CM

POWER SUPPLY FOR 4" COLD-CATHODE FLUORESCENT LAMPS
FLPS1

Features:
• for use with cold-cathode fluorescent lamps of 4"
Specifications:
• input voltage: 12V
• output voltage: 180-800V
• current consumption: approx. 375mA
• dimensions: 2.40" x 0.83" (height: 0.59")

Packaging		EAN code	54 10329 21750 1
Carton	/1	UPC code	8 36479 00258 6

ROPE LIGHTS - PRECUT & ASSEMBLED

ROPE LIGHT - 18ft - BLUE
RL118B

Specifications:
• color: blue
• length: 18ft

18ft

Packaging		EAN code	
Carton		UPC code	8 36479 00804 5

ROPE LIGHT - 18ft - GREEN
RL118G

Specifications:
• color: green
• length: 18ft

18ft

Packaging		EAN code	
Carton		UPC code	8 36479 00806 9

ROPE LIGHT - 18ft - RED
RL118R

Specifications:
• color: red
• length: 18ft

18ft

Packaging		EAN code	
Carton		UPC code	8 36479 00807 6

ROPE LIGHT - 18ft - YELLOW
RL118Y

Specifications:
• color: yellow
• length: 18ft

18ft

Packaging		EAN code	
Carton		UPC code	8 36479 00808 3

ROPE LIGHT - 30ft - YELLOW
RL130Y

Specifications:
• color: yellow
• length: 30ft

30ft

Packaging		EAN code	
Carton		UPC code	8 36479 00813 7

MULTIFUNCTIONAL INVISIBLE INK PEN
VDLIIP

Features:
• the words you write are invisible in normal daylight but are revealed under the light of the pen
• can be used to detect counterfeit money
• suitable for a variety of fun applications: secret messages, security markings, party gadget, ...

Packaging		EAN code	54 10329 34038 4
Carton	/200	UPC code	

STROBOSCOPES

LED STROBES

MINI WHITE LED STROBE - 24 LEDs
VDLL24STU

Features:
• easy to use mini LED strobe
• flash rate: 1 ~ 10 flashes/sec adjustable via sensitivity knob
Specifications:
• power supply: 12VDC/500mA (adapter incl.)
• dimensions: 4 59/64" x 3 11/32" x 2 11/64" (bracket not incl.)
• weight: 5.5 oz

Packaging		EAN code	
Carton		UPC code	

WHITE LED STROBE - 60 LEDs
VDLL60STU

Features:
• easy to use LED strobe
• flash rate: 1 ~ 10 flashes/sec adjustable via sensitivity knob
Specifications:
• power supply: 12VDC/500mA (adapter incl.)
• dimensions: Ø 4 59/64" x 6 19/64"
• weight: 19 oz

Packaging		EAN code	
Carton		UPC code	

LASER PRODUCTS

LASER POINTERS

LASER POINTER - ABS - 1mW - CLASS II
MP1000

1mW Class II. 650nm. Housing in ABS.
Specifications:
• power supply: 2 x AAA-battery (incl.)
• dimensions: 5.43 x (Ø)0.71"
• weight: 0.85oz

Packaging		EAN code	54 10329 28127 4
Carton	/100	UPC code	

2 x
AAA

DELUXE LASER POINTER - 1mW - CLASS II
MP1800

Range 100m. 1mW. Class II. 660nm. Supplied with protection pouch.
Features:
• metal housing
• mat chrome finish
Specifications:
• power supply: 2 x AAA-battery (incl.)
• life span: 3000h
• dimensions: Ø 0.5" x 5.50"
• weight: 1.94oz

Packaging		EAN code	54 10329 28518 0
Carton	/100	UPC code	

2 x
AAA

BLACKLIGHT LAMPS

BLACKLIGHT LAMPS - HQPOWER®

Order Code	voltage (V)	power consumption (W)	socket	color	dimensions
LAMP04TBL	230	4	E27	UV	5 9/32" / 5 53/64" ± 5/64"

LAMP04TBL

SPEAKER ACCESSORIES

LOUDSPEAKER CONNECTORS

LOUDSPEAKER CONNECTION TERMINALS

WITH PUSH BUTTONS

LOUDSPEAKER CONNECTION TERMINAL - ROUND
LSC1

Specifications:
• dimensions: Ø 3"

Packaging		EAN code	54 10329 21931 4
Carton	/500	UPC code	

LOUDSPEAKER CONNECTION TERMINAL - SQUARE
LSC2

Specifications:
• dimensions: 2.2" x 2.2"

Packaging		EAN code	54 10329 29835 7
Carton	/1000	UPC code	

LS TERMINALS

LS TERMINALS - GOLD-PLATED

Features:
• gold-plated
• for professional loudspeakers
• wires up to 0.3" Ø
Features:
• for professional loudspeaker wires with a max. Ø of 0.275"
Specifications:
• dimensions: Ø 0.43" x 1.93"

Order Code	color
LSTGB	black
LSTGR	red

DUAL BANANA PLUGS

Features:
- gold-plated
- for professional loudspeakers
- wires up to 0.3" Ø

Order Code	color
CM13B	black
CM13R	red

BINDING POSTS - GOLD

Features:
- gold-plated
- for professional loudspeakers
- wires up to 0.3" Ø

Specifications:
- gold-plated
- for 0.16" banana plug
- side hole: for cable with a max. Ø of 0.28"
- length: 1.9"
- hole: Ø 0.31"

Order Code	ring colour
CA114B	black
CA114R	red

LOUDSPEAKER CABLES

AUDIO CONNECTORS

Order Code	color	size	inner conductor	outside Ø	length (on reel)
K/LOW1	red / black	2 x 0.030" sq.	0.007" x 24 x 2	0.087" x 2	82ft

82ft

K/LOW1

MICROPHONES

PROFESSIONAL MICROPHONES

PROFESSIONAL DYNAMIC MICROPHONE
MICPRO8

Specifications:
- unidirectional
- frequency response: 100Hz-14kHz
- sensitivity: approx -73dB
- impedance: 600 ohm ± 30%
- cable length: 13ft. with 6.35mm plug
- cable Ø: 1/4"
- weight: 13.23oz

Packaging	EAN code	54 10329 35128 1
Carton /20	UPC code	

HEADPHONES

DE LUXE DIGITAL STEREO HEADPHONES
HPD13

Features:
- self-adjusting headband

Specifications:
- speaker: Ø 40mm dynamic type
- impedance: 32 ohm
- maximum power: 600mW
- frequency: 20-20000Hz
- sensitivity: 105dB ± 3dB (at 1kHz)
- input connection: gold-plated 3.5mm stereo plug & 6.3mm adapter
- cord length: 6 1/2ft. (single output cord)
- weight: 6.50oz (without cord)

3.5mm   6.5mm

Packaging	EAN code	54 10329 27769 7
Carton /24	UPC code	

DE LUXE MONO DJ HEADPHONES
HPD14

Specifications:
- speaker: Ø 50mm dynamic type
- impedance: 32 ohm ± 10%
- maximum power: 500mW
- frequency: 20 to 20000Hz
- sensitivity: 105dB ± 3dB (at 1kHz)
- input connection: gold-plated 6.3mm mono plug (90°)
- cord length: ± 5ft. spiral
- colour: silver grey

Packaging	EAN code	54 10329 27775 8
Carton /20	UPC code	

AUDIO APPLIANCES

DISCO AUDIO SETS

KARAOKE SET
VDSPROM4

Specifications:
- contains:
  - 1 x karaoke sound mixer: PROMIX02
  - 2 x dynamic microphone: MIC3BL

Packaging	EAN code	54 10329 35237 0
Carton	UPC code	

TV / VIDEO / PHOTO

A/V SELECTORS

AUDIO/VIDEO SELECTOR - 4 INPUTS AND 1 OUTPUT
VMS4N

Connect 4 audio/video inputs to 1 audio/video output e.g. 1 x VCR, 1 x video disc player, 1 x satellite receiver and 1 x camcorder to 1 x stereo TV.
Specifications:
- video in/out terminals: 4 input / 1 output connector (RCA)
- audio in/out terminals: 4 input / 1 stereo output connectors (RCA)
- temperature range: -14°F to +104°F
- dimensions: 6 57/64" x 2 9/16" x 63/64"

Packaging	Carton	EAN code	UPC code
		54 10329 38047 2	

MICROPHONES

DYNAMIC MICROPHONES

Unidirectional dynamic microphones.

Order Code	frequency response	sensitivity	impedance		weight	color
MIC1B	100 - 12500Hz	-75 ± 3dB	600ohm ± 30%	10ft cable with 1/4" plug	5.8oz.	black
MIC1BL	100 - 12500Hz	-75 ± 3dB	600ohm ± 30%	10ft cable with 1/4" plug	5.8oz.	blue
MIC1R	100 - 12500Hz	-75 ± 3dB	600ohm ± 30%	10ft cable with 1/4" plug	5.8oz.	red

Packaging	EAN code
Carton /50	54 10329 27497 9
	UPC code 8 36479 00350 7

MIC1B

Packaging	EAN code
Carton /50	54 10329 27498 6
	UPC code 8 36479 00351 4

MIC1BL

Packaging	EAN code
Carton /50	54 10329 27499 3
	UPC code 8 36479 00352 1

MIC1R

SEMIPROFESSIONAL DYNAMIC MICROPHONES

DYNAMIC MICROPHONE
MIC3B

Specifications:
- frequency response: 50Hz-16kHz
- sensitivity: -50 ±3dB
- impedance: 600 ohm ±30%
- cable length: 9.84ft with 6.35mm (1/4") plug and XLR plug
- colour: black
- weight: 5.47oz

Packaging	EAN code
Carton /20	54 10329 33790 2
	UPC code

DYNAMIC MICROPHONE
MIC3BL

Specifications:
- frequency response: 50Hz-16kHz
- sensitivity: -50 ±3dB
- impedance: 600 ohm ±30%
- cable length: ±10ft. with 6.35mm plug
- colour: blue
- weight: 5.47oz

Packaging	EAN code
Carton /20	54 10329 33791 9
	UPC code 8 36479 00891 5

SPECIAL HEADPHONES

MOTORCYCLE INTERCOM SET
INTERCOM

Excellent quality, versatile and light model. Has the most advanced design among of its class.
Specifications:
- power source: 2 x 1.5V AAA-batteries (not incl.)
- current consumption: in use : 30mA max. / standby : 8mA
- S/N ratio: more than 60 dB
- operating temperature: -4°F to 122°F
- rated output: 150mW
- frequency response: 50-20,000 Hz ±3dB
- input circuit: 62dB ± 1dB (1.5 unbalanced)
- output circuit: 32ohm 150mW, 84dB ± 3dB
- dimensions: 2.5" x 2.2" x 1.0"
- dimensions (earphone + microphone): 3.1" x 2.2" x 0.9"
- weight: 1.1oz

Packaging	EAN code
Carton /60	54 10329 30520 8
	UPC code 8 36479 00342 2

EARPHONES

STEREO EARPHONES FOR MP3 PLAYERS
HPE2

Features:
- stereo earphones for use with MD/CD/MP3/MP4 (player not included)
- possibility to wear the player around the neck
- silicon rubber ear caps
- perfectly fit almost any ear shape for pleasant comfort
Specifications:
- speaker: Ø15mm
- driver: 16mm
- impedance: 32 ohms
- sensitivity: 107db/mW
- rated power: 10mW
- max. input power: 40mW
- frequency response: 6Hz - 25kHz
- plug: 3.5mm stereo jack
- wire length: 3.28 ft.
- weight: 0.18oz (without cord)

Packaging	EAN code
Carton	54 10329 35959 1
	UPC code

IN-EAR PHONES + EXTENSION CABLE 3.2 FT - BLACK
HPE4

Features:
- stereo earphone for MD/CD/MP3/MP4 use
- high-velocity element for excellent sound
- airtight soft in-ear cushions (3 different sizes included)
- durable and lightweight surface
- clear dynamic sound with enhanced bass response
- flexigrip connection prevents cable damage

Specifications:
- driver: Ø25/64"
- impedance: 32 ohm
- sensitivity: 116dB ±3dB @ 1kHz, 0.5Vrms
- frequency response: 18Hz - 20kHz
- plug: 3.5mm stereo jack
- wire length: 2.1 ft + 3.2 ft extension cable
- weight: 1.4oz

3.5mm

Packaging	EAN code	54 10329 37598 0
Carton	UPC code	8 36479 00842 7

EAR PHONES WITH SPORTSCLIP DESIGN
HPE5

Features:
- stereo earphone for MD/CD/MP3/MP4 use
- high-velocity element for excellent sound
- Nd-Fe-B drivers for a perfect sound response
- durable and lightweight
- clear dynamic sound with enhanced bass response
- high-quality PU cord with flexigrip connection to prevent cable damage
- alloy metal housing with special ear-fitting design

Specifications:
- driver: Ø19/32"
- impedance: 32 ohms
- sensitivity: 116dB ±3dB @ 1kHz, 0.5Vrms
- frequency response: 18Hz - 20kHz
- plug: 3.5mm stereo jack
- wire length: 3.2 ft.
- weight: 2.4 oz

3.5mm

Packaging	EAN code	54 10329 37616 1
Carton	UPC code	

IN-EAR PHONES + EXTENSION CABLE 3.2 FT - WHITE
HPE4W
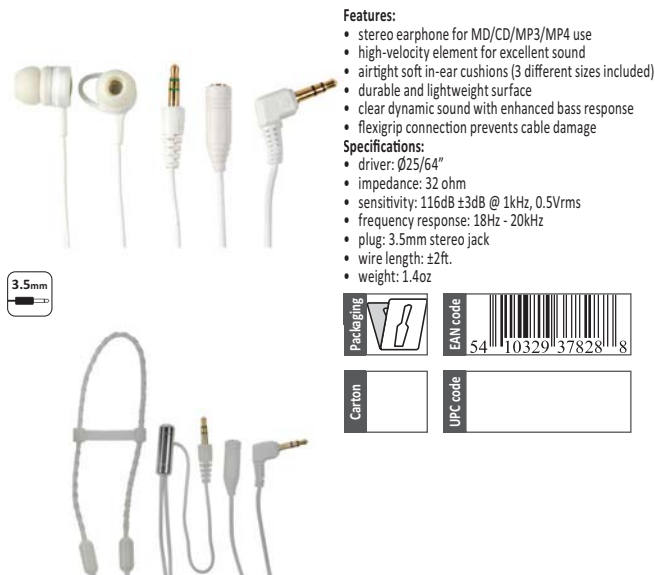
Features:
- stereo earphone for MD/CD/MP3/MP4 use
- high-velocity element for excellent sound
- airtight soft in-ear cushions (3 different sizes included)
- durable and lightweight surface
- clear dynamic sound with enhanced bass response
- flexigrip connection prevents cable damage

Specifications:
- driver: Ø25/64"
- impedance: 32 ohm
- sensitivity: 116dB ±3dB @ 1kHz, 0.5Vrms
- frequency response: 18Hz - 20kHz
- plug: 3.5mm stereo jack
- wire length: ±2ft.
- weight: 1.4oz

3.5mm

Packaging	EAN code	54 10329 37828 8
Carton	UPC code	

IN-EAR PHONES- METAL BODY
HPE6

Features:
- stereo earphone for MD/CD/MP3/MP4 use
- high-velocity element for excellent sound
- durable and lightweight
- clear dynamic sound with enhanced bass response
- airtight soft in-ear cushions
- attractive and smart alloy metal design minimizes sound leakage

Specifications:
- driver: Ø25/64"
- impedance: 32 ohms
- sensitivity: 116dB ±3dB @ 1kHz, 0.5Vrms
- frequency response: 18Hz - 20kHz
- plug: 3.5mm stereo jack
- wire length: 3.4 ft.
- weight: 1.4 oz

3.5mm

Packaging	EAN code	54 10329 37621 5
Carton	UPC code	

CLIP-ON STEREO EARPHONES - WITH NECK STRAP
HPD16
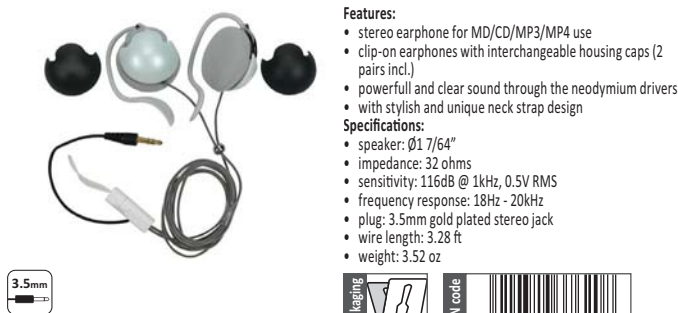
Features:
- stereo earphone for MD/CD/MP3/MP4 use
- clip-on earphones with interchangeable housing caps (2 pairs incl.)
- powerfull and clear sound through the neodymium drivers
- with stylish and unique neck strap design

Specifications:
- speaker: Ø1 7/64"
- impedance: 32 ohms
- sensitivity: 116dB @ 1kHz, 0.5V RMS
- frequency response: 18Hz - 20kHz
- plug: 3.5mm gold plated stereo jack
- wire length: 3.28 ft
- weight: 3.52 oz

3.5mm

Packaging	EAN code	54 10329 37620 8
Carton	UPC code	

NECKLACE EAR PHONES -
HPE8

Features:
- stereo earphone for MD/CD/MP3/MP4 use
- high-velocity element for excellent sound
- soft earphone shell
- durable and lightweight
- clear dynamic sound with enhanced bass response
- flexigrip connection prevents cable damage

Specifications:
- driver: 19/32"
- impedance: 32 ohm
- sensitivity: 116dB ±3dB @ 1kHz, 0.5Vrms
- frequency response: 18Hz - 20kHz
- plug: 3.5mm stereo jack
- wire length: 3.6 ft.
- weight: 1.4oz

3.5mm

Packaging	EAN code	54 10329 37827 1
Carton	UPC code	

HEADPHONE WITH 1 EARCUP
HPSS1

Features:
• Ø 1.1" drive unit
Specifications:
• drive unit: Ø 1.1" mylar speaker with an isotropic ferrite magnet
• frequency response: 20 - 18000Hz
• impedance: 32ohms
• sensitivity: 101dB
• 1/8" nickel-plated plug
• cable length: 4ft
• max. power input: 100mW

3.5mm

| Packaging | EAN code | 54 10329 30536 9 |
| Carton | /50 | UPC code | 8 36479 00338 5 |

STEREO AUDIO CABLE SET - 3.5mm MALE (90°) TO 3.5mm FEMALE - 2 3/4"
PCMP17

Features:
• allows you to connect your earphones and other stereo devices to a portable music player, PDA, etc.
• contains: 1 black cable and 1 white cable
Specifications:
• cable length: ± 140mm
• connector: gold-plated 3.5mm stereo male plug and female jack
• cable type: OFC

| Packaging | EAN code | 54 10329 39397 7 |
| Carton | UPC code | |

STEREO AUDIO CABLE ADAPTER SET - 2.5mm MALE (90°) TO 3.5mm FEMALE - ± 2 3/4"
PCMP18

Features:
• allows you to connect your earphones and other stereo devices to a portable music player, PDA, etc.
• contains: 1 black cable and 1 white cable
Specifications:
• cable length: ± 2 3/4"
• connector: gold-plated 2.5mm stereo male plug and 3.5mm female jack
• cable type: OFC

| Packaging | EAN code | 54 10329 39398 4 |
| Carton | UPC code | |

STEREO AUDIO CABLE WHITE- 3.5mm FEMALE TO 2.5mm MALE - 1 37/64"
AVB074W

Features:
• allows you to connect earphones and other stereo devices to your portable music player, PDA, etc.
• color: white
• compatible with most 4-pole 2.5mm inputs (see wiring)
Specifications:
• length: 1 37/64"
• connection: gold-plated 2.5mm stereo male jack (4-pole) and 3.5mm stereo female jack
• cable type: OFC

| Packaging | EAN code | 54 10329 38550 7 |
| Carton | UPC code | |

Not connected
Left
Right
Ground

HEADPHONES

DIGITAL STEREO HEADPHONES
HPD19

NEW

3.5mm

Features:
• powerfull bass
• ergonomic design
Specifications:
• impedance: 32 ohm ± 4 ohm
• speaker: 1.57"
• sensitivity: 95db+/-4db
• frequency response: 20Hz - 20kHz
• max. power: 100mW
• cable length: 6.9ft with 3.5mm plug
• weight: 6oz

| Packaging | Carton | EAN code | 54 10329 42808 2 | UPC code |

DIGITAL STEREO HEADPHONES
HPD21

NEW

3.5mm

Features:
• powerfull bass
• ergonomic design
Specifications:
• impedance: 1.57"
• speaker: 40mm
• sensitivity: 100db+/-4db
• frequency response: 20Hz - 20kHz
• max. power: 80mW
• cable length: 6.9ft with 3.5mm plug
• weight: 6oz

| Packaging | Carton | EAN code | 54 10329 42810 5 | UPC code |

DE LUXE DIGITAL STEREO HEADPHONES
HPD11

Features:
• self-adjusting headband
Specifications:
• speaker: Ø 40mm dynamic type
• impedance: 32 ohm
• maximum power: 600mW
• frequency: 20-20000Hz
• sensitivity: 105dB ± 3dB (at 1kHz)
• input connection: gold-plated 3.5mm stereo plug & 6.3mm adapter
• cord length: 6 1/2ft.
• weight: 8.82oz

3.5mm 6.5mm

Packaging	Carton	EAN code	UPC code
	/20	54 10329 27758 1	

STEREO HEADPHONES WITH VOLUME CONTROL
HPD17

Features:
• metallic color
• soft self-adjusting inner headpad for extra comfort
• 1 3/16" drivers
• single-sided 6.5 ft cable allows big movement range
Specifications:
• sensitivity: 94dB
• driver: Ø 1 3/16"
• cable length: 6.5 ft.
• max. input power: 100mW
• plug type: 3.5mm, gold-plated
• impedance: 32 ohms
• frequency range: 20Hz - 20kHz
• magnet type: ferrite

3.5mm

Packaging	EAN code
	54 10329 37826 4
Carton	UPC code

MEGAPHONES

SPARE MICROPHONE FOR PA5N
PA5N/SP1

Features:
• for: PA5N

Packaging	EAN code
	54 10329 41476 4
Carton	UPC code
	8 36479 00896 0

PORTABLE PUBLIC ADDRESS SYSTEM 7W / 8 OHM
PA5NU

Features:
• light and smart design for easy carrying
• low noise and excellent performance
• ideal for schools, factories, meetings, guides and street vendors
• headset with dynamic condense microphone
• spare microphone: PA5N/SP1
Specifications:
• speaker: 2.5" / 8 ohm
• power output: 7W max.
• frequency response: 100 - 13.000Hz (±3dB)
• length of waistband: 3' 4"
• power supply: DC 9-12V (8 x 1.5V AA-batteries (LR6C), not incl.)
• weight: 11.64oz
• dimensions: 6.7" x 2.8" x 2"

8 x AA

Packaging	EAN code
Carton	UPC code
	8 36479 00886 1

POWER MEGAPHONE 10W
M10M

Hand-held megaphone with shoulder strap. With siren, on/off switch and volume control. ABS housing.
Specifications:
• range: ± 650 ft depending on operating conditions
• power supply: 4 x 1.5V D-batteries (not incl.)
• weight: 31 oz
• dimensions: Ø6 1/2" x 10 15/64"

Packaging	EAN code
	54 10329 33412 3
Carton /6	UPC code

MEGAPHONE 10W
MP10

Hand-held megaphone with shoulder strap. With siren & music/speak, on/off switch and volume control. ABS housing.
Features:
• foldable handle
• carrying strap
Specifications:
• rated power: 10W
• range: 300~500m depending on conditions
• power supply: 4 x 1.5V D batteries (LR20C, not incl.)
• weight: 17.28oz.
• dimensions cone: Ø6 7/64"
• length: 9 41/64"

4 x D

Packaging	EAN code
	54 10329 41136 7
Carton	UPC code
	8 36479 00892 2

MEGAPHONE 10W WITH RECORD FUNCTION
MP10SR

Hand-held megaphone with shoulder strap. With record/play, siren, speak, on/off switch and volume control. ABS housing.
Features:
- foldable handle
- carrying strap
- 10 seconds record and play function

Specifications:
- rated power: 10W Max.
- range: 330 ft depending on conditions
- power supply: 4 x 1.5V D battery (LR20C, not incl.)
- weight: 21 oz
- dimensions cone: Ø 6 7/64"
- length: 9 41/64"

4 x D

Packaging

EAN code
54 10329 41137 4

Carton

UPC code

POWER MEGAPHONE 25W
MP25SFM

Hand-held megaphone with shoulder strap. whistle and siren. Detachable anti-howl microphone with coiled lead, on/off switch and volume control. ABS housing.
Features:
- carrying strap

Specifications:
- rated power: 25W
- range: 330yd ~ 550yd depending on conditions
- impedance: 8&#937
- power supply: 8 x 1.5V C batteries (LR14C, not incl.) or via 12Vdc connector and cigar lighter (incl)
- weight: 58 oz
- dimensions cone: Ø9"
- length: 13 37/64"

8 x C

Packaging

EAN code
54 10329 41138 1

Carton

UPC code
8 36479 00885 4

AUDIO AND CD ACCESSORIES

CD STORAGE SYSTEMS

CD WALLET (40 CD's)
CACD4

Specifications:
- for 40 CD's/DVD's
- colour: black

Packaging

EAN code
54 10329 23234 4

Carton

UPC code

FLASH LIGHTS

TORCHES - ACCESSORIES

BULBS FOR TORCHES

Order Code	ratings	packaging	spare bulb for
LAMP302W6	1.5V / 750mA	1pc in polybag	ZL302W6
LAMPZL500	ZL500NU	H3 - 6V 25W	

LAMP302W6   LAMPZL500

BULBS FOR COMBI LED LIGHTS

Order Code	spare bulb for	ratings	packaging
LAMPAR306	ZLAR306	4.5V	-

LAMPAR306

ULTRAVIOLET LAMPS

MINI ULTRAVIOLET LAMPS

MINI ULTRAVIOLET LAMP + TORCH / BLACK
ZLUVB

Specifications:
- color: black housing

Packaging

EAN code
54 10329 20407 5

Carton

UPC code

WORK LAMPS

RECHARGEABLE LED WORK LIGHT- 60 LEDs
ZLLWL1U

Features:
- excellent light output and ultra-low power consumption
- with suspension hook
- including charging adapter 110V

Specifications:
- charging time: 1.5h (for 4-5h of full-power light emission)
- dimensions: Ø2 11/64" x 14 9/16"
- weight: 26.45oz

Packaging

EAN code

Carton /6

UPC code
8 36479 00872 4

CONSUMER & COMPUTER PRODUCTS

CAR

12V NEON LIGHT TUBES

14.9" RED LIGHTNING NEON LIGHT TUBE
FLROD1
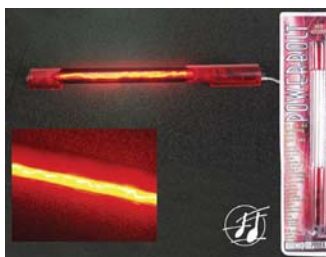
"POWERBOLT 38".
Features:
- 15" red lightning neon light tube
- with built-in music control module
Specifications:
- contents: 1 "Powerbolt 38" lighting rod and 2 fixing screws

Packaging / EAN code 54 10329 20763 2
Carton /24 / UPC code
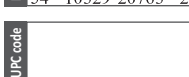
9.8" BLACKLIGHT NEON TUBE"
FLROD3
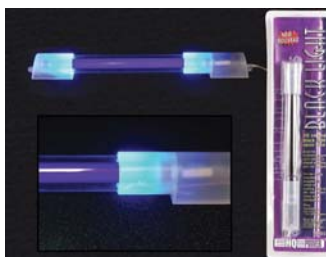
"BLACK LIGHT 25"
Features:
- 9.8" real black light neon tube
- real black light: creates high-lights on clothes, UV reflective materials, ...
Specifications:
- contents: 1 "Blacklight 25" lighting rod and 2 fixing screws

Packaging / EAN code 54 10329 20765 6
Carton /24 / UPC code
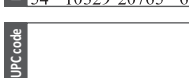
7.9" BLUE NEON TUBE
FLROD4B

"BLUE NEON 20"
Features:
- 7.9" blue neon light tube
Specifications:
- contents: 1 "Blue Neon 20" lighting rod and 2 fixing screws

Packaging / EAN code 54 10329 20768 7
Carton /36 / UPC code
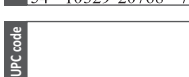
7.9" PINK NEON TUBE
FLROD4P

"PINK NEON 20"
Features:
- 7.9" pink neon light tube
Specifications:
- contents: 1 "Pink Neon 20" lighting rod and 2 fixing screws

Packaging / EAN code 54 10329 20769 4
Carton /36 / UPC code
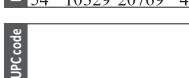
CAR ACCESSORIES

BLUE EL STRIP LIGHT - 5ft.
NWRB16

Features:
- safety lighting
- easy to apply anywhere
- use a heat gun to bend the strip
Specifications:
- colour: blue
- dimensions: 5ft. x 1/2"
- power supply: 12VDC

Packaging / EAN code 54 10329 35928 7
Carton / UPC code
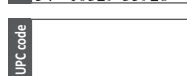
AIR COMPRESSOR (116 psi) WITH GAUGE AND WORK LIGHT
VTAC1

Features:
- the perfect device to inflate car, van and truck tyres, inflatable boats, balls etc.
- strong enough for long-term inflating
- also serves as a light
- low power consumption
- top quality, high-pressure air hose with valve connector, 2 extra nozzles and needle
- car DC plug with ±10ft. cable
Specifications:
- pressure: 116 PSI / 8 bar
- power: 30W
- air hose: 13.78"
- work lamp: 12V / 3W

Packaging / Carton /12 / EAN code 54 10329 35934 8 / UPC code 8 36479 00817 5

METAL DETECTORS

METAL DETECTORS - VELLEMAN

HAND-HELD METAL DETECTOR
CS10MD

The CS10MD is a high-quality hand-held metal detector designed to meet the requirements of the security industry. Typical applications include : body search for offensive weapons, airport and border security, checking parcels and letters for metal objects and searching anywhere that hidden metal needs to be detected.
Specifications:
- power supply: 1 x 9V battery (not included)
- operating frequency: 22kHz
- operating current: < 50mA
- operating voltage: 7V to 9V
- operating temperature: 23°F to 131°F
- weight (net): 9.9oz
- dimensions: 15.6" x 2.7" x 1.3"

1 x 9V

Packaging / EAN code 54 10329 20745 8
Carton /25 / UPC code 8 36479 00392 7

BASIC METAL DETECTOR
CS100

Features:
- hunt for coins, relics, jewellery, gold and silver just about anywhere
- headphones output
- VU-meter
- waterproof search head
- adjustable stem

Specifications:
- power supply: 6 1.5V AA batteries (not incl.)

6 x AA

Packaging	EAN code	54 10329 20387 0
Carton	/5	UPC code 8 36479 00204 3

BASIC METAL DETECTOR
CS100N — **NEW**

Features:
- hunt for coins, relics, jewellery, gold and silver just about anywhere
- headphones output
- VU-meter
- waterproof search head
- adjustable stem

Specifications:
- power supply: 6 1.5V AA batteries (not incl.)
- dimensions:
  - length: 60~91cm (23.6"~35.8")
  - coil: Ø16.5cm (6.5")
- weight: 660g (1.46lbs) (without batteries)

6 x AA

Packaging	EAN code	54 10329 45482 1
Carton		UPC code

METAL DETECTOR WITH AUDIO DISCRIMINATOR
CS150

Features:
- hunt for coins, relics, jewellery, gold and silver just about anywhere
- 3-tone audio discriminator
- headphones output
- VU-meter
- waterproof search head (8" Ø)
- adjustable stem

Specifications:
- power supply: 3 9V-battery (not incl.)
- frequency: 15KHz ±2KHz
- sensitivity: 16cm for a € 2 coin (Ø 25mm, in 'all metal' mode)
- 3-tone audio discrimination:
  - low: 400Hz + 60Hz
  - medium: 700Hz + 105Hz
  - high: 1500Hz + 225Hz
- operating temperature: 0°C ~ 40°C
- dimensions (LxWxH): 36.2~47.6" x 7.9" x 7.3"
- weight: ±2.78lb.

3 x 9V

Packaging	EAN code	54 10329 20388 7
Carton	/4	UPC code 8 36479 00205 0

METAL DETECTOR WITH AUDIO DISCRIMINATOR
CS150N — **NEW**

Features:
- hunt for coins, relics, jewellery, gold and silver just about anywhere
- 3-tone audio discriminator
- headphones output
- VU-meter
- waterproof search head (8" Ø)
- adjustable stem

Specifications:
- power supply: 3 9V-battery (not incl.)
- frequency: 15KHz ±2KHz
- sensitivity: 16cm for a € 2 coin (Ø 25mm, in 'all metal' mode)
- 3-tone audio discrimination:
  - low: 400Hz + 60Hz
  - medium: 700Hz + 105Hz
  - high: 1500Hz + 225Hz
- operating temperature: 32°F ~104°F
- dimensions (LxWxH): 36.2~47.6" x 7.9" x 7.3"
- weight: ±2.78lb.

3 x 9V

Packaging	EAN code	54 10329 45483 8
Carton		UPC code 8 16353 01035 7

METAL DETECTOR
CS130 — **NEW**

Features:
- hunt for coins, jewelry, gold and silver
- comfortable arm support
- headphones output: 0.14" jack
- VU meter for metal type indication
- waterproof search coil (Ø 7.09")
- adjustable tune
- adjustable stem
- adjustable sensitivity
- volume control
- low-battery indicator

Specifications:
- power supply: 1 x 9V battery (6LR61C, not incl.)
- dimensions:
  - length: 30.71"~41.73"
  - coil: Ø7.1"
- weight: 22.58oz

Packaging	EAN code	54 10329 43193 8
Carton		UPC code

LCD METAL DETECTOR
CS200

Features:
- 7.9" waterproof search head
- large LCD display
- target ID
- depth readout
- sensitivity control
- variable discrimination
- variable notch
- 3-tone audio discrimination
- low-battery indicator

Specifications:
- 1/8" headphone jack
- power supply: 2 9V-battery (not included)
- non-motion detection: no
- motion search modes: all metal, discriminate, notch
- sensitivity adjustment: 10 levels
- sensitivity: 15cm
- multitone indication: 3 tones
- signal strength indication: no
- depth indication: 12 segments
- LCD: 75 x 40mm
- pin-pointing (in all-metal mode): no
- manual ground balance: no
- surface elimination: no
- preset saving: no
- volume adjustment: yes
- low battery indication: yes
- searchcoil size: Ø20cm

1 x 9V

Packaging	EAN code	54 10329 20664 2
Carton	/4	UPC code

SOLAR CELLS

SMALL SOLAR CELLS

Specifications:
• panel material: polycrystal

Order Code	solar panel	voltage	current	connections	dimensions
SOL1	polycrystalline	0.5V	400mA	leads	1.8" x 2.8" x 0.2"
SOL2	polycrystalline	0.5V	800mA	leads	2.6" x 3.7" x 0.2"
SOL3	polycrystalline	1V	200mA	leads	1.8" x 3.0" x 0.2"
SOL4	polycrystalline	2V	200mA	leads	3.0" x 3.7" x 0.2"

Packaging | EAN code 54 10329 20658 1
Carton /500 | UPC code 8 36479 00388 0

SOL1

Packaging | EAN code 54 10329 21694 8
Carton /500 | UPC code 8 36479 00389 7

SOL2

Packaging | EAN code 54 10329 21695 5
Carton /500 | UPC code 8 36479 00390 3

SOL3

Packaging | EAN code 54 10329 21696 2
Carton /500 | UPC code 8 36479 00391 0

SOL4

SOLAR CELLS WITH 12V DC OUTPUT

SOLAR CHARGER (12V/1.5W)
SOL5N

Powerful solar power source for 12Vdc battery.
Features:
• built-in protection to prevent current reversal
• waterproof
• amorphous solar cells
• included accessories:
  - 1 x lead wire with cigarette lighter plug
  - 1 x lead (3m) with 2 battery clamps
  - 4 x suction cups (for mounting e.g. on car window)
Specifications:
• power: 1.5W maximum
• voltage output: 12V (± 20%)
• nominal voltage: 17.5V
• current: max.125mA
• dimensions: 13.4" x 4.7" x 0.6"
• weight: 1.0 lbs

Packaging | EAN code 54 10329 30290 0
Carton /12 | UPC code 8 36479 00903 5

COMPACT SOLAR GENERATOR IN BRIEFCASE DESIGN
SOL8

Powerful 13W solar chargers. With adjustable support.
Features:
• applications: caravan, yacht, electric hand tools, DC refrigerator, notebook computer, GPS system
• with blinking charging indicator
• waterproof
• for use with 12V batteries
• with detachable connectors for different applications
• optional controller: SOL4UCN2
• folded solar panels form protective case, which is held together by magnets in the handle.
Specifications:
• type: amorphous silicon
• power: 13W maximum
• working voltage: 17.5V
• working current: 750mA
• dimensions:
  - unfolded: 26" x 20.1" x 1.6"
  - each panel: 17.4" x 11.4" (2 pcs)
• weight: 9.7lbs

Packaging | EAN code 54 10329 30291 7
Carton /5 | UPC code 8 36479 00904 2

CHARGE CONTROLLER

DC VOLTAGE CONTROLLER FOR SOLAR ENERGY
SOL4UCN2

Features:
• small and exquisite design
• professional control IC provides low voltage, overload protection to solar panel and storage battery
• used for lighting, camera, recorder, etc...
• easy installation and operation
• for use with: SOL8, SOL5N, SOL15
Specifications:
• output DC voltage: 3V, 6V, 12V (± 10%)
• output DC current: 4A max.
• optimal input voltage (battery): 13.5V ± 10%
• over-discharge protection voltage: = 15V
• solar panel:
  - working current: <= 5A
  - open voltage: 21 ~ 24V
• suggested type of rechargeable battery: 12V / 10 ~ 40Ah sealed lead acid battery
• working temperature: +14°F ~ +107°F, humidity : <= 80%
• dimensions: 4.7" x 3.1" x 0.9"

Packaging | EAN code 54 10329 30292 4
Carton /50 | UPC code 8 36479 00906 6

CONSUMER SOLAR PRODUCTS

SOLAR-POWERED CHARGER WITH LI-ION BATTERY - 3.7V / 2000mAh
SOL17

A pocket-size solar charger that can serve as a backup power source.
Features:
• easy to install
• perfect for camping or any place without an electrical outlet
• ideal for charging your mobile phone, MP3, mini disc, GPS, etc.
• included plugs:
  - PLUGSP10: Sony Ericsson T28
  - PLUGSP12: Nokia 6110, 8210
  - PLUGSP14: Samsung A288, A300
  - PLUGSP16: Motorola V3
• extra spare plugs (not incl.):
  - PLUGSP10: Sony Ericsson T28, K500
  - PLUGSP11: Sony Ericsson K700i
  - PLUGSP12: Nokia 6110
  - PLUGSP13: Nokia 6101, 6280
  - PLUGSP14: Samsung A300
  - PLUGSP15: Siemens C55
  - PLUGSP16: Motorola V3
Specifications:
• solar panel: polycrystalline 5.5V/100mA/0.55W
• Li-ion battery: 3.7V/2000mAh
• USB charging cable: 5.5V
• max.output current: 500mA
• DC output:
  - 5.5V ± 0.5%/500mA/2.75W
  - 7.5V ± 0.5%/350mA/2.63W
  - 9.5V ± 0.5%/300mA/2.85W
• battery type: Li-ion rechargeable 3.7V/2000mAh
• current consumption (stand-by): < 150µA
• charging times:
  - lithium battery:
    · full sunlight conditions: 12h
    · poor sunlight conditions: 20h
    · USB cable: 3 ~ 4h
• connectors: Sony Ericsson T28, Nokia8210, MotorolaV3, SamsungA288
• LED indication: charging (red) / discharging (green)
• dimensions: 4 23/32" x 2 3/4" x 19/32"
• weight: 100g (3.53 oz) (battery included)

Packaging	Carton	EAN code	UPC code
		54 10329 40535 9	8 36479 00889 2

SOLAR-POWERED LI-ION BATTERY PACK - 1350mAh
SOL18U

A pocket-size solar charger that can serve as a backup power source.
Features:
• easy to install
• perfect for camping or any place without an electrical outlet
• ideal for charging your mobile phone, MP3, mini disc, GPS, etc.
• comes with:
  - USB charging cable
  - PSU
  - plugs:
    · Sony Ericsson
    · Nokia (2x)
    · Samsung
    · mini USB
• spare plugs (not incl.):
  - PLUGSP10: Sony Ericsson T28, K500
  - PLUGSP11: Sony Ericsson K700i
  - PLUGSP12: Nokia 6110
  - PLUGSP13: Nokia 6101, 6280
  - PLUGSP14: Samsung A300
  - PLUGSP15: Siemens C55
  - PLUGSP16: Motorola V3
Specifications:
• solar panel: polycrystalline silicon 5.0V/60mA
• high-capacity built-in polymer battery: 1350mAh
• output voltage: 5.5V
• output current: 360-800mA
• charging times:
  - full sunlight conditions: 12~15h
  - poor sunlight conditions: 20~25h
  - PSU: 3 ~ 5h
• dimensions: 4 23/32" x 2 3/4" x 19/32"
• weight: 2 oz (without connectors or cables)

Packaging	Carton	EAN code	UPC code
			8 36479 00888 5

SOLAR KEY RING WITH WHITE LED LIGHT
ZLLSOL

Features:
• long-lasting ultra-bright LED flashlight
• with keychain
• can be charged during via solar panel
• on/off push button
Specifications:
• number of LEDs: 3
• type solar panel: monocrystalline silicon
• illumination: 200 ± 5 lux
• dimensions:
  - key ring: 2 1/4" x 1 3/8" x 25/64"
  - solar panel: 1 3/8" x 25/32"
• weight: 1.19 Oz. (batt.incl)
• backup battery: Li battery 3.6v - 40mAh (included)

Packaging	Carton	EAN code	UPC code
		54 10329 41240 1	8 36479 00926 4

DYNAMO/SOLAR KEY RING WITH WHITE LED LIGHT
ZLLSOL2

NEW

Features:
• small and convienient flashlight with key chain
• charged by solar power or hand crank power
• slide switch (ON/OFF)

Specifications:
• number of LEDs: 2
• LED lifetime: > 10.000h
• LED brightness (max.): > 6000mcd
• battery type: 20mAh NI-MH (rechargeable)
• operating voltage (max.): 5.6V
• cranking voltage (max.): 6-8V
• operating current (max.): 25mA
• dimensions: 1 31/32" x 1 3/16" x 63/64"
• weight: 0.88 oz

Packaging	Carton	EAN code	UPC code
		54 10329 42147 2	

SOLAR SHED LIGHT
SOL9

This 2-part portable solar-powered lighting consists of a waterproof solar panel, and a compact lamp with bright white LEDs and a built-in 3.6V rechargeable NiMH battery.

Features:
• easy to install
• perfect for camping or any place without an electrical outlet
• add light to any outdoor space including sheds, gazebos and greenhouses
• requires no extra wiring
• comes with mounting kit
• waterproof (solar panel only)
• light with magnet base to stick on metal surfaces
• amorphous silicon solar cells

Specifications:
• 5 powerful white diffuse 10mm LEDs
• on/off switch
• dimensions solar panel: 5 45/64" x 3 47/64"
• width lamp: 8 21/32"
• length wire: 8 ft.
• weight: 19.4 oz
• power supply: buit-in 3.6V/600mA rechargeable NiMH battery
• spare battery: T3005C

Packaging	Carton	EAN code	UPC code
		54 10329 38737 2	8 36479 00905 9

KEY FINDER

KEY FINDER WITH FLASHING LIGHT
KF22

Most useful! The next time you misplace your keys, just whistle and the KF22 will then both beep and flash, allowing you to find your keys!

Specifications:
• power supply: 2 x 1.55V LR41 V392C watch batteries (4 batteries incl.)

Packaging	EAN code
	54 10329 33027 9
Carton /200	UPC code 8 36479 00871 7

HOUSEHOLD ITEMS

BATHTUB WATER LEVEL ALARM
HAM01

Features:
• powerful buzzer
• no on/off switch
• easy to use
• elegant design
• how it works:
  - stick the suction cup on the tile or bath tub
  - adjust the string of the HAM01 to the desired water level
  - when the water level reaches the HAM01, it will make a beeping sound
  - the beeping will continue until the water level goes below the HAM01

Specifications:
• rope length: 14.17"
• power supply: 3 x 1.5V LR44 alkaline battery V13GA (incl.)
• dimensions: 4.02" x 0.98" x 1.77"
• weight: 0.1oz

Packaging	EAN code
	54 10329 39273 4
Carton	UPC code

COMPASSES

ELECTRONIC / DIGITAL COMPASS
COMP1

2 x AAA

Features:
• valuable navigational/aid/safety device for travellers
• perpetual calendar
• alarm + clock
• clock displayed in 12/24h mode
• heading displayed in cardinal points (N, NW, etc.) and in numerals (degrees)
• directional compass arrow
• backlit LCD for use at night
• manual calibration
• extra wide temperature range: 0°C ~ +60°C (32°F ~ 140°F)

Specifications:
• power supply: 2 x 1.5V AAA batteries (LR03C, incl.)

Packaging	Carton /50	EAN code	UPC code
		54 10329 32992 1	

CLOCKS, WATCHES & WEATHER STATIONS

STOPWATCHES

STOPWATCH 1/100 SEC.
SW2

1 x LR44

Features:
- time/calendar display: hours, minutes, seconds, month, date and day of the week
- stopwatch accuracy: 1/100 of a second during the first 30min, 1 second after 24hrs
- time display mode: 12/24hr mode (selectable)
- with alarm and snooze function

Specifications:
- power supply: 1 LR44-battery (incl.)
- weight: 1.4oz

Packaging	EAN code
	54 10329 20767 0
Carton /200	UPC code
	8 36479 00634 8

WALL CLOCKS

WALL CLOCK WITH DATE & TEMPERATURE DISPLAY AND 3 TIME-SIGNAL MODES
WC32TM

Features:
- wood finish (imitation)
- with foldable stand
- 12hr or 24hr time format
- display: hours, year, month, day and temperature
- temperature read-out in °C or °F
- 3 time signal modes:
  - A: no audible time signal
  - B: spoken time signal on hourly basis (only English)
  - C: time signal with melody, 16 or 24 times a day (different melody each hour)

Specifications:
- temperature range: 16°F to 122°F (-9°C to +50°C)
- LCD size: 6.5" x 3.6"
- dimensions: 11.6" x 7.6" x 1.2"
- power supply: 2 1.5V AA-batteries (not incl.)

1. °C/°F 12h/24h

Packaging	EAN code
	54 10329 23273 3
Carton	UPC code

DESK CLOCKS

MULTIFUNCTIONAL CLOCK WITH BACKLIGHT
WT63

Features:
- jumbo liquid crystal display
- temperature read-out in °C or °F
- double countdown function
- 200-year calendar (1900-2099)
- alarm clock and snooze function
- for wall-mounting or desktop display using the supplied stand
- backlight
- volume control

Specifications:
- power supply: 4 x 1.5V AA-batteries (not incl.)
- dimensions: 10.5" x 5.1" x 0.9"

1. EL ZZzz °C/°F

Packaging	EAN code
	71 83626 30086 0
Carton	UPC code

THERMO/HYGROMETER
WS8461

1 x AAA

Features:
- digital thermo- & hygrometer with large LCD
- recording of maximum and minimum temperatures and humidity
- with low battery indication
- temperature display: °C or °F
- table stand or wall mount

Specifications:
- temperature range:
  - indoor: 14°F~122°F
  - outdoor: -58°F~158°F
- hygrometer: 20~90% (indoor humidity only)
- power supply: 1 x 1.5V AAA battery (LR03C, not incl.)
- dimensions: 4 39/64" x 4 7/32" x 25/32"
- weight: 5.82 oz

Packaging	Carton	EAN code	UPC code
		54 10329 38350 3	8 36479 00850 2

CLOCK WITH ALARM, DATE & THERMOMETER
WT302N

2 x AAA

Features:
- large display: middle display shows month/date/day, top display shows clock, bottom display shows temperature
- with birthday alarm
- temperature display in °C or °F
- alarm with snooze function

Specifications:
- power supply: 2 x 1.5V AAA batteries (LR03C, not incl.)
- dimensions: 4 21/64" x 2 21/64" x 1 1/16"
- weight: 3 oz

Packaging	Carton	EAN code	UPC code
		54 10329 38351 0	

CLOCK + ALARM
WT003

EL ZZzz 1 x AAA

Luminescent display

Features:
- clock with alarm / snooze function and blue EL backlight

Specifications:
- power supply: 1 x 1.5V AAA battery LR03C (not incl.)
- dimensions: 4" x 2 1/2" x 7/8"
- weight: 2.12oz

Packaging	Carton /100	EAN code	UPC code
		54 10329 34177 0	

CLOCK WITH ALARM, DATE & TEMPERATURE
WT306

Features:
• triple display: left display shows month/date/day, middle display shows clock, right display shows temperature
• with timer function: countdown from 29:59:59
• temperature: switchable between °C / °F
• stopwatch: 29:59:59 max.
• protection cover also serves as a stand
Specifications:
• dimensions: 3.9" x 2.6" x 0.6"
• power supply: 1 3V CR2025 battery (included)

Packaging		EAN code	
		54 10329 21407 4	
Carton	/100	UPC code	8 36479 00731 4

DIGITAL DESIGN CLOCK with ALARM - DATE - TEMPERATURE
WT4406

Features:
• design clock
• with: temperature, calendar, alarm with snooze/light function
• blue negative backlight LCD
• 12/24h function
• temperature in °C/°F
Specifications:
• power supply: 2 x 1.5V AAA batteries (LR03C, not incl.)
• digits: 11/16" x 5/16"
• dimensions: 3" x 2 7/8" x 1 1/2"

Packaging	EAN code	
	54 10329 35240 0	
Carton	UPC code	

WEATHER STATIONS

WIRELESS POOL AND POND THERMOMETER
WSPT1
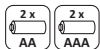
Features:
• measures indoor and outdoor (pool/pond/...) temperature simultaneously
• used for: pool, hot tub, pond, boat, lake ...
• temperature indication: °C/°F
• max. / min. temperature trend indicator
• external sensor:
  - waterproof floating thermometer
  - submersible structure
  - chemical and UV resistant
• contents:
  - 1x: main station
  - 1x: external sensor (WSPT1/TX)
Specifications:
• transmission frequency: 433 MHz
• transmission range: <=100ft
• measuring range: -40°F ~ 140°F ± 0.2°F
• main station:
  - LCD size: 1 39/64" x 1 27/64"
  - power supply: 2x 1.5V AAA (incl.)
  - dimensions: 2 53/64" x 15/16" x 4 49/64"
  - operating temperature: 23°F~122°F
  - weight: 3,5 oz
• floating unit:
  - LCD size: 1 11/32" x 19/32"
  - storage temperature: -58°F ~ 158°F, non-condensing
  - power supply: 2x 1.5V AA (incl.)
  - dimensions: Ø3 15/16" x 6 7/64"
  - weight: 7.2 oz

Packaging	Carton	EAN code		UPC code
		54 10329 41599 0		

SPARE SENSOR FOR WIRELESS POOL AND POND THERMOMETER WSPT1
WSPT1/TX

Features:
• for: WSPT1
Specifications:
• transmission frequency: 433 MHz
• transmission range: <= 30m (<=100ft)
• measuring range: -40°C ~ +60°C (-40°F ~ 140°F) ±0.1°C (0.2°F)
• floating unit:
  - LCD size: 1 11/32" x 19/32"
  - storage temperature: -50°C ~ +70 °C (-58°F ~ 158°F), non-condensing
  - power supply: 2x 1.5V AA (LR6C, incl.)
  - dimensions: Ø 3 15/16" x 6 7/64"
  - weight: 7.23 oz

Packaging	Carton	EAN code		UPC code
		54 10329 41621 8		

TIMERS

24H-TIMER
TIMER7U

Features:
• activates and deactivates electric appliances
• switching time settable per 15 minutes
• 96 programs in a 24h period
Specifications:
• power supply: 110VAC/60Hz
• max. power: 1800W/15A
• dimensions: 4 23/32" x 2 53/64" x 2 61/64"
• weight: 5.36 oz

Packaging	EAN code	
Carton	UPC code	8 36479 00655 3

DIGITAL TIMER - WEEKLY PROGRAMMABLE
TIMER8U

Features:
• activates and deactivates electric appliances
• large LCD display
• memory for max. 10 daily or weekly ON/OFF programs
• minimum time interval: 1 minute
• 12/24 hour mode selectable
• daylight saving time function
Specifications:
• power supply: 110VAC/60Hz
• max. power: 1800W/15A
• dimensions: 4 59/64" x 2 23/64" x 2 61/64"
• weight: 6 oz

Packaging	EAN code	
Carton	UPC code	8 36479 00650 8

COUNTDOWN TIMER WITH ALARM
TIMER10

NEW

Features:
• count down or up: max. 99 min. 59 sec.
• mounting: clip or magnet
• can also be placed upright
Specifications:
• color: white
• dimensions: 3" x 1.8" x 0.6"
• power supply: 1 1.5V LR44 battery (V13GAC, included)
• LCD: 1.5" x 0.7"
• weight: ±1.24oz.

1 x LR44

| Packaging | | EAN code | 54 10329 43292 8 |
| Carton | | UPC code | |

TIMER WITH CLOCK & ALARM
TIMER6

Features:
• chronometer or countdown: 99min 59sec
• mounting: clip, magnet or freestanding
• 24h-clock with alarm function
Specifications:
• colour: silver/black
• dimensions: Ø2 1/2" x 1"
• power supply: 1 x 1.5V AG10 battery V389AC (incl.)

| Packaging | | EAN code | 54 10329 37750 2 |
| Carton | | UPC code | 8 36479 00877 9 |

DIGITAL TALLY COUNTER (5 DIGITS)
CNT2

Features:
• ideal for accurate attendance counts, lap counts, golf scores and tallies
• counts from 0 - 99999 (5 digits)
• compact and lightweight model with finger holder
• big LCD readout
• quick reset
Specifications:
• material: 0.88 oz
• weight: 0.88 oz.
• dimensions: 1 3/16" x 1 37/64"
• power supply: 1 x G-13 button cell (V13GAC, incl.)

| Packaging | | EAN code | 54 10329 40485 7 |
| Carton | | UPC code | |

WALL CLOCK MOVEMENTS

QUARTZ CLOCK MECHANISM
WCM1

Quartz clock mechanism for your self-made clock or as a replacement for a damaged watch. With suspension clip.
Features:
• spare hands: WCM1/SP1
Specifications:
• power supply: 1 1.5V AA-battery (not incl.)
• dimensions: 2.2" x 2.2" x 0.6"

1 x AA

| Packaging | | EAN code | 54 10329 23274 0 |
| Carton | /500 | UPC code | 8 36479 00564 8 |

THERMOMETERS

TRANSPARENT WINDOW THERMOMETER WITH MIN/MAX
TA25

NEW

Features:
• for indoor and outdoor use
• transparent LCD display
• min/max temperature display
• automatic daily reset function of min/max temperatures
• °C/°F selectable
Specifications:
• power supply: 1 x G-13 button cell (V13GAC, incl.)
• dimensions: 3.52" x 3.84" x 0.79"
• weight: 1.76oz
• measurement range: 32°F~122°F

| Packaging | | Carton | | EAN code | 54 10329 43197 6 | UPC code | |

DIGITAL PROBE THERMOMETER
DTP5

NEW

Features:
• for checking temperatures
• with stainless steel probe
• with on/off and hold button
• protective plastic sleeve with stainless steel clip
Specifications:
• measurement range: -58°F~392°F
• resolution: -
• power supply: 1 x LR44 (1.5V) battery (incl.)
• LCD size: 0.91" x 0.31"
• probe length: 2.95"
• total length: 7.28"
• weight: 1.23oz
• spare battery (not incl.): V13GAC

1 x LR44

| Packaging | | EAN code | 54 10329 43195 2 |
| Carton | | UPC code | |

DIGITAL THERMOMETER
PMTEMP1

1 x
LR44

Features:
• easy panel mounting
• large and clear display
• high-grade ABS case
• low battery indication
• on/off switch
• °F/°C switch

Specifications:
• measuring range: -58°F to 158°F
• accuracy: 0.1°F (between -67.82°F and 391.82°C), otherwise 1°F
• display size: 1/2" x 15/32"
• sensor cable: 10 ft
• dimensions: 2 1/16" x 1 1/16" x 35/64"
• panel cut-out: 2" x 1"
• power supply: 1 x LR44 battery (incl.)

Packaging	Carton	EAN code	UPC code
		54 10329 40103 0	

DIGITAL IN/OUT THERMOMETER
TA20

°C / °F   ▮▮   1 x AAA

Features:
• ideal for refrigerator, freezers, in or around the home and workplace
• in/out thermometer
• clearly legible display
• memory for min/max values
• wall-mounted or freestanding device
• simultaneously display in/out
• alert/set button to enter a preset value for in/out temperature
• temperature readout in °C or °F
• weatherproof sensor probe for outdoor temperature

Specifications:
• temperature range
  - indoor: -10°C to +50°C (+14°F to +122°F)
  - outdoor: -50°C to +70°C (-58°F to +158°F)
• resolution: 0.1°C (0.1°F)
• sensor wire length: 1.8m
• digit height: 12mm (0.5")
• display size: 30 x 40mm (1.18" x 1.57")
• unit size: 110 x 70 x 20mm (4.3" x 2.75" x 0.78")
• power supply: 1 x 1.5 V AAA battery (LR3C) (incl.)

Packaging	EAN code
	54 10329 33926 5

Carton	UPC code
/100	

MESSAGE BOARDS

RED MESSAGE BOARD
MML16RU

A ready-to-run moving message medium. The device is easy to use and features 1 color (red). Memory for up to 26 page text or 16 page graphic + 10 page text messages. Each page max. 210 characters (or 6500 characters in total).

Features:
• non-flickering
• 3 fonts
• 32K memory
• 4 pre-programmed graphic symbols (motor, arrow, down and left)
• insert time and date into your message
• 12/24h format
• 26 European characters
• over 15 ways of selecting the leading and closing effect
• display effect: normal or blinking
• 4 scrolling speeds
• brightness control: set by software (25%, 50%, 75%, 100%)
• memory: max. 6500 characters and 16 pages of graphics
• display information: text, symbols and graphics
• 3 different songs can be added randomly in a message
• automatic activation or deactivation of display possible
• multiple messages can be displayed in a predefined sequence
• both the current date and time can be displayed in your message
• designed for indoor use only
• device can be wall-mounted, hung from the ceiling or free standing
• easy programming via remote control (incl.) or via PC with RS-232/USB connection (software incl.)
• system requirements: Windows® 98 or higher

Specifications:
• digits: 7 x 80 dots (13/64")
• pixel pitch: 19/64"
• viewing angle: 160°
• viewing distance: 130 ft.
• display time: 0.5 to 13 secs
• operating temp.: 23°F ~122°F
• operating humidity: 20% to 90%
• power supply:
  - message board: 110VAC ~ 12VDC/2.5A (adapter incl.)
  - remote control: 2 x 1.5V AA batteries LR6C (incl.)
• consumption: max. 30W
• dimensions: 2.29 ft x 3 15/16" x 1 49/64"
• viewable area: 2 ft x 2 11/64"
• weight: 3.5 Lbs

Packaging	Carton	EAN code	UPC code
			8 36479 00941 7

MOBILE SCROLLING MESSAGE DISPLAY WITH REMOTE CONTROL   NEW
MML10M

Features:
• use in: offices, shops, show windows, fairs, clubs, bars, home, car (check local regulations) ...
• sleek design: suitable for desktop or behind window mounting
• rotating brackets: use freestanding, wall or ceiling mounted
• clearly visible bright red LEDs
• 99 pre-programmed messages (English only)
• program custom messages easily, combine messages
• adjust scroll speed and display brightness
• IR remote control (MML10M/RC): works from front or rear

Specifications:
• digits: 7 x 50 dots (350 LEDs)
• characters per line: 10
• pixel pitch: 0.20"
• pixel size: 0.12"
• memory: 470 characters divided over 11 locations
• viewing angle: 360°
• operating temp.: 32°F to 140°F
• power supply:
  - message board: 12 VDC (cigar lighter plug + 11.5ft cable)
  - remote control: 2 x 1.5V AAA batteries LR03C (incl.)
  - optional adaptor: 110VAC - 12VDC car plug output (PSC1310EU, not incl.)
  - car plug fuse: F2A/250V (FF2N)
• dimensions: 17.05" x 3.74" x 2.60"
• weight: 21.87oz

Packaging	Carton	EAN code	UPC code
		54 10329 42735 1	8 16353 01024 1

SPORTS & HEALTH ELECTRONICS

DIGITAL BLOOD PRESSURE WRIST MONITOR
SHE9

Features:
- ideal for daily monitoring of blood pressure
- designed for advanced blood pressure data analysis
- one-touch inflation/deflation control
- LCD displays systolic, diastolic, pulse, data, time zone simultaneously
- quick measurement in only 30 seconds
- emergency valve design for rapid deflation
- automatic shut-off in 3 minutes
- 128 sets of data storage: includes date & time

Specifications:
- wrist: ± 5 5/16"~7 43/64"
- power supply: 2 x AAA/LR03 batteries (incl.)
- dimensions: 3 5/32" x 2 3/4" x 1 19/64"
- weight: 4.93 oz

2 x AAA

Packaging	EAN code	54 10329 38593 4
Carton	UPC code	
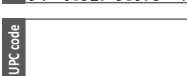
GLASS BATHROOM SCALES - HIGH CAPACITY
VTBAL8

Features:
- weighs in kilograms, pounds and stone pounds
- large capacity (150kg/330lb/24 stone)
- graduation: 4 individual load sensors, one at each corner, ensure the highest accuracy
- easy-to-read 1 1/8" digital LCD
- 1/4" tempered glass platform
- auto zero and auto off system
- easy operation
- overload and low battery indication

Specifications:
- graduation: 0.1kg/0.2lb
- power supply: 2 x CR2032 batteries (incl.)
- dimensions: 11 7/32" x 10 53/64"

2 x CR2032

Packaging	EAN code	54 10329 40066 8
Carton	UPC code	
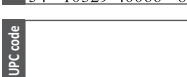
COMPUTER & MULTIMEDIA

VELLEMAN PC ACCESSORIES

KEYBOARDS

NUMERIC USB 2.0 KEYBOARD
PCKB7

Features:
- Plug & Play mini keyboard with USB connector
- especially well-suited for laptops
- self-powered through USB or PS/2
- with LED indication for power ON
- USB-PS/2 adapter included

Specifications:
- operating voltage: 5V
- cable length: 39 1/3 ft
- dimensions: 5 1/8" x 3 25/64" x 25/64"

Packaging	EAN code	54 10329 36943 9
Carton	UPC code	

COMPUTER MOUSES 'VELLEMAN'

COMPUTER MOUSE
PCM1W

Features:
- with scroll button
- very sensitive (650 dpi)
- advanced mechanical technology
- robust microswitch buttons
- ergonomic shape

Specifications:
- connector: PS/2

Packaging	EAN code	69 35965 10071 4
Carton /100	UPC code	

WIRELESS & RECHARGEABLE MINI OPTICAL COMPUTER MOUSE
PCM6

Features:
- 100% plug & play
- USB interface
- 800dpi hardware resolution
- compatible with Windows 98, 2000, ME & XP
- 16 combinations possible for the user code

Specifications:
- range: 9.84ft max.
- power supply: 2 x 1.2V NiMH AAA batteries (incl.)
- rechargeable via USB port
- dimensions:
  - mouse: 3 1/2" x 1 3/4" x 1 1/4"
  - USB receiver: 1 1/4" x 3/4" x 1/2"
- weight:
  - mouse: 1.94oz (without batteries), < 2.82oz (with batteries)
  - USB receiver: < 0.53oz

CE 0359 ①

Packaging	EAN code	54 10329 33006 4
Carton /40	UPC code	

USB HUBS

NOTEBOOK COOLING PAD - 4 x USB 2.0 HUB
PCCP2

Features:
- ideal to cool your notebook or laptop
- 6 adjustable levels
- foldable and easy to carry
- 3 fans: highly effective and fast heat removal
- compatible with any notebook computer
- 4-port high-speed USB 2.0 hub
- power on/off switch

Specifications:
- dimensions: 10 3/4" x 12 53/64" x 1 21/32"
- power supply: 5V (through USB port)
- power consumption: < 0.9W
- noise level: 25dBA
- material: ABS
- weight: 1.1 Lbs

USB

Packaging	EAN code	54 10329 40263 1
Carton	UPC code	

ROTATING NOTEBOOK STAND
PCCP4

Features:
- ideal to cool your notebook or laptop without having to use fans
- foldable
- rotating base
- compatible with any notebook computer

Specifications:
- dimensions: 11 13/16" x 13" x 25/32"
- material: ABS
- weight: 1.1 lbs

Packaging	EAN code	54 10329 40944 9
Carton	UPC code	

USB HUB, USB-B FEMALE TO 4 x FEMALE USB-A PORTS - WITH POWER ADAPTER
PCUSB1U

Features:
• suitable for all USB1.1 & 2.0 devices
• 1 x upstream port & 4 x downstream ports
• extremely compact design
• power supply: USB powered or via external mini adapter
• OCP (over current protection): 500mA
• bus fault detection and recovery
• plug-and-play and hot-pluggable
• 12Mbps full speed USB HUB
• compatible with any device with USB ports
• Windows 98(SE), 2000, ME, XP & Mac
• comes with: extension cable USB-A male to USB-B male (length :12")

Specifications:
• dimensions: 4 9/64" x 1 17/32" x 5/8"
• power supply: 5V DC / 1A (adapter 100~240V 50/60Hz included)

Packaging		EAN code	
Carton	/60	UPC code	

USB 2.0 HUB, 1 x USB-B FEMALE TO 4 x USB-A FEMALE
PCUSB3U

Features:
• 4 USB ports, up to 100mA per port or up to 500mA (with power adapter)
• supports overcurrent protection
• supports high-speed (480Mbps) as well as full-speed (12Mbps) and low-speed (1.5Mbps) transfer rate
• automatic 'plug-and-play' system configuration
• chains up to 127 USB devices
• USB and ACPI compliant
• easy connection to external hard disks, digital camcorders, scanners and multimedia & storage devices
• requirements:
  - Mac or IBM compatible PC
  - USB host card or USB hub device

Specifications:
• interface standard: USB V2.0
• USB connectors: 4 A type female connectors and 1 B female connector
• data transfer rate: high-speed transfer 480Mbps, full speed 12Mb/sec and low speed 1.5Mb/sec.
• a power LED lights when the USB cable is plugged in
• 4 activity LEDS: every downstream USB port has a LED that lights when the port is used
• supports bus-powered and self-powered mode
• cable: 1 USB cable
• material: 0.88 oz

Packaging		EAN code	
Carton		UPC code	

USB 2.0 HUB / 4-PORTS + LIGHT
PCUSB11

Features:
• compatible with all USB1.1 & 2.0 devices
• blue EL light panel is lit while powered
• 1 x upstream port & 4 x downstream port
• extremely compact design
• power supply: USB powered or via external mini adapter (DC 5V max 2A, not incl.)
• compliant with EHCI/UHCI/OHCI
• plug-and-play and hot-pluggable
• max. 480Mb/sec
• compatible with any device with USB ports
• Windows 98(SE), 2000, ME, XP & Mac
• 5 LED indicators to indicate power on, USB port 1-4 connected

Specifications:
• dimensions: 1 3/8" x 3 3/8" x 1/2"
• remark: actual item may vary from depicted image

Packaging		EAN code	54 10329 34940 0
Carton		UPC code	

USB PERIPHERALS

USB LED LIGHT 15 3/4"
PCUSBL2

NEW

LED light with gooseneck.
Features:
• just turn on your notebook or PC to power the LED light
• gently place the gooseneck in the desired position
• durable LED is rated to 10,000 hours of use

Specifications:
• gooseneck with 1 LED
• gooseneck length: 15 3/4"

Packaging		Carton		EAN code	54 10329 36400 7	UPC code	8 16353 01023 4

USB 2.0 LAN INTERFACE
PCUSBLAN

Features:
• plug-and-play (no drivers needed for use on a PC running Windows® XP SP2)
• integrated fast ethernet MAC, physical chip and transceiver in one chip
• supports 10Mb/s and 100Mb/s auto negotiation operation
• compliant to USB 1.0 / 1.1 / 2.0
• supports suspend/resume detection logic
• supports full duplex flow control (IEEE 802.3x)
• Microsoft® Windows Vista compatible

Packaging		EAN code	54 10329 36920 0
Carton		UPC code	

USB AUDIO CONTROLLER
PCUSBSND

Features:
• plug-and-play (no drivers needed for use on a PC running Windows® XP SP2)
• drives 2CH speakers directly & supports 3D positional sound
• uses USB port power, so no additional power supply is needed
• digital Class-B power amplifier inside
• Microsoft® Windows Vista compatible

Packaging		EAN code	54 10329 36918 7
Carton		UPC code	

USB CARD READERS

USB 2.0 MULTICARD READER/WRITER, 56 CARD TYPES + SIM, + LIGHT
PCUSB15

Features:
- 56-in-1 card reader/writer
- USB 2.0 transfer rate up to 480Mbps, backward USB 1.1 compatible (max. 12Mbps)
- power supply: USB powered
- compact & lightweight design
- display for company name or logo with blue EL backlight
- all-in-1 design. the 6 memory card slots support 56 digital memory card types (see below)
  - slot 1: CF type I, CF Type II, CF-Ultra II, Micro Drive, CF Pro, CF Pro II, CF Extreme, CF Extreme III, CF PSP II, CF Super, CF Ultra X
  - slot 2: MS, MS (Magic Gate), MS-Pro (Magic Gate), HS-MS-Pro (Magic Gate), MS-DUO, MS-DUO (Magic Gate), MS-Pro-Duo (Magic Gate), HS-MS-Pro-Duo (Magic Gate), MS-PRO DUO, MS-PRO Duo-PSP, MS-PRO Duo-gaming
  - slot 3: SIM
  - slot 4: SD, SDC,SD-Pro, SD- Pleomax, SD-Pro C, SD-Ultra, SD-Ultra II, SD-Ultra II Plus, SD-Extreme III, SD-Ultra X, SD-Turbo, SD, super, SD-Max, Mini SD, Mini SD-Pro, Mini SD-Pleomax, MMC, MMC-Pleomax, MMC-Pro, HS-MMC, MMC-Plus, MMC-Plus Turbo, RS MMC, RS-MMC Pleomax, RS MMC-Speed, RS MMC-Max, MMC Mobile, MMC Mobile-ProC, MMC Mobile-Pocketnet
  - slot 5: XD, XD(M), XD(H), Smart Media
  - slot 6: T-Flash, Micro SD
- Microsoft® Windows Vista compatible

Specifications:
- supports Windows ME/2000/XP & Mac OS X without device driver
- supports Windows 98Se with USB device driver (incl.)
- dimensions: 2 3/4" x 2 9/16" x 5/8"
- weight: 2.6 oz
- comes with connection cable (3 ft.) & driver (on CD)

EAN code: 54 10329 37637 6

USB 2.0 HUB (3 PORTS) + MULTICARD READER/WRITER, 32 CARD TYPES, + LIGHT
PCUSB16

Features:
- 32-in-1 card reader/writer with built-in USB 2.0 HUB, 3 ports
- USB 2.0 transfer rate up to 480Mbps, backward USB 1.1 compatible (max. 12Mbps)
- power supply: USB powered or external mini power adapter (not included)
- 5 LED indicators: for power ON, card reader access, USB port 1, 2, 3 connected
- data copying between cards without intermediate storage
- compact & lightweight design
- display for company name or logo with blue EL backlight
- all-in-1 design. the 5 memory card slots support 32 digital memory card types (see below)
  - slot 1: CF type I, CF Type II, CF-Ultra II, Micro Drive, CF-pro, CF-pro II, CF Extreme, CF Extreme III, CF-PSP II
  - slot 2: MS, MS (Magic Gate), MS-Pro (Magic Gate), HS-MS-Pro (Magic Gate), MS-Duo, MS-Duo (Magic Gate), MS-Pro-Duo (Magic Gate), HS-MS-Pro-Duo (Magic Gate)
  - slot 3: SD, SD-ultra, SDC, SD-Pro, SD-Ultra II, MMC, HS-MMC,MMC-Pro, MMC Plus, RS-MMC ,Mini SD
  - slot 4: SM, XD ,XD(M)
  - slot 5: T-Flash
- Microsoft® Windows Vista compatible

Specifications:
- supports Windows ME/2000/XP & Mac OS X without device driver
- supports Windows 98Se with USB device driver (incl.)
- power: USB bus powered or 5V DC power supply (not incl.)
- dimensions: 3 11/32" x 2 3/4" x 39/64"
- weight: 2.6 oz
- comes with connection cable (3 ft;) & driver (on CD)

EAN code: 54 10329 37641 3

USB 2.0 CARD READER
PCUSBSD

Features:
- full speed USB v1.1 or v2.0 connectivity
- read and write flash memory cards
- plug-and-play
- hot swappable
- perfect for mobile use
- a convenient and fast data exchange device for MP3, PDA, digital camera, etc.
- USB bus-powered, no external power supply is needed
- LED power indicator
- compatible with: T-Flash, Mini SD, SD, SDC, SDHC, SD Ultra, HS - MMC, MMC, RS-MMC, MMC-B
- Microsoft® Windows Vista compatible

EAN code: 54 10329 36921 7

USB 2.0 CARD READER
PCUSBSDH

NEW

Features:
- supports high speed class 6
- full speed USB v1.1 or v2.0 connectivity
- read and write flash memory cards
- plug-and-play
- hot swappable
- perfect for mobile use
- a convenient and fast data exchange device for MP3, PDA, digital camera, etc.
- USB bus-powered, no external power supply is needed
- LED power indicator
- compatible with: T-Flash, Mini SD, SD, SDC, SDHC, SD Ultra, HS - MMC, MMC, RS-MMC, MMC-B
- Microsoft® Windows Vista compatible

EAN code: 54 10329 42530 2

USB CONVERSION CABLES

USB 2.0 DATALINK CABLE
PCUSB5

Features:
- connects 2 computers through USB

Specifications:
- maximum data transfer rate: over 5Mbps
- single cable solution for network communication
- single cable solution for data communication
- supported by Windows 98/Me/2000/XP
- easy drag&drop file transfer
- standard Windows Explorer user interface
- supports TCP/IP, Netbeui, Ipx/Spx protocols
- Full Ndis driver implementation
- bus-powered device, no external power needed
- compliant with USB 1.1
- Hot PnP for ease of use

Carton: /50   EAN code: 54 10329 31731 7
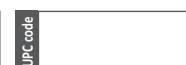
PC FANS WITH LEDS

PC FAN WITH 3 BLUE LEDS
PCBB

Features:
- silent
- cool and illuminate your case at the same time
- add flair and personality to your PC
- easy to install
- shockproof

Specifications:
- dimensions: 3.1" x 3.1" x 1.0"
- weight: 2.5oz
- speed: 3000rpm (avg.)
- air flow: 34ft³/hr
- noise: 30dBA
- power supply: DC 12V
- power consumption: 2.8W

Packaging		EAN code	54 10329 24192 6
Carton	/100	UPC code	

COLD-CATHODE FLUORESCENT LAMP + POWER SUPPLY, 11.8"

Features:
- acrylic protection tube with self-adhesive pads
- housing for power inverter and tube
- can be mounted in a computer: use the optional cable set : FLPSCOMP

Specifications:
- dimensions:
    - tube housing: 12.2" x 0.47" x 0.47"
    - tube: 11.8" x Ø0.16"
    - power supply: 3.3" x 1.0" x 0.7"
- tube voltage: 180 ~ 800V
- average brightness: 15000cd/m²
- average life: 15.000hrs
- power inverter (incl.): input DC 12V / 400mA

Order Code	color
FLPSB2	blue
FLPSBL2	blacklight
FLPSG2	green
FLPSP2	pink
FLPSW2	white
FLPSY2	yellow

Packaging		EAN code	54 10329 24151 3
Carton	/100	UPC code	

FLPSB2

Packaging		EAN code	54 10329 24152 0
Carton	/100	UPC code	

FLPSBL2

Packaging		EAN code	54 10329 24153 7
Carton	/100	UPC code	

FLPSG2

Packaging		EAN code	54 10329 24154 4
Carton	/100	UPC code	

FLPSP2

Packaging		EAN code	54 10329 24155 1
Carton	/100	UPC code	

FLPSW2

Packaging		EAN code	54 10329 24156 8
Carton	/100	UPC code	
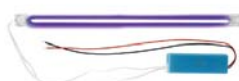
FLPSY2

LED ACCESSORIES

BLUE TUNING LED FOR COMPUTER
PCL1B

Features:
- the tuning LEDs can be mounted almost anywhere on or in the PC case thanks to the self-adhesive strip

Specifications:
- colour: blue
- power supply: 12Vdc
- dimensions: 1 3/4" x 5/8" x 3/8"
- weight: 0.53oz

Packaging		EAN code	54 10329 34298 2
Carton	/100	UPC code	

GREEN TUNING LED FOR COMPUTER
PCL1G

Features:
- the tuning LEDs can be mounted almost anywhere on or in the PC case thanks to the self-adhesive strip

Specifications:
- colour: green
- power supply: 12Vdc
- dimensions: 1 3/4" x 5/8" x 3/8"
- weight: 0.53oz

Packaging		EAN code	54 10329 34300 2
Carton	/100	UPC code	

RED TUNING LED FOR COMPUTER
PCL1R

Features:
- the tuning LEDs have a self-adhesive pad and can be fixed almost anywhere in or on the PC case

Specifications:
- colour: red
- power supply: 12Vdc
- dimensions: 1 3/4" x 5/8" x 3/8"
- weight: 0.53oz

Packaging		EAN code	54 10329 34299 9
Carton	/100	UPC code	

UV TUNING LED FOR COMPUTER
PCL1UV

Features:
- the tuning LEDs have a self-adhesive pad and can be fixed almost anywhere in or on the PC case

Specifications:
- colour: ultraviolet
- power supply: 12Vdc
- dimensions: 1 3/4" x 5/8" x 3/8"
- weight: 0.53oz

Packaging		EAN code	54 10329 34301 9
Carton	/100	UPC code	

MULTIMEDIA MICROPHONES

MULTIMEDIA MICROPHONE
HSM5

Features:
- dual usage: can be worn on clothing or put directly on the computer
- desktop and monitoring kit
- unidirectional electret condenser microphone
- for use with all sound cards

Specifications:
- frequency response: 50-13000Hz
- output impedance: >= 2.2kohm
- sensitivity: -58dB ± 3dB
- plug: 1/8" male
- equivalent noise level: 34dB
- power supply: 1.5-12VDC / 0.8mA

Packaging	EAN code
	54 10329 35890 7

Carton /200	UPC code
	8 36479 00687 4

MULTIMEDIA MICROPHONE
HSM6

Specifications:
- frequency range: 50-16000Hz
- directivity: omnidirectional
- impedance: 1500 ohm
- max. power input: 0.5mA
- sensitivity: -58dB ± 3dB
- S/N ratio: > 60dB @ 1kHz
- plug: 1/8" stereo jack
- cord length: ± 5ft

Packaging	EAN code
	54 10329 35892 1

Carton /50	UPC code
	8 36479 00688 1

MULTIMEDIA HEADPHONES

PROFESSIONAL COMMUNICATION HEADSET + MICROPHONE
HSM2

Features:
- professional design
- for multimedia applications
- with microphone
- with volume control

Specifications:
- headphones:
  - drive unit: 1.2"Ø mylar cone
  - impedance: 32ohm
  - sensitivity: 101dB S.P.L. @ 1kHz ±2%
  - frequency response: 20 - 18000Hz
  - max. power handling: 100mW
  - 1/8" stereo plug with 5ft cable
- microphone:
  - type: Ø 0.4", electret condenser
  - directivity: omnidirectional
  - sensitivity: -68dB ±3dB
  - impedance: 2Kohm
  - frequency response: 20 - 16000Hz
  - max. power handling: 0.5mA
  - 1/8" stereo plug with 5ft cable

Packaging	Carton /100	EAN code	UPC code
		54 10329 35891 4	8 36479 00339 2

MULTIMEDIA STEREO COMMUNICATION HEADPHONES WITH MICROPHONE
HSM7

Specifications:
- sensitivity microphone: 58 + 2dB
- impedance: 32 ohm (1kHz)
- sensitivity: 105dB/mW
- frequency response: 8Hz ~ 22kHz
- cable length: ± 6 1/2ft.
- weight: ±7oz (without cable)

Packaging	Carton /60	EAN code	UPC code
		54 10329 33018 7	

TELEPHONE & MULTIMEDIA HEADSET WITH MICROPHONE
HSMT1

Features:
- mono headphone with Ø.11" drive unit
- with microphone
- RJ-type connection adapter provided for telephone connection (TCU18C)

Specifications:
- headphones:
  - drive unit: 1.1" Ø
  - cable length: 5.6ft
  - max. input power: 30mW
  - impedance: 150ohm
  - 1/8" plug
- microphone:
  - type: electret condenser
  - directivity: omnidirectional
  - 1/8" plug

Packaging	EAN code
	48 92372 00003 2

Carton /60	UPC code
	8 36479 00341 5

COMPUTER CABLES

SERIAL CABLES SUBD9 MALE - SUBD9 FEMALE

SERIAL CABLE SUBD9 MALE - SUBD9 FEMALE / 6.6 FT
CW014

Packaging	EAN code
	54 10329 23737 0

Carton /100	UPC code

USB ADAPTERS

USB ADAPTER - USB A MALE TO PS/2 FEMALE
CW089

This PS/2-USB adapter allows you to use your PS/2 compatible mouse and keyboard as USB compatible devices.
Features:
• compliant with USB HID specifications
• USB powered
• fully compatible with PS/2 keyboard / mouse
• supports USB and PS/2 plug-and-play
• also supports 2 PS/2 keyboards or 2 mice
• supports standard Windows multimedia keys
• supports Windows 98/SE/ME/2000/XP and Mac OS9.0/OSX/Linux
Specifications:
• keyboard adapter
• mini-DIN 6pin female / USB A male

Packaging		EAN code	54 10329 32097 3
Carton	/100	UPC code	

USB 2.0 CABLES

USB 2.0 CABLES - A MALE TO A MALE

USB 2.0 CABLE - A MALE TO A MALE, 6.6 FT
CW092B

High-speed USB cable.
Features:
• USB 2.0: supports up to 480 Mbps for high-speed devices
• supports all USB devices: eg. keyboards, mice, joysticks, printers, scanners, storage devices, modems, video conferencing cameras etc.
• compatible with USB1 and USB1.1

Packaging		EAN code	54 10329 23697 7
Carton		UPC code	
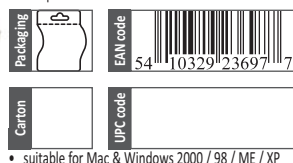
• suitable for Mac & Windows 2000 / 98 / ME / XP

CLEANING TOOLS & PRODUCTS FOR MULTIMEDIA EQUIPMENT

CD/MP3/MD CASSETTE ADAPTER
CP1201

Features:
• play the music on your iPod, CD, MP3, MP4 or other audio player through your car cassette player
• with bass enhancer
• universal 3.5mm jack
Specifications:
• dimensions: 4" x 2 1/2" x 1/2"
• cable length: ± 2.8 ft
• weight: 3.35 oz

Packaging		EAN code	47 16237 01201 8
Carton		UPC code	

LASER LENS CLEANER
CP3101

Features:
• up to 120 RPM
• strong cleaning effect
Specifications:
• dimensions: Ø15/32" x 1/32"
• weight: 2.32 oz

Packaging		EAN code	47 16237 03101 9
Carton		UPC code	

DISC SCRATCH REPAIR KIT
CP3301

Features:
• removes scratches on CDs and DVDs
Specifications:
• contains:
  - 12ml disc repair solution
  - 2 nanofibre cleaning cloths
• dimensions: 1 57/64" x 2 53/64" x 13/64"
• weight: 2.36 oz
• repair solution: 0.4 fl oz

Packaging		EAN code	47 16237 03301 3
Carton		UPC code	

SCREEN CLEANING KIT
CP4103

Features:
• microfibre cloth for efficiently cleaning dust, fingerprints and stains
• use this cloth on flat panel displays, TVs, CDs and DVDs
• the cleaning solution will not blemish the LCD's coating
Specifications:
• cleaning solution: 0.67 fl. oz
• dimensions: 2 13/32" x 4 11/64" x 1 31/32"
• weight: 5 oz

Packaging		EAN code	47 16237 04103 2
Carton		UPC code	

MINI SCREEN CLEANING KIT
CP4106

Microfibre cloth for efficiently cleaning dust, fingerprints and stains. Use this cloth on flat panel displays, TVs, notebooks, CDs and DVDs.
Features:
• the cleaning solution will not blemish the LCD's coating
Specifications:
• cleaning solution: 0.33 fl oz
• dimensions: 3 25/32" x 1 27/64" x 1 3/16"
• weight: 0.95oz

Packaging		EAN code	47 16237 04106 3
Carton		UPC code	

MONITOR CLEANING KIT
CPCD19

Features:
• a standard cleaning solution and an ordinary cloth can damage your LCD panel and can actually damage the components. This kit includes a professional cleaning solution and a microfibre cloth which prevent the panel from getting scratched
• applications: TFT LCD, PDA, cameras, sunglasses, cellular phone
• remove dust and smudges without streaks,stains or scratches
• contents:
  - anti-static brush removes dust and dirt effectively
  - drip-free cleaning solution won't hurt LCD coating
  - special micro fiber material is capable to prevent panel scratch and enhance performance of cleaning function
  - remove dust and fingerprint without streak, drip and stain
  - one side of the cleaner is made by super-fine brush to clean the dust from keyboard. The other side is micro fiber cleaning cloth to clean LCD screen, CRT monitor and CD/DVD disc

Packaging		EAN code	47 16237 85428 1
Carton		UPC code	

ACCESSORIES FOR IPOD® AND MP3

SPEAKER SET FOR iPOD & MP3 PLAYERS
PCSP802

Features:
- lightweight design
- works with portable digital music player, DVD player and laptop
- slide-out holder to securely hold your portable player
- can be used with any portable audio device
- foldable design
- switch: OFF-MIN-MAX volume control

Specifications:
- max. output power: 2W/channel (4W rms)
- frequency response: 50Hz-15kHz
- impedance: 8 ohms
- speaker unit: 1.42", full range
- output connection: 3.5mm stereo plug
- power supply: 4 x 1.5V AAA (not incl.) or power adapter 6VDC (not incl.)
- dimensions:
  - open: 6.3" x 2.68" x 2.68"
  - closed: 2.68" x 2.68" x 2.68"
- weight: 0.37lbs.

Packaging		EAN code	54 10329 35896 9
Carton		UPC code	

3-IN-1 USB CHARGER SET FOR iPOD
PCMP1U

Features:
- 3-in-1 combination charger suitable for Apple iPods with dock connector. Includes a USB charger for computer or laptop, an adapter for a 12V car cigarette lighter and a wall socket adapter
- the car adapter allows plugging into a 12V car cigarette lighter adapter to keep your iPod powered when you are on the road. Enhanced internal circuitry to manage charging status, prevent over and undercharging and protect against voltage backflow to the car's electrical system. Integrated LED power indicator with electrical fuse to prevent damage to your iPod, battery or car's electrical system
- AC power adapter allows charging at home, work on when travelling
- compatible with iPod 4G, iPod mini, iPod photo, iPod U2 special edition and iPod shuffle

Specifications:
- contents:
  - car charger:
    - input voltage: 12-24VDC
    - output voltage: 5VDC (max. 1A)
    - fuse: 2A/110V
  - travel charger:
    - input voltage: 110VAC
    - output votage: 5-12VDC (max.1 A)
  - USB charger with retractable cable (± 3ft)

Packaging		EAN code	
Carton		UPC code	8 36479 00897 7

USB CAR ADAPTOR FOR iPOD
PCMP10

Features:
- for use with: PCMP13 or original USB cable

Specifications:
- input voltage: 12-24VDC
- output voltage: 5VDC / 1A
- fuse: 2A/250V (FF2N)

Packaging		EAN code	54 10329 37547 8
Carton		UPC code	

CHARGER FOR iPOD®
PCMP11U

Specifications:
- input voltage: 90-240VAC - 50/60Hz, 500mA
- output voltage: 5V, 500mA

Packaging		EAN code	
Carton		UPC code	

USB POWER PACK FOR MOBILE USE - 5V/700mAh Li-Ion
PCMP15

Power pack for mobile use. Powers or recharges a wide variety of mobile devices. Just plug it in and play! Recharge and use the power pack as a mobile power source through the USB port.

Features:
- powers or charges: iPods (including iPod Video), cell phones, PSP and other digital devices
- rechargeable battery: can be charged up to 1 000 times
- your mobile phone can be used while charging
- supports popular brand digital devices
- white LED flashlight
- LED indicator
- elegant and slim design
- built-in USB port (5V / max. 700mAh)
- short-circuit and overcharge protection
- supported devices:
  - camcorders: max. 5V / 700mAh
  - cell phones: Motorola, Nokia, Sony-Ericcson, NEC
  - digital cameras: max. 5V / 700mAh
  - games: max. 5V / 700mAh
  - iPod: Shuffle, Nano, Mini, Video
  - other devices: MP3/MP4 devices, PDA, PSP, PMP
- comes with cable + 5 phone plugs (Sony-Ericsson K750i, Nokia 6110, Nokia 6280, Samsung, Motorola V3 (mini USB))
- charging requirements (not included): USB cable (CW092A, CW092B, CW092C, CW073) and free USB port on PC or 230VAC-5VDC power adaptor (PSSMV14)

Specifications:
- battery type: Li-Ion (700mAh)
- charging time: ± 3h
- dimensions: 3.54" x 1.57" x 0.31"
- weight: 1.23oz

Packaging		EAN code	54 10329 39069 3
Carton		UPC code	

Y-CABLE - DOCK CONNECTOR TO USB 2.0 + FIREWIRE FOR iPOD
PCMP12

The Dock connector to FireWire and USB 2.0 for iPod offers Windows® users up to 480 Mbps data transfer for quickly loading an entire Music Library onto music players. Connect the FireWire cable to the power adapter for your iPod to charge while syncing.
Compatible with only the Dock connector on your iPod.

Specifications:
- cable length: ± 1.2m
- weight: 3.53oz

Packaging		EAN code	54 10329 37064 0
Carton		UPC code	

USB 2.0 CABLE FOR iPOD, iPHONE & iPAD
PCMP13

The Dock connector to USB 2.0 cable offers up to 480 Mbps data transfer for quickly loading an entire Music Library on your iPod, iPhone & IPad. Connect the USB cable up to the power adapter to charge while syncing.
Compatible with all iPod, iPhone & IPad series.
Note to Mac users: USB 2.0 requires Mac V10.3.4 or later for compatibility.
Features:
- iPhone, iPod and iPad are trademarks of Apple Inc., registered in the U.S. and other countries.
Specifications:
- USB 2.0 compatible
- cable length: ±3.28ft
- weight: 0.6oz

Packaging		EAN code	54 10329 37066 4
Carton		UPC code	

STEREO EARPHONES FOR DIGITAL MUSIC PLAYERS
PCMP2

Features:
- stereo earphones for use with iPod and other digital music players (player not included)
- perfectly fit almost any ear shape for pleasant comfort
Specifications:
- impedance: 16 ohms
- sensitivity: 105dB SPL/mW
- frequency response: 8Hz - 27kHz
- plug: 3.5mm stereo jack
- cable length: ±3.28ft

3.5mm

Packaging		EAN code	54 10329 37016 9
Carton		UPC code	

ALUMINIUM CASE FOR iPOD NANO
PCMP7

Features:
- maximum protection for your iPod
- made of high-quality aluminium
- non-scratch, anti-shake and easy to use
Specifications:
- color: black
- weight: 0.7 oz

Packaging		EAN code	54 10329 37057 2
Carton		UPC code	

LEATHER CASE FOR iPOD NANO
PCMP5

This leather case is a trendy way to protect your iPod. Fits perfectly around your belt or arm.
Features:
- leather case for use with iPod nano
Specifications:
- color: black
- weight: 1.23 oz

Packaging		EAN code	54 10329 37054 1
Carton		UPC code	

iPOD / MP3 SOUND BOX
PCMP14U

Features:
- iPod/MP3 stereo speaker system for an optimal sound
- with bass and tweeter boost circuit
- play and charge the iPod at the same time
- comes with 4 adapters for use with different iPod models
Specifications:
- power: 2 x 5W
- speakers: 2 x 2"
- impedance: 8 ohms
- frequency response: 80Hz - 18kHz
- distortion: 1%
- S/N ratio: 65dB
- input sensitivity: 500mV
- power supply: 9VDC/1A adapter (incl.) or 6 x 1.5V AA batteries LR6C (not incl.)
- dimensions: 2 43/64" x 14 1/64"
- weight: 53.6oz
- operating temperature: -4°F - 113 °F

Packaging		EAN code	
Carton		UPC code	

ACCESSORIES FOR PORTABLE PHONES

GSM CARD READER/WRITER

SIM CARD READER/WRITER
GSCRU

Features:
- hardware requirements:
  - 486 processor or higher (Pentium 133, 16MB RAM recommended)
  - 4MB Ram, 10MB free harddisk space
  - Windows 2000/XP/ME/98SE
- comes with software (English only) on CD Rom, SIM Card adapter & card reader with USB cable

Packaging		EAN code	54 10329 31777 5
Carton		UPC code	8 36479 00830 4

GSM CARD READER
GSCRU1

Features:
- explore all the information from your GSM SIM card (2G and 3G cards)
- read phonebook entries from SIM card, edit, delete and backup to your PC
- compose SMS messages on your PC and save them to your SIM card, ready to send from your phone
- save and backup your received messages for future use and reference
- hardware requirements:
  - 486 processor or higher (Pentium 133, 16MB RAM recommended)
  - 4MB RAM, 10MB free harddisk space
  - Windows 2000/XP/ME/98SE
- comes with software (English only) on CD-ROM, SIM card reader / writer and manual
Specifications:
- USB connection

Packaging		EAN code	54 10329 36904 0
Carton		UPC code	

CHRISTMAS LIGHTING

4 RECHARGEABLE CANDLE LED LIGHTS WITH PLASTIC CUPS
XMCL2U

Features:
- rechargeable LED candle lights
- create the same atmosphere as real candle lights
- comes with frosted plastic holder
- with on/off switch

Specifications:
- power supply: 7.5VDC / 350mA
- dimensions:
  - cup: Ø1.77" x 3.94"
  - candle: Ø1.50 x 2.17"

Packaging	Carton	EAN code	UPC code

CLIMBING SANTA DOLL MOVING ON A ROPE
XMSC4

Features:
- sound-controlled
- action: going up and down

Specifications:
- rope length: 23 5/8"
- dimensions: 13" x 4" x 3 1/2"
- weight: 0.8 lbs.
- power supply: 3 x 1.5V AA batteries LR6C (not incl.)

Packaging	Carton	EAN code	UPC code
		54 10329 36066 5	8 36479 00908 0

FLICKERING LED CANDLE LIGHT W/ GLASS HOLDER
XMCL1

2 x AAA

Features:
- creates the same atmosphere as a real candle
- comes with frosted glass holder
- with on/off switch

Specifications:
- power supply: 2 x LR03C (not incl.)
- dimensions: Ø2.36" x 5.31"
- weight: 11.82oz

Packaging	Carton	EAN code	UPC code
	/48	54 10329 35173 1	

2 LED TEALIGHTS
XMCL3

1 x CR2032

Features:
- nice candle light effect without smoke, flames or danger
- indoor use only

Specifications:
- power supply: 1 x lithium 2032 3.0V-230mAh batteries (CR2032C) (incl.)
- dimensions: Ø1.42" x 1.18"
- weight: 0.42oz

Packaging	Carton	EAN code	UPC code
		54 10329 36022 1	8 36479 00870 0

LED TORCHES

LED LAMPS : New generation of lamps : miniature models, do not heat up, better shock resistance, ultrabright light, life 100,000hrs, batteries consume 50 to 100 times less power

LED TORCHES

ALUMINIUM HAND TORCH WITH WHITE LED 1W
ZL1113A

1W-LED

Features:
- hand torch with LED 1W
- new LED technology: 10 times brighter than standard LEDs
- long-life LED: 100.000hrs
- water-resistant
- autonomy:
  - battery: 4 hrs

Specifications:
- power supply: 3 x 1.5V AAA batteries (incl.)
- bulb type:
  - LED: 1W LED
- output power: 25~30 lumen
- dimensions: Ø1.6" x 5.20"

Packaging		EAN code	54 10329 33336 2
Carton	/36	UPC code	

3-IN-1 FLASH LIGHT (3 LEDs / HALOGEN / CCFL)
ZLFX8803

Features:
- ultra bright LED light
- long-life LEDs: 100000hrs
- high-intensity CCFL tube: 15000hrs
- a xenon lamp is 200% brighter than standard bulbs
- focus control for xenon lamp
- can be used as area light or flash light
- ribbed rubber handle
- handy carrying strap
- water-resistant
- life:
  - xenon lamp: 3.5hrs
  - CCFL: 7hrs
  - LED: 80hrs
- 3 operating modes: Xenon on / 3 LEDs on / CCFL on

Specifications:
- power supply: 4 1.5V AA batteries (incl.)
- bulb type:
  - LED: 3 white LED Ø 0.2"
  - halogen: 4.7V 0.4A xenon
  - CCFL: CCFL
- dimensions: Ø 2.8" x 7.1"

3 led   Xenon

CCFL

Packaging		EAN code	54 10329 21743 3
Carton	/48	UPC code	8 36479 00735 2

TORCH 9 LEDs - ALUMINIUM
ZL1022L

Features:
- durable anodized aluminium body finished
- attractive design
- 9 high-intensity superbright white LEDs
- autonomy: ±5h (alkaline batteries)
- shock-resistant
- with handstrap
- with on/off switch on back

Specifications:
- LED lifetime: 100.000 h
- power supply: 3 x AAA 1.5V batteries LR03C (not incl.)
- dimensions: 3.74" x 1.10"
- weight: 3.53oz

3 x AAA

Packaging		EAN code	54 10329 35952 2
Carton		UPC code	

LED TORCHES - GENERIC LEDS

TORCH WITH 5 WHITE LEDS
ZL303W5

Features:
- lamp with 5 white LEDs
- long-life LEDs: 80.000 hours
- silver aluminum housing
- water- and shockproof

Specifications:
- power supply: 2 1.5V AA batteries (incl.)
- lamp type: 5 white LED Ø0.2"
- dimensions: 0.8" x 6.0"

2 x AA

Packaging		EAN code	54 10329 31952 6
Carton	/60	UPC code	
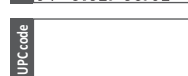
COUNTER DISPLAY WITH 12 PCS OF 9 BRIGHT WHITE LEDS TORCH
ZLLPROM2D

NEW

Features:
- number of torches: 12
- each torch:
  - 9 bright white LEDs
  - high-strength aluminum case

Specifications:
- each torch:
  - brightness per LED: 11.000 ~ 13.000 mcd
  - LED lifetime: 100 000h
  - power supply: 3 x 1.5V AAA (LR03C) batteries, not incl.
  - dimensions: Ø1 11/32" x 4 13/32"
  - weight: 2.43 oz
- total weight: ± 1.98 lbs

LED   3 x AAA

Packaging		EAN code	54 10329 42623 1
Carton		UPC code	

COUNTER DISPLAY WITH 12 x LED TORCH
ZLLPROM3D

NEW

Features:
- number of torches: 12
- each torch:
  - 24 bright white LEDs
  - soft-grip housing
  - strong magnet on reverse for attaching to metal surfaces
  - swivel hook for hanging

Specifications:
- brightness per LED: 12.000 mcd
- LED lifetime: 100 000h
- power supply (each torch): 3 x 1.5V AA (LR6) batteries, not incl.
- dimensions torch: 8 5/32" x 2 21/64" x 1 7/64"
- dimensions display:
- weight torch: 4.33 oz
- weight full display: ± 3.96 lbs

LED   3 x AA

Packaging		EAN code	54 10329 42733 7
Carton		UPC code	

COUNTER DISPLAY WITH 12 x LED TORCH (24 + 4 LEDs)
ZLLPROM4D

NEW

Features:
- number of torches: 12
- each torch:
  - 24 + 4 bright white LEDs
  - soft-grip housing
  - strong magnet on reverse for attaching to metal surfaces
  - swivel hook for hanging

Specifications:
- brightness per LED: 13.000 mcd
- LED lifetime: 100 000h
- power supply (each torch): 3 x 1.5V AAA LR03 batteries (not incl.)
- dimensions torch: 55 x 91 x 35 mm
- dimensions display: 31 x 18 x 10 cm
- weight torch: 4.33 oz
- weight full display: ±1060g

Packaging	EAN code	54 10329 44821 9
Carton	UPC code	

LED | 3 x AAA

TORCH WITH 6 WHITE LEDS + XENON
ZL302W6

Features:
- torch with 6 white LEDs + xenon bulb
- long-life LEDs: 80.000 hours
- anodised aluminium housing
- adjustable focus (xenon)
- battery life: (depends on battery quality)
  - 3 LEDs: 160hrs
  - 6 LEDs: 100hrs
  - xenon: 5hrs
- accesories: wrist strap

Specifications:
- luminous intensity (xenon bulb): 50 ±25% lm
- power supply: 3 x 1.5V C batteries (incl.)
- bulb type:
  - xenon bulb 1.5V - 0.75A (LAMP302W6)
  - 6 x Ø5mm white LEDs
- dimensions: Ø1.73" x 9"
- weight: 15.87oz

3 x C

Packaging	EAN code	54 10329 33162 7
Carton /24	UPC code	

3 LEDs   6 LEDs   Xenon

MINI TORCH WITH 3 WHITE LEDS
ZL101

Features:
- aluminum LED hand torch with 3 LEDs
- long-life LED: 80.000 hours
- water- and shockproof

Specifications:
- power supply: 1 1.5V AAA battery (not incl.)
- lamp type: 3 Ø0.2" white LED
- dimensions: Ø0.7"/0.5" x 4.0"

Packaging	EAN code	54 10329 31923 6
Carton /120	UPC code	

1 x AAA

ALUMINIUM HAND TORCH WITH WHITE LUXEON LED 1W
ZL1113L

Features:
- hand torch with Luxeon LED 1W
- new LED technology: 10 times brighter then standard LEDs
- anodized aluminium body finished
- long-life LED: 100.000 hrs
- water-resistant
- O-ring sealed
- autonomy: battery 9hrs (alkaline)

Specifications:
- power supply: 3 x 1.5V AAA batteries (not incl.)
- bulb type: LED 1W Luxeon
- output power: 25 lumen
- dimensions: Ø11.82" x 54.37"

1W-LED

3 x AAA

Packaging	EAN code	54 10329 35097 0
Carton /60	UPC code	

LED POWER TORCH - 16 LEDs - WITH 4 x D-CELL
ZLL4D

Features:
- 16 high-power LEDs
- 3 times brighter than regular LEDs
- weather resistant
- soft-grip handle
- low power consumption

Specifications:
- power supply: 4 x 1.5V D-cell batteries (R20C, incl.) or 1 x 6V-block (4R25C, not incl.)
- LED lifetime: 100 000h
- dimensions: 7 3/32" x 4 23/32" x 5 1/8"

4 x D

Packaging	EAN code	54 10329 39576 6
Carton	UPC code	

LED TORCH - 1W - ALUMINIUM HOUSING
ZLL113/1W

Features:
- long-life LED: lasts up to 100 000h
- Luxeon LED is 10x brighter than regular LED
- optimized collimator focuses for a deeper and brighter beam
- machined aluminium construction
- includes lanyard

Specifications:
- light output: high-power LUXEON 1W LED
- power supply: 3 x 1.5V AAA batteries LR03C (incl.)
- dimensions: Ø 1 3/16" x 4 23/32"
- weight: 0.36oz

1W

3 x AAA

Packaging	EAN code	54 10329 38895 9
Carton	UPC code	

LED TORCH - 3W - ALUMINIUM HOUSING
ZLL113/3W

Features:
• long-life LED: lasts up to 100 000h
• Luxeon LED is 10x brighter than a regular LED
• optimized collimator focuses for a deeper and brighter beam
• machined aluminium construction
• includes lanyard
• waterproof
• light time: ± 20h (depending on batteries)

Specifications:
• light source: high-power LUXEON Star 3W LED
• light output: 130lm
• power supply: 2 x 1.5V C batteries LR14C (incl.)
• dimensions: Ø 1 17/64" x 7 3/32"
• weight: 11.6 oz

2 x C

Packaging	EAN code	54 10329 38901 7
Carton	UPC code	

3 IN 1 HAND TORCH
EFL03

Features:
• bright LED light
• xenon lamp (2x brighter than standard bulbs)
• battery power indicator
• can be used as area light or hand-held torch
• antiskid rubber handle
• handy carrying strap
• 3 operating modes: 3 LEDs on / 6 LEDs on / xenon on

Specifications:
• bulb type:
   - LED: 9 x white LED (Ø 5mm)
   - halogen: 3.6V 0.5A xenon
• power supply: 4 x AAA batteries (incl.)

4 x AAA

Packaging	EAN code	54 10329 38859 1
Carton	UPC code	

LED TORCHES - CREE LEDS

CREE

5 WATT CREE-LED ALUMINIUM POWER TORCH - 180lm
ZLL505

NEW

Features:
• compact hand torch with super bright white 5W CREE led
• long-life LED
• aircraft-grade anodized aluminum body with silicon sleeve
• low power consumption
• weatherproof
• O-ring sealed
• with carrying strap

Specifications:
• brightness CREE LED: up to 180 lumens
• LED lifetime: > 100.000h
• autonomy: ±4 hours (depending on battery type)
• dimensions: Ø4.4 x 18.2 cm
• power supply: 2 x 1.5V C batteries (LR14C), not incl.
• weight: 185g

5W   LED   2 x C

Packaging	EAN code	54 10329 42167 0
Carton	UPC code	

DYNAMO LED LAMPS

DYNAMO LED FLASHLIGHT / CHARGER FOR MOBILE PHONE / ALARM / FAKE MONEY DETECTOR
ZL388/5

Features:
• LED flashlight, mobile phone charger, flashing warning light with alarm and counterfeit money detector
• rotating the crank for 1 minute will give up to 30 minutes of continuous light
• 5VDC output

Specifications:
• power supply: 3.6V rechargeable Li-ion button cell
• recommended rotation speed for recharging: 120 RPM, 1W output power

Packaging	EAN code	54 10329 38527 9
Carton	UPC code	

DYNAMO LED FLASHLIGHT - 3 LEDs - WEATHERPROOF
ZL388/6

Features:
• ultracompact flashlight with 3 LEDs
• crancking for 1 minute will give up to 30 minutes of continuous light
• weatherproof

Specifications:
• recommended rotation speed for recharging: 120 RPM
• dimensions: 3 3/16" x 1 59/64" x 1 1/2"
• weight: 3.45 oz

Packaging	EAN code	54 10329 38530 9
Carton	UPC code	

DYNAMO FLASHLIGHT - 5 LEDs - 3 IN 1+ USB output
ZL388/3

USB

Features:
• LED flashlight, mobile phone charger, USB charger, compass
• rotating the crank for 1 minute will give up to 30 minutes of continuous light
• with USB output
• cables for USB and telephone charger included

Specifications:
• power supply: 3.6V rechargeable Li-ion button cell
• recommended rotation speed for recharging: 120 RPM, 1W output power

Packaging	EAN code	54 10329 38568 2
Carton	UPC code	

POWERFUL BICYCLE DYNAMO LED LIGHT WITH HOLDER - 3 LEDs
ZL388/7

Features:
- powerful dynamo LED flashlight with 3 LEDs
- soft-touch surface
- with holder for easy mounting on bicycle
- cranking for 1 minute will give up to 40 minutes of continuous light
- weatherproof

Specifications:
- recommended rotation speed for recharging: 120 RPM
- dimensions: 2 3/4" x 1 21/32" x 1 21/32"
- weight: 2.64 oz

Packaging	EAN code	54 10329 38533 0
Carton	UPC code	

LED ILLUMINATION

SOLAR LIGHT with stainless steel pole - 24pcs in Display
CSOL04D

NEW

Features:
- stainless steel pole solar light
- trendy design
- ideal for your garden and around patio
- recharges by sunlight via solar panel
- light turns on automatically in dark environment
- no wiring, fast & easy installation
- on/off switch
- water & corrosion resistant

Specifications:
- solar panel: 1x 2V / 40mA
- light source: 1x super bright LED 10,000~12,000 mCd
- light colour: white
- rechargeable battery: 1x NiMh button cell 40H
- operating time: 6~8h when fully charged
- dimensions:
  - stainless steel pole: Ø3/4" x 6 19/64"
  - ground pin: 4 23/32"
  - total: Ø2 11/64" x 14 9/16"
- weight: 2.5 Oz.

Packaging	EAN code	54 10329 44397 9
Carton	UPC code	
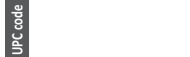
SOLAR-POWERED SUN JAR
CSOL08

NEW

Features:
- brighten up and enjoy your summer nights with this solar sun jar
- the flickering yellow candle light effect creates a warm atmosphere
- rechargeable: battery is charged by sunlight during the day and provides enough power to let the lantern glow for hours after sunset
- ideal for summer parties, weddings, family barbeques, or for a quiet, relaxing evening in the garden
- with on/off switch

Specifications:
- colour of the jar: misty white
- light source: 1 yellow LED (flickering)
- operating time: 3 ~ 6h
- battery: rechargeable NiMH type 2/3 AA (600mAh/1.2V)
- dimensions: Ø90 x 115mm
- weight: 495g

Packaging	EAN code	54 10329 44813 4
Carton	UPC code	

MULTIFUNCTION LED CAMPING LANTERN AND FLASHLIGHT
EFLC2

NEW

Works as both a flashlight and a lantern. Great for reading at night.

Used as a lantern, 6 LED bulbs with a frosted globe create a comfortable light.

Used as a flashlight, 3 LED bulbs are bright enough to light your way on dark trails.

With bungee strap for hanging inside a tent or on a tree branch.

Features:
- settings: 3 white LEDs / 6 white LEDs / 1 yellow LED / off
- bungee strap

Specifications:
- material: ABS
- LED brightness:
  - white LED: 1300 mcd
  - yellow LED: 700 mcd
- autonomy (depending on type of battery used):
  - 3 LED flashlight: up to 40 hrs.
  - 6 LED lantern: up to 35 hrs
  - 1 yellow LED: up to 40 hrs.
- power supply: 3 x 1.5V AA battery (not incl.)
- weight: 7.33 Oz.

Packaging	EAN code	54 10329 43711 4
Carton	UPC code	

DYNAMO LED LANTERN WITH RADIO
EDL4

Features:
- 4 functions:
  - LED camping lantern:
    - 3 modes: 6 white LEDs in power-saving mode, 6 white LEDs in normal mode, 6 red flashing LEDs
  - FM radio
  - charger for mobile phone, MP3/MP4 player (3.5mm jack to USB cable incl.)
  - siren

Specifications:
- power supply: 3.6V rechargeable NiMH-batteries, 300mAh
- recommended rotation speed for recharging: 120 RPM, 1W output power
- dimensions: 10 1/2" x 3 5/16" x 4"
- weight: 7 oz

Packaging	EAN code	54 10329 39655 8
Carton	UPC code	8 36479 00860 1

ALUMINIUM ADJUSTABLE GOOSENECK CLIPLIGHT - LED 1W
ZL2711

Features:
- momentary or constant illumination
- collimator provides more focused beam distribution
- DC-DC regulator maintains maximum light output throughout the entire battery life
- clip attachment
- battery life: 2.5hrs

Specifications:
- power supply: 1 x 123 lithium battery 3V (incl.)
- bulb type: 1W Luxeon
- dimensions: 1.10" x 1.10" x 3.35" (body) / 12.60" (gooseneck length)
- weight: 3.8oz (with battery)

1W-LED

Packaging	EAN code	54 10329 32976 1
Carton /72	UPC code	

MINI LED LAMP WITH KEYRING
ZLAL08W

Features:
• LED lamp on a key hanger, with aluminum housing and rubber coating
• long-life LED: 100.000hrs
• small & light
• water-resistant
• burn time: 12hrs (alkaline)
Specifications:
• power supply: 3 x V392C button cell (incl.)
• bulb type: Ø 0.2" white LED
• dimensions: Ø 0.7" x 1.9"

Packaging	EAN code	54 10329 20608 6
Carton /144	UPC code	

SELF-ADHESIVE LED LIGHT
ZLL403SS

Features:
• adhesive back ensures fixation on many surfaces
• ± 100h battery lifetime (using alcaline batteries)
• simply push to switch on or off
• twist-lock for easy battery replacement
Specifications:
• colour: silver
• function: on/off
• power supply: 3 x AAA batteries (LR03C), not incl.
• dimensions: Ø2 3/4" x 7/8"
• weight: 0.88oz

3 x AAA

Packaging	EAN code	54 10329 37512 6
Carton	UPC code	

ALUMINUM LED FLASH LIGHT WITH MAGNIFYING LENS
ZLA201W

Features:
• aluminum LED keychain with "magnifier lens"
• water-resistant
• battery life: 12 hrs
Specifications:
• power supply: 3 V357C button cell batteries (incl.)
• bulb type: Ø 0.2"white LED
• dimensions: Ø 1.0" x 3.9"
• weight: 2.1oz (with batteries)

Packaging	EAN code	54 10329 21963 5
Carton /72	UPC code	8 36479 00733 8

LED LIGHT WITH MAGNETIC CONTACT - 3 pcs
ZLLSETN

Set of 3 LED lamps with magnetic contacts.
Features:
• compact design
• adhesive base allows fixation on many surfaces
• bright light output and low consumption
• switches automatically on/off through the magnetic reed switch
• comes with 3 magnetic plates
Specifications:
• power supply (per lamp): 3 x LR44 button cell (V13GAC, incl.)
• dimensions: 2 23/64" x 1 3/16" x 25/32"
• weight: 0.7 oz

Packaging	EAN code	54 10329 40903 6
Carton	UPC code	

ALUMINIUM KEYCHAIN WITH WHITE LED LIGHT
ZLL9606

NEW

Specifications:
• power supply: 4 x V392AC (incl.)
• dimensions: 2.17" x 0.71" x 0.28"
• weight: 0.71oz

Packaging	EAN code	54 10329 43293 5
Carton	UPC code	

LED BIKE LIGHTS

BIKE LED LIGHT SET
ZLBL5/3

Features:
• can be used on almost any bike
• headlight:
  - 5 white LEDs
  - modes: steady and flashing
  - quick release bracket, fits all bikes
  - 360° side visibility
• taillight:
  - 5 red LEDs
  - modes: steady on and 6 flashing patterns
  - with belt clip
• up to 100 hours run time (depending on usage and batteries)
Specifications:
• taillight: 2 x 1.5V AAA batteries (not incl.)
• headlight: 4 x 1.5V AAA batteries (not incl.)

Packaging	EAN code	54 10329 36654 4
Carton	UPC code	

LED HEADLAMPS

HEADLAMP WITH 3 ULTRABRIGHT WHITE LEDS
EHL7

NEW

Adjustable headlamp with 3 white LEDs.
Features:
• 3 mode switch: 1 white LED on / 3 white LEDs on / 3 white LEDs blinking / off
• rubber housing and nylon elastic strap
• ideal for camping, hunting, climbing, etc.
• adjustable headband with fixing clip
• weatherproof
Specifications:
• LEDs:
  - white LEDs: 3 (22000mcd/led)
  - life: 100 000h
• autonomy: up to 24h (white) depending on battery type
• power supply: 2 x CR2032 batteries (incl.)
• dimensions: 4 23/32" x 10 15/64"
• weight: 1.4 Oz.

LED   2 x CR2032

Packaging	EAN code	54 10329 43964 4
Carton	UPC code	

HEAD / BELT LAMP WITH 3 LEDs
ZL321M-3

Features:
• ultra bright LED headlamp
• long-life LED: 100.000hrs
• lasts exceptionally long
• water-resistant
• clip attachment rotates 360°
• can be attached to the wrist, belt, hat, etc.
• adjustable headband
Specifications:
• power supply: 3 1.5V AAA batteries (incl.)
• bulb type: 3 Ø 0.2" white LED
• dimensions: Ø1.1" x 3.2"

Packaging	EAN code	54 10329 23920 6
Carton	UPC code	

8-LED DIVING HEADLIGHT
ZL928

Features:
• waterproof to a depth of 30ft
• tough ABS body / PVC coating
• adjustable inclination
• life:
  - LED: 50hrs
Specifications:
• power supply: 4 1.5V AA batteries (incl.)
• bulb type:
  - LED: 8 white LED Ø 0.2"
• dimensions: 5.4" x 3.0" x 2.6"

4 x AA

Packaging		EAN code	54 10329 21725 9
Carton	/36	UPC code	

HEADLAMP WITH 3 LEDs + KRYPTON LIGHT
ZLHL389E

Features:
• headlamp with 3 LEDs + krypton
• super bright LED for close range use
• krypton bulb for long range use
• long-life LED: 100000hrs
• adjustable headband
• adjustable inclination
• up/down adjustable headlight
• super bright light
• focus control: from spot to floodlight
• 3 modes: 1 LED on / 3 LEDs on / krypton on
• autonomy:
  - krypton: 2.5hrs (alkaline)
  - 3 LEDs: 80hrs (alkaline)
Specifications:
• power supply: 3 x 1.5V AAA batteries (not incl.)
• bulb type:
  - LED: 3 white LEDs Ø 5mm
  - krypton: krypton bulb 3.6V / 0.3A

3 x AAA

Packaging		EAN code	54 10329 33441 3
Carton	/60	UPC code	

2 LEDs   3 LEDs   Halogen

ULTRABRIGHT LED HEADLIGHT WITH CLIP
ZLHL510

Features:
• with ultrabright LED
• long-life LED
• with focal lens
• adjustable and removable headband with fixing clip
• battery life: ± 16h (Lithium)
Specifications:
• LED type: Nichia LED Ø 5mm, white
• output power: 1.8lm
• power supply: 2 x CR2016 batteries CR2016 (incl.)
• dimensions: 1 1/4" x 1 1/4" x 1 5/8"
• weight: 1.0oz (incl. batteries)

2 x CR2016

Packaging		EAN code	54 10329 38898 0
Carton		UPC code	

WHITE LED HEAD / BELT LAMP
ZL321M

Features:
• ultra bright LED headlamp
• long-life LED: 100.000hrs
• water-resistant
• clip attachment rotates 360°
• can be attached to the wrist, belt, hat, etc.
• adjustable headband
• battery life: 80hrs (alkaline)
Specifications:
• power supply: 3 1.5V AAA batteries (incl.)
• bulb type: Ø 0.2" white LED
• dimensions: Ø 1.1" x 3.2"

3 x AAA

Packaging		EAN code	54 10329 20602 4
Carton	/72	UPC code	

LED CONTROLLERS AND DIMMERS

RGB LED CONTROLLER WITH REMOTE CONTROL
CHLSC1

NEW

Multiply the output power of your Velleman LED controller with VM169
Features:
• for: CHLS4RGB, CHLS5RGB/1M, CHLS6RGB, CHLS7RGB
• 4-line, 3-loop RGB controller with remote control
• controlled by push switch on the unit or through infrared remote (incl.)
• 20 pre-programmed output modes (single colours, flash, strobe, fade,...)
• high load capacity
• comes with screws and self adhesive strip on the backside for easy installation
Specifications:
• input voltage: 12 or 24VDC
• output power: 180W (12VDC) or 360W (24VDC)
• max. output for each loop: 60W (12VDC) or 120W (24VDC)
• IR remote control working distance: 23 ft.
• dimensions: 4 49/64" x 2 1/64" x 1 1/32"
  - controller: 4 49/64" x 2 1/64" x 1 1/32"
  - IR remote control: 3 35/64" x 1 59/64" x 9/32"
• weight:
  - controller: ± 3.88 oz.
  - IR remote control: ± 0.77 oz.
• power supply remote control: 3V lithium CR2025, incl.

12V 24V

Packaging		EAN code	54 10329 42301 8
Carton		UPC code	

LED DECORATION STRIPS & MODULES

ACCESSORIES FOR LED STRIPS

LED PROFILES - ALUMINIUM

ALUMINIUM LED PROFILE FOR LED STRIPS - STAIR - 2M
CHLAP6

NEW
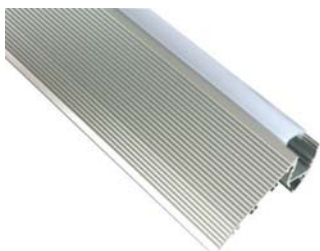
Features:
• specially designed for use on stairs
• optional end cup (not incl.): CHLAPC6L, CHLAPC6R
Specifications:
• dimensions (LxWxH): 2m x 66.9mm x 27.4mm

Packaging | EAN code: 54 10329 45503 3
Carton | UPC code:

ALUMINIUM LED PROFILE FOR LED STRIPS - SLIM / WIDE - 2M
CHLAP7

NEW

Features:
• wide and slim LED profile
• optional end cup (not incl.): CHLAPC7
• optional mounting bracket (not incl.): CHLAPB7
Specifications:
• dimensions (LxWxH): 2m x 22.6mm x9.9mm

Packaging | EAN code: 54 10329 45507 1
Carton | UPC code:
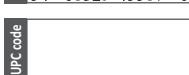
ALUMINIUM LED PROFILE FOR LED STRIPS - SLIM - 2M
CHLAP8

NEW

Features:
• slim LED profile
• optional end cup (not incl.): CHLAPC8
• optional mounting bracket (not incl.): CHLAPB8
Specifications:
• dimensions (LxWxH): 2m x 7mm x 17.5mm

Packaging | EAN code: 54 10329 45511 8
Carton | UPC code:

ALUMINIUM LED PROFILE FOR LED STRIPS -RECESSED - SLIM 7mm - 2m
CHLAP9

NEW

Features:
• wide and slim LED profile
• optional end cup (not incl.): CHLAPC9
Specifications:
• dimensions (LxWxH): 2m x 24.5mm x 7mm

Packaging | EAN code: 54 10329 45514 9
Carton | UPC code:

DOUBLE SELF-ADHESIVE LED STRIPS 25/32" X 5 29/32"

Specifications:
• optional controller: -

Order Code	color	light output	current consumption	number of LEDs	power supply	dimensions
CHLS2B	blue	1.2-1.3 lm/LED	< 1.2W	2 x 15 pcs	12VDC	25/32" x 5 29/32"
CHLS2R	red	470-500 mlm/LED	< 1.2W	2 x 15 pcs	12VDC	25/32" x 5 29/32"

Packaging | EAN code: 54 10329 38846 1
Carton | UPC code: 8 36479 00853 3

CHLS2B

Packaging | EAN code: 54 10329 38847 8
Carton | UPC code: 8 36479 00859 5
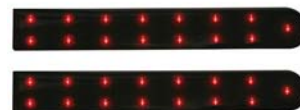
CHLS2R

LED DECORATION STRIPS & MODULES

FLEXIBLE LED STRIPS - 150 LED - 16.40 FT.

Features:
• IP rating: IP61
• for illuminated advertising and marking
• self-adhesive
• can be cut every 3 LEDs (10cm)
Specifications:
• viewing angle: 120°
• LED spacing: 1 19/64"
• operating voltage: 12VDC

Order Code	color	wavelength	intensity (per LED)	power consumption	current	dimensions	weight
CHLS4B	blue	465 - 475nm	1000mcd	19.5W	1.6A	13/64" x 25/64"	5.46 Oz.
CHLS4R	red	620 - 660nm	600mcd	25W	2.1A	13/64" x 25/64"	5.46 Oz.
CHLS4RGB	red-green-blue	red: 620~625nm, green: 520~525nm, blue: 465~470nm	red: 500mcd, green: 1000mcd, blue: 300mcd	29.5W (red 11W, blue 9W, green 9.5W)	2.5A (red 0.9A, blue 0.75A, green 0.8A)	13/64" x 25/64"	5.46 Oz.
CHLS4W	white	-	4000mcd	19.5W	1.6A	13/64" x 25/64"	5.46 Oz.

Packaging | EAN code: 54 10329 40245 7
Carton | UPC code:

CHLS4B

Packaging | EAN code: 54 10329 40246 4
Carton | UPC code:

CHLS4R

Packaging | EAN code: 54 10329 40250 1
Carton | UPC code:

CHLS4RGB

Packaging | EAN code: 54 10329 40249 5
Carton | UPC code:
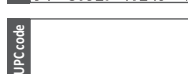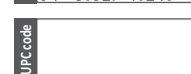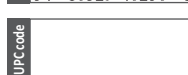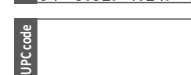
CHLS4W

FLEXIBLE WATERPROOF LED STRIPS - 150 LEDS - 16 FT - IP68

Features:
• waterproof flexible PCB (IP68)
• contains 150 high brightness LEDs (type 5050)
• for illuminated advertising and marking
• can be cut every 3 LEDs
• mounting clips: CHLCLIP1
Specifications:
• viewing angle: 120°
• dimensions: 13/64" x 25/64"
• LED spacing: 21/32"
• operating voltage: 12VDC
• weight: 12.36 oz.

Order Code	color	wavelength	intensity (per LED)	power consumption	current
CHLS11B	blue	465-470nm	1000mcd	19.5W	1.6A
CHLS11RGB	red-green-blue	red: 620~625nm, green: 520~525nm, blue: 465~470nm	red: 500mcd, green: 1000mcd, blue: 300mcd	36W (red 12W, blue 12W, green 12W)	2.5A (red 0.9A, blue 0.75A, green 0.8A)
CHLS11W	white (9000K)	-	4000mcd	19,5W	1.6A
CHLS11WW	warm white	-	4000mcd	20,5W	1.7A

Packaging | EAN code 54 10329 42994 2
Carton | UPC code

CHLS11B

Packaging | EAN code 54 10329 42992 8
Carton | UPC code

CHLS11RGB

Packaging | EAN code 54 10329 42993 5
Carton | UPC code

CHLS11W

Packaging | EAN code 54 10329 43012 2
Carton | UPC code
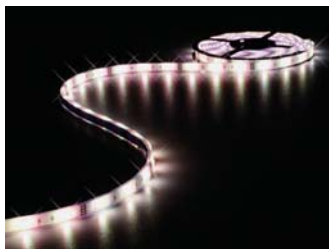
CHLS11WW

FLEXIBLE LED STRIPS - 300 LED - 16.4 FT.

Features:
• for illuminated advertising and marking
• self-adhesive
• optional power supplies: PSIN04012, PSIN06012, PSIN10012, PSIN15012, PSIN30012, LPS04512R,LPS06012R,LPS08012R,LPS10012R
Specifications:
• IP rating: IP61
• viewing angle: 120°
• LED spacing: 21/32"
• operating voltage: 12VDC

Order Code	color	wavelength	intensity (per LED)	dimensions	power consumption	current
CHLS3B	blue	465 - 475nm	400mcd	5m x 10mm	18W	1.5A
CHLS3R	red	620 -660nm	600mcd	5m x 10mm	20,5W	1,7A
CHLS3W	white	-	1600mcd	5m x 10mm	18W	1.5A

Packaging | EAN code 54 10329 40238 9
Carton | UPC code

CHLS3B

Packaging | EAN code 54 10329 40240 2
Carton | UPC code

CHLS3R

Packaging | EAN code 54 10329 40242 6
Carton | UPC code
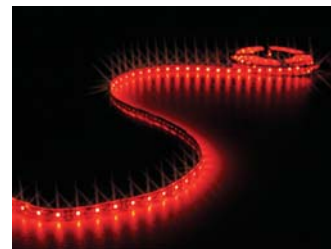
CHLS3W

FLEXIBLE LED STRIPS - 300 LED - 16.4 FT. - 24V

Specifications:
• IP rating: IP61
• viewing angle: 120°
• dimensions: 13/64" x 25/64"
• LED spacing: 21/32"
• operating voltage: 24VDC
• weight: 7 oz.

Order Code	IP rating	color	wavelength	intensity (per LED)	power consumption
CHLS7B	IP61	blue	465 - 475nm	1000mcd	55W
CHLS7RGB	IP61	red-green-blue	red: 620~625nm, green: 520~525nm, blue: 465~470nm	red: 500mcd, green: 1000mcd, blue: 300mcd	65W (red 23W, blue 21W, green 21W)
CHLS7W	IP61	white	-	4000mcd	53W
CHLS7WW	IP61	warm white	-	4000mcd	53W
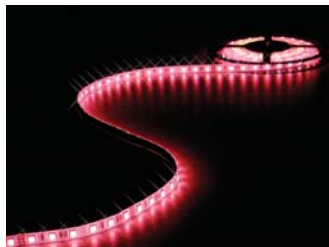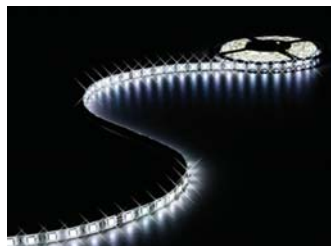
EAN code 54 10329 42946 1 — CHLS7B
EAN code 54 10329 42394 0 — CHLS7RGB
EAN code 54 10329 42945 4 — CHLS7W
EAN code 54 10329 43013 9 — CHLS7WW

FLEXIBLE LED STRIPS - 96 LED - 1M

Features:
• sealed soft silica gel LED strip (IP65)
• comes with mounting clips
Specifications:
• power supply: 12V
• power consumption: 8W
• number of LEDs: 96
• IP rating: IP65
• dimensions: 9/32" x 15/32" x 3.2 ft
• optional controller: VM152

Order Code	color	light output
LSL8B	blue	5700 - 6000 mlm
LSL8CW	cold white	6300 - 7200 mlm
LSL8G	green	8200 - 9000 mlm
LSL8R	red	210 - 250 mlm
LSL8WW	warm white	1060 - 1300 mlm
LSL8Y	yellow	270 - 350 mlm

EAN code 54 10329 38865 2 — LSL8B
EAN code 54 10329 38868 3 — LSL8CW
EAN code 54 10329 38867 6 — LSL8G
EAN code 54 10329 38866 9 — LSL8R
EAN code 54 10329 38869 0 — LSL8WW
EAN code 54 10329 39048 8 — LSL8Y

DECORATIVE LED MODULES

LED LIGHTS WITH PEARL EFFECT - 12VDC

Powerful LED decoration modules for all kind of applications.
Specifications:
• optional controller: VM152
Features:
• 8 LEDs
• easy installation
Specifications:
• power supply: 12VDC
• power consumption: < 2W
• light output: 4.9 - 5.0 lm
• light spacing: 14 9/16"
• dimensions: Ø1 17/64" x 25/32"

Order Code	color
CHLPLB	blue
CHLPLW	white

Packaging	EAN code		Packaging	EAN code
	54 10329 38864 5			54 10329 38863 8
Carton	UPC code		Carton	UPC code
				8 36479 00852 6
CHLPLB			CHLPLW	

DECORATIVE LED STRIPS

LED DOME LIGHTS

Order Code	power supply	number of LEDs	intensity	power consumption	color	dimensions
LAMPL5035W	12Vdc	20	290 lm	5W	white	1 31/32" x 1 3/8"

Packaging	EAN code
	54 10329 43910 1
Carton	UPC code
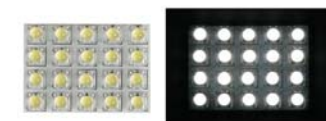
LAMPL5035W

DECORATIVE SINGLE LED STRIPS

LED STRIP - BLUE - 11 13/16"
CHLBLB

Features:
• superbright LEDs
• easy installation
• waterproof
• on/off switch

12V

Packaging	EAN code
	54 10329 38846 1
Carton	UPC code
	8 36479 00853 3

LED STRIP - WHITE - 11 13/16"
CHLBLW

Features:
• superbright LEDs
• easy installation
• waterproof
• on/off switch

12V LED

Packaging	EAN code
	54 10329 38847 8
Carton	UPC code
	8 36479 00859 5
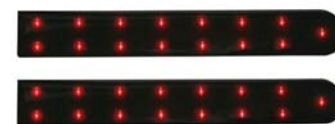
LED GADGETS

FLASHING MINI LED LIGHTS - BATTERIES NOT INCLUDED

Features:
• can be worn around the neck or attached to a key chain or bag
Specifications:
• power supply: 3 x 1.5V AG3 (type V392AC) batteries (not incl.)
• dimensions: Ø0.39" x 1.97"

Order Code	colour
LF5BN	blue
LF5GN	green
LF5RN	red
LF5YN	yellow

Packaging	EAN code		Packaging	EAN code
	54 10329 39535 3			54 10329 39536 0
Carton	UPC code		Carton	UPC code
LF5BN			LF5GN	

Packaging	EAN code		Packaging	EAN code
	54 10329 39537 7			54 10329 39544 5
Carton	UPC code		Carton	UPC code
LF5RN			LF5YN	

COLOR CHANGING LED ORB Ø10"
CLB2U

Features:
• this colorful LED ball slowly and automatically changes color
• with on/off switch
• 9 LEDs
Specifications:
• adaptor: 4.5VDC (incl.)
• dimensions: Ø10"
• weight: 1.3 lbs.

LED

Packaging	EAN code
Carton	UPC code
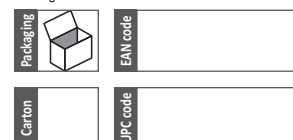
ATTRACTIVE & COLOURFUL MINIATURE LED CUBE
CLC5

Features:
- LED mood light cube
- changes very slowly from one colour to another
- with on/off switch

Specifications:
- power supply: 2 x LITHIUM 3.0V-230mAh (CR2032C) (incl.)
- dimensions: 2 3/64" x 2 3/64" x 2 3/64"
- weight: 1.8 oz

Packaging	EAN code	54 10329 36020 7
Carton	UPC code	

LED

LED COASTER
CLC7

NEW

Features:
- slow fading red-blue LED coaster
- place weight on top to switch on, remove weight to switch off

Specifications:
- power supply: 2 x CR2032 lithium battery (CR2032C, incl.)
- LEDs: 2 x red, 2 x blue
- dimensions: 3.54" x 3.54" x 0.28"

Packaging	EAN code	54 10329 42848 8
Carton	UPC code	

LED

MULTICOLORED LED PANEL
CLP1U

Features:
- flat LED panel with silver frames
- with on/off switch
- 9 panels slowly change color independently
- wall-mounting possible
- 27 LEDs

Specifications:
- adaptor: 4.5AC/DC (incl.)
- dimensions: 11 6/8" x 11 6/8" x 2 1/4"
- weight: 2.9 lbs.

Packaging	EAN code	
Carton	UPC code	

LED

COLOUR CHANGING LED LAMP
CLT1U

Features:
- LED tube with silver housing
- with different built-in effects (selectable with push button)
- 18 LEDs

Specifications:
- power supply: adapter 12V /250mA (incl.)
- dimensions: 39.4" x Ø1.97" (base 5.91")
- weight: 2.87lbs

Packaging	EAN code	
Carton	UPC code	8 36479 00766 6

LED

BLUE LED KEY CHAIN LIGHT
ZL325B

Features:
- ultra bright blue LED pocket light
- long-life LED: long-life LED
- lasts exceptionally long
- small & light
- with key ring

Specifications:
- power supply: 2 3V CR2016 button cell (incl.)
- bulb type: Ø 0.2" blue LED
- dimensions: 1.4" x 1.9" x 0.4"

Packaging	EAN code	54 10329 20617 8
Carton /144	UPC code	

LED

WHITE LED KEY CHAIN LIGHT
ZL325W

Features:
- ultra bright white LED pocket light
- long-life LED: 100.000hrs
- lasts exceptionally long
- small & light
- with key ring

Specifications:
- power supply: 2 3V CR2016C button cell (incl.)
- bulb type: Ø0.2" white LED
- dimensions: 1.4" x 1.9" x 0.4"

Packaging	EAN code	54 10329 20618 5
Carton /144	UPC code	

LED

SLIM LINE LED LIGHT WITH KEYCHAIN - WHITE -
LLW5

Features:
- cylinder-shaped, slim line design with keychain
- very bright white LED

Specifications:
- luminous intensity: 12000 mcd
- power supply: 4 LR41 button cell batteries (incl.)
- dimensions: Ø0.35" x 1.8"
- weight: 0.7oz

Packaging	EAN code	54 10329 31947 2
Carton /120	UPC code	

LED

KEYCHAIN WITH WHITE LED LIGHT AND EXTENDABLE CORD
LLW6

Features:
- special design so you can easily find the keyhole
- easily attachable to waistband, bag etc.
- extra strong durable nylon cord

Specifications:
- cord length: ±2ft.
- power supply: 2 x CR2016C (incl.)
- dimensions: 1 29/64" x 3" x 19/32"
- weight: 1oz

Packaging	EAN code	54 10329 36061 0
Carton	UPC code	

LED

CABLES

MOUNTING WIRES

MOUNTING WIRE (SQT 0.008")

10 COLOR - STRANDED MOUNTING WIRE KIT 60m
K/MOW

Specifications:
- multicore, sqt 0.008"
- colors: 16.4ft : white / blue / brown / green / yellow / orange / gray / violet + 32.8ft : black / red

| Packaging | | EAN code | 54 10329 21767 9 |
| Carton | /50 | UPC code | 8 36479 00346 0 |

10 COLOR - SOLID CORE MOUNTING WIRE KIT 60m
K/MOWM

Specifications:
- full core, sqt 0.008"
- colors: 16.4ft : white / blue / brown / green / yellow / orange / gray / violet + 32.8ft : black / red

| Packaging | | EAN code | 54 10329 20193 7 |
| Carton | /50 | UPC code | 8 36479 00347 7 |

AUDIO & VIDEO CABLES

AUDIO & VIDEO CABLES (JACKS) - STANDARD Q

3.5MM STEREO JACK MALE TO 3.5MM STEREO JACK FEMALE

Order Code	length
AVW038	3m

AUDIO & VIDEO CABLES (SCART) - STANDARD Q

3-CHANNEL AUDIO/VIDEO SWITCHER

Order Code	dimensions	weight
AVW089	6.3" x 2.6" x 1.2"	3.5 oz.

AVW089

21-PIN SCART PLUGS

21-PIN SCART - MALE

Order Code	type	color
SCARTM	solder model	black

21-PIN SCART - FEMALE

Order Code	type	color
SCARTF	solder model	black

PRO - AUDIO CABLES

PROFESSIONAL SPEAKER CABLES

Order Code	connectors
AVW158	loudspeaker XLR connector (3-pin male to RCA male)

AVW158

XLR CABLES

3P XLR MALE TO 3P XLR FEMALE

Specifications:
- connectors: 3P XLR male to 3P XLR female
- outer Ø: 6.5mm
- inner conductor: (0.12mm x 20) x 2
- braiding: 0.12mm x 64

Order Code	length	color
AVW111-1	3 1/4 ft	black
AVW111-3	9 3/4 ft	black

AUDIO CABLE TESTER - 10 WAY
VTTEST15

Features:
- enables quick and convenient continuity cable testing for all types of audio cables
- continuity test function (buzzer and LED indication)
- suited for the following connectors and their combinations:
  - 6.3mm jack
  - 3.5mm jack
  - XLR 3P (M/F)
  - XLR 5P (M/F)
  - phono / RCA
  - banana plug
  - Speakon® 8P
  - Speakon® 4P
  - DIN 3P / 5P / 7P / 8P
  - 5-pin mini DIN
- LEDs confirm each conductor connection
- 9-way switch for selecting connections to be tested
- battery check function
- rugged, compact, metal construction for ultimate roadworthiness, long life and reliability
- includes one pair of probes

Specifications:
- power supply: 1 x E-block 9V 6LR61C (included)
- dimensions: 7 31/64" x 2 23/64" x 4 21/64"
- weight:

Packaging	EAN code 54 10329 39135 5
Carton /20	UPC code 8 36479 00839 7

VELLEMAN HIGH-Q CABLES IN BLISTER

SUPER-Q AUDIO-VIDEO CABLES IN BLISTER

2 X RCA PLUG MALE TO 2 X RCA PLUG MALE + EARTHING CABLE - HIGH-Q

Features:
- gold-plated connectors
- high-quality, shielded, Cu braid
- 2 separate cables for signal transfer
- with earthing cable

Order Code	length
AVW150-1.5	4.9ft
AVW150-5	16.4ft
AVW150-10	32.8ft

3 X RCA PLUG MALE TO 3 X RCA PLUG MALE - HIGH-Q

Features:
- gold-plated connectors
- high-quality, shielded, Cu braid
- 3 separate cables for high-quality signal transfer

Order Code	length
AVW151-5	16.4ft
AVW151-10	32.8ft

4-PIN MINI-DIN PLUG MALE TO 4-PIN MINI-DIN PLUG MALE (S-VHS) - HIGH-Q

Features:
- true video performance
- ideal for all DVD's, VCR's, game consoles, audio/video receivers, televisions and any other equipment that features S-Video inputs / outputs applications
- use this cable when connecting and S-Video device to another S-Video ready device
- gold-plated contacts

Order Code	length
AVW149-7	23.0ft

AUDIO-VIDEO ADAPTERS

ADAPTER 4P MINI-DIN FEMALE TO MALE RCA GOLD
AVW139

Specifications:
- description: female 4-pin mini-DIN to male RCA
- remark: gold-plated

Packaging	EAN code 54 10329 20817 2
Carton /200	UPC code

OPTICAL CABLES

FIBRE OPTIC CABLES & CONNECTORS - HIGH-Q

FIBRE OPTIC CABLE, 2 x TOSLINK MALE, 3.28ft
AVW092

Features:
- fibre optic cable of superior quality for data transmission
- fitted with heavy-duty Toslink connectors with protection caps

Specifications:
- 2 x male connectors
- cable:
  - with Ø 6mm (0.24) for ultra low transmission loss
  - length: 3.28ft

Packaging	EAN code 54 10329 22331 1
Carton /60	UPC code

GLASS FIBRE OPTIC CABLE, 2 x TOSLINK MALE (4.92")
AVW145

Features:
- glass fibre optical cable with spring-loaded Toslink-Toslink connectors, exceptional quality
- glass fibre core
- high-resolution digital audio throughput
- ideal for home theatre, DVD, D-VHS, hifi, professional audio, DVD audio, SACD, CD, Dolby digital & DTS

Packaging	EAN code 54 10329 21461 6
Carton /20	UPC code

DIGITAL VIDEO CABLES (HDMI)

HDMI MALE 19P TO HDMI MALE 19P

Features:
• HDMI is a user-friendly way of interconnecting high-definition TVs, plasma screens, set-top boxes, satellite receivers...
Features:
• HDMI 1.3
Specifications:
• connection: 19-pin male to 19-pin male
• bandwidth: up to 5Gbps (165Mhz)

Order Code	length
AVB100/3.0	9.84 ft
AVB100/5.0	16.4 ft
AVB100/10.0	32.8 ft

AVB100/3.0

AVB100/5.0

AVB100/10.0

GOLD-PLATED HDMI MALE 19P TO HDMI MALE 19P

Features:
• HDMI is a user-friendly way of interconnecting high-definition TVs, plasma screens, set-top boxes, satellite receivers...

Order Code	length	bandwidth	connection
AVB101/3.0	9.84 ft	up to 5Gbps (165Mhz)	gold-plated 19-pin male to 19-pin male
AVB101/5.0	16.4 ft	up to 5Gbps (165Mhz)	gold-plated 19-pin male to 19-pin male
AVB101/10.0	32.8 ft	up to 5Gbps (165Mhz)	gold-plated 19-pin male to 19-pin male

AVB101/3.0

AVB101/5.0

AVB101/10.0

CABLE ACCESSORIES

CABLE TIES

Specifications:
• material: polyamide (nylon 6.6) as specified in MIL-S-23190 self-extinguishing
• temperature: -40°F to 230°F

Order Code	colour	dimensions (A x B)	quantity
K/TFB3	black	3.86" x 0.1"	100pcs
K/TFB4	black	5 33/64" x 9/64"	100pcs
K/TFB5	black	7.87" x 0.19"	100pcs
K/TFB6	black	11 27/64" x 3/16"	100pcs

CABLE TIES - TRANSPARENT

Specifications:
• material: polyamide (nylon 6.6) as specified in MIL-S-23190 self-extinguishing
• temperature: -40°F to +230°F

Order Code	colour	dimensions (A x B)	quantity
TF3	3.86" x 0.1"	98 x 2.5mm	100 pcs
TF4	transparent	5.51" x 0.14"	100 pcs
TF5	transparent	7.87" x 0.19"	100 pcs
TF6	transparent	11.42" x 0.19"	100 pcs

CABLE TIES - BLISTER SETS
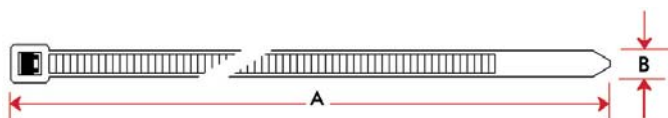
75 pc CABLE TIES IN BLISTER PACK
K/TF

Specifications:
• dimensions (A x B): quantity / color
  - 0.12" x 3.9": 25 pcs transparent
  - 0.2" x 4.7": 25 pcs transparent
  - 0.2" x 7.9": 25 pcs transparent
• total: 75 pcs

Packaging		EAN code	54 10329 22284 0
Carton	/120	UPC code	8 36479 00591 4

300 pc CABLE TIES IN PLASTIC CAN
K/TF300

Specifications:
• dimensions (A x B): quantity / color
  - 0.1" x 3.9": 25 pcs green, 25 pcs yellow, 25 pcs black, 25 pcs red, 50 pcs transparent
  - 0.138" x 7.9": 50 pcs red, 50 pcs blue, 50 pcs transparent
• total number: 300 pcs

Packaging		EAN code	54 10329 20513 3
Carton	/25	UPC code	8 36479 00884 7

1000 pc CABLE TIES IN PLASTIC CAN
K/TF1000

Specifications:
- dimensions (A x B): quantity / color
  - 0.1" x 3.9": 100 pcs blue, 100 pcs red, 100 pcs white, 100 pcs yellow
  - 0.138" x 7.9": 100 pcs white, 100 pcs blue, 100 pcs green
  - 0.142" x 7.9": 200 pcs white
  - 0.142" x 11.8": 100 pcs white
- total: 1000 pcs

| Packaging | | EAN code | 54 10329 22285 7 |
| Carton | /25 | UPC code | 8 36479 00577 8 |

K/STMC2

K/STR

CABLE ACCESSORIES

HEAT-SHRINKABLE TUBING

HEAT-SHRINKABLE TUBING 2 : 1 - LOW-COST

HEAT-SHRINKABLE TUBING 2 : 1 - LOW-COST - BLACK - IN BOX

Heat-shrinkable tubing is universally applied for the insulation of connections or for the end-handling of electric wire, for the insulation of soldered points on resistors and capacitors, for the identification and encapsulation of electric wire, for the corrosion-proofing of metallic rods or tubes and for the protection of antennas. Heat-shrinkable tubes are used for the corrosion-proof and waterproof connection of fibre optic cable.

This is thin-walled, flexible, irradiated polyolefin tubing with a smooth exterior. It offers excellent tensile strength and low water absorption. The max. shrinking ratio is 50% and the material is flame-retardant.

Specifications:
- continuous operating temperature range: -67 to 221 °F
- shrinking ratio: 2 : 1
- basic material: polyolefin
- shrinking temperature: 194°F
- flammability: self-extinguishing

Order Code	color	reel length	bore as supplied min.
ST10BK-BX	black	49 ft	1/32"
ST120BK-BX	black	26 ft	15/32"

HEAT-SHRINKABLE TUBE SETS

Heat-shrinkable tubing is universally applied for the insulation of connections or for the end-handling of electric wire, for the insulation of soldered points on resistors and capacitors, for the identification and encapsulation of electric wire, for the corrosion-proofing of metallic rods or tubes and for the protection of antennas. Heat-shrinkable tubes are used for the corrosion-proof and waterproof connection of fibre optic cable.

Order Code	colour	shrinking temperature	max. temperature	shrinking ratio	dielectric strength
K/STB	black	194°F	248°F	2:1	15kV/mm
K/STMC	mixed color	194°F	248°F	2:1	15kV/mm
K/STMC2	mixed	194°F	248°F	2:1	at 1 min. 2500VAC - no breakdown
K/STR	red	194°F	248°F	2:1	15kV/mm

K/STB

K/STMC

N CONNECTORS

N CONNECTORS

N FEMALE

Order Code	for
CN01	RG213/U - 50 ohm - Ø0.36"

N MALE

Order Code	for
CN15C	RG213/U - 50 ohm - Ø0.36"

PHONO (RCA) CONNECTORS

PHONO (RCA) PLUGS

Specifications:
• boot in molded plastic
• solder connections
• for cable: Ø 0.16"

Order Code	boot color
CA047B	black
CA047G	green
CA047R	red
CA047W	white
CA047Y	yellow

PHONO (RCA) JACKS

Specifications:
• boot in molded plastic
• solder connections
• for cable: Ø 0.16"

Order Code	boot color
CA054B	black
CA054G	green
CA054R	red
CA054W	white
CA054Y	yellow

RIGHT-ANGLE PHONO (RCA) PLUGS

Specifications:
• rubber cable guide
• type: right-angle
• screw connections

Order Code	boot color
CA119	black

NICKEL-PLATED PHONO (RCA) PLUGS

Specifications:
• spring cable guide
• with colored identification ring
• for cable: Ø 0.24"
• solder connections

Order Code	boot color
CA063B	black
CA063R	red

NICKEL-PLATED PHONO (RCA) JACKS

Specifications:
• spring cable guide
• with colored identification ring
• for cable: Ø 0.24"
• solder connections

Specifications:
• spring cable guide
• with colored identification ring
• for cable: Ø 0.24"
• solder connections

Order Code	boot color
CA064B	black
CA064R	red

GOLD-PLATED PHONO (RCA) PLUGS

Specifications:
• gold-plated
• spring cable guide
• with colored identification ring
• for cable: Ø 0.24"
• solder connections

Order Code	boot color
CA048B	black
CA048R	red

GOLD-PLATED PHONO (RCA) JACKS

Specifications:
• gold-plated
• spring cable guide
• solder connections
• for cable: Ø 0.24"

Order Code	boot color
CA059B	black
CA059R	red

GOLD-TIP PHONO (RCA) PLUGS

Specifications:
• with colored identification ring
• for cable: Ø 0.24"
• solder connections

Order Code	boot color
CA049B	black
CA049R	red

PHONO (RCA) CONNECTORS

GOLD-TIP PHONO (RCA) JACKS

Specifications:
• with colored identification ring
• for cable: Ø 0.24"

Order Code	boot color
CA058R	red

GOLD-TIP PHONO (RCA) PLUGS, BLACK HOUSING

Specifications:
• spring cable guide
• with colored identification ring
• for cable: Ø 0.28"
• solder connections

Order Code	ring color
CA052R	red
CA052W	white

GOLD-TIP PHONO (RCA) JACKS, BLACK HOUSING

Specifications:
• spring cable guide
• with colored identification ring
• for cable: Ø 0.28"
• solder connections

Order Code	boot color
CA062W	white

GOLD-TIP PHONO (RCA) PLUGS, BLACK HOUSING

Specifications:
• with colored identification ring
• for cable: Ø 1/4"
• solder connections

Order Code	ring color
CA051R	red
CA051W	white

GOLD-TIP PHONO (RCA) JACKS, BLACK HOUSING

Specifications:
• with colored identification ring
• for cable: Ø 1/4"
• solder connections

Order Code	ring color
CA061R	red
CA061W	white

NICKEL-PLATED RCA PANEL-MOUNT JACKS

Specifications:
• hole: Ø 0.24"
• panel thickness: max. 0.19"
• insulation: colored nylon

Specifications:
• hole: Ø 0.24"
• panel thickness: max. 0.19"
• insulation: colored nylon

Order Code	color
CA055B	black
CA055R	red
CA055W	white
CA055Y	yellow

GOLD-PLATED RCA PANEL-MOUNT JACKS

Specifications:
• chassis mount
• hole: Ø 0.24"
• panel thickness: max. 0.19"

Order Code	color
CA056B	black
CA056R	red

1 X 2P RCA JACKS

Order Code	material	dimensions
CA065	nickel plated	2.0" x 0.8"

1 X 4P RCA JACKS

Order Code	material	dimensions
CA066	nickel plated	3.0" x 1.0"
CA071	gold plated	3.0" x 1.0"

2 X 2P RCA JACKS

Order Code	material	dimensions
CA067	nickel plated	2.0" x 1.4"
CA072	gold plated	2.0" x 1.4"

3 X 2P RCA JACKS

Order Code	material	dimensions
CA068	nickel plated	2.3" x 1.4"
CA073	gold plated	2.3" x 1.4"

4 X 2P RCA JACKS

Order Code	material	dimensions
CA069	nickel plated	3.0" x 1.4"
CA074	gold plated	3.0" x 1.4"

2.5MM (3/32") PHONE CONNECTORS

2.5MM (3/32") PLUGS WITH STRAIN RELIEF, BLACK

Specifications:
• boot in molded plastic
• for cable: Ø 0.16"
• solder connections

Order Code	type
CA001	mono
CA002	stereo

2.5MM JACKS MALE - BLACK - HIGH QUALITY

Order Code	type
CA002H	stereo

2.5MM (3/32") JACKS WITH STRAIN RELIEF, BLACK

Specifications:
• boot in molded plastic
• for cable: Ø 0.16"
• solder connections

Order Code	type
CA007	mono
CA008	stereo

2.5MM (3/32") PANEL-MOUNT JACKS

Specifications:
• with insert switch
• solder connections

Order Code	type
CA013	mono

2.5MM (3/32") PANEL-MOUNT JACKS

Specifications:
• with insert switch
• solder connections

Order Code	type
CA014	mono

1/8" PHONE CONNECTORS

1/8" PLUGS WITH STRAIN RELIEF, BLACK

Specifications:
• boot in molded plastic
• for cable: Ø 0.16"
• solder connections

Order Code	type
CA110	mono
CA111	stereo

3.5MM JACKS MALE - BLACK - HIGH QUALITY

Order Code	type
CA111H	stereo

1/8" PLUGS WITH STRAIN RELIEF, NICKEL-PLATED

Specifications:
- spring cable guide
- for cable: Ø 0.16"
- solder connections

Order Code	type
CA003	mono
CA004	stereo

1/8" PLUGS WITH STRAIN RELIEF, GOLD-PLATED

Specifications:
- for cable: Ø 0.16"
- solder connections

Order Code	type
CA005	mono
CA006	stereo

1/8" JACKS WITH STRAIN RELIEF, BLACK

Specifications:
- boot in molded plastic
- for cable: Ø 0.16"
- solder connections

Order Code	type
CA009	mono
CA010	stereo

3.5MM JACKS FEMALE - BLACK - HIGH QUALITY

Order Code	type
CA009H	mono
CA010H	stereo

1/8" JACKS, NICKEL-PLATED

Specifications:
- solder connections
- maximum cable size: Ø4mm
- spring cable guide

Order Code	type
CA011	mono
CA012	stereo

1/8" PANEL-MOUNT JACKS

Specifications:
- solder connections
- with insert switch

Order Code	type
CA015	mono / close circuit

1/8" PANEL-MOUNT JACKS

Specifications:
- solder connections
- with insert switch
- in housing

Order Code	type
CA016	mono

1/8" PANEL-MOUNT JACKS, NICKEL-PLATED

Specifications:
- solder connections
- with stereo insert switch
- in housing

Order Code	type
CA017	stereo

1/4" PHONE CONNECTORS

1/4" PLUGS WITH STRAIN RELIEF, BLACK

Specifications:
- solder connections
- boot in molded plastic
- for cable: Ø 0.24"

Order Code	type
CA019	mono
CA020	stereo

1/4" PLUGS WITH STRAIN RELIEF, NICKEL-PLATED

Specifications:
- solder connections
- spring cable guide
- for cable: Ø 0.24"

Order Code	type
CA021	mono
CA022	stereo

1/4" PLUGS WITH STRAIN RELIEF, GOLD-PLATED

Specifications:
• solder connections
• spring cable guide
• for cable: Ø 0.24"

Order Code	type
CA023	mono
CA024	stereo

RIGHT-ANGLE 1/4" PLUGS WITH STRAIN RELIEF, NICKEL-PLATED

Specifications:
• solder connections

Order Code	type
CA025	mono
CA026	stereo

PROFESSIONAL 1/4" PLUGS - NICKEL

Specifications:
• solder connections

Order Code	boot color	type
CA027B	black	mono
CA027BL	blue	mono
CA027R	red	mono
CA028B	black	stereo
CA028R	red	stereo

PROFESSIONAL 1/4" MONO PLUGS WITH GOLDEN TIP

Specifications:
• solder connections

Order Code	color	type
CA120B	black ring	gold tip
CA120R	red ring	gold tip

1/4" JACKS WITH STRAIN RELIEF, BLACK

Specifications:
• nickel-plated
• boot in molded plastic
• for cable: Ø 0.24"
• for cable: solder connections

Order Code	boot color	type
CA033	black	mono
CA034	black	stereo

1/4" JACKS WITH STRAIN RELIEF, SILVER-PLATED

Specifications:
• silver-plated
• spring cable guide
• solder connections
• for cable: Ø 0.24"

Order Code	type
CA035	mono
CA036	stereo

1/4" JACKS WITH STRAIN RELIEF, GOLD-PLATED

Specifications:
• gold-plated
• spring cable guide
• solder connections
• for cable: Ø 0.24"

Order Code	type
CA037	mono
CA038	stereo

1/4" PANEL-MOUNT JACKS - OPEN CIRCUIT

Specifications:
• open circuit
• panel mount

Order Code	type
CA039	mono
CA041	stereo

1/4" PANEL-MOUNT JACKS - CLOSED CIRCUIT

Specifications:
• closed circuit (when no plug is inserted)
• panel mount
• with insert switch

Specifications:
• closed circuit (when no plug is inserted)
• panel mount
• with insert switch

Order Code	type
CA040	mono
CA042	stereo

1/4" PANEL-MOUNT JACKS - WITH SWITCH

Specifications:
- closed circuit
- with insert switch

Order Code	type
CA043	mono
CA044	stereo

2P DIN CONNECTORS

2P DIN PLUGS, BLACK, SCREW CONNECTION

Specifications:
- screw connections

Order Code	boot color	remark
CA075	black	-

2P DIN JACKS, BLACK, SCREW CONNECTION

Specifications:
- screw connections

Order Code	boot color	remark
CA076	black	-

2P DIN PANEL-MOUNT JACKS

Specifications:
- solder connections

Order Code	color
CA077	black

AUDIO DIN CONNECTORS

5P DIN PLUGS - BLACK

Specifications:
- 5 pins over 180°
- boot in molded plastic
- solder connections

Order Code	boot color
CA082	black

5P DIN JACKS - BLACK

Specifications:
- 5 pins over 180°
- boot in molded plastic
- solder connections

Order Code	boot color
CA084	black

5P DIN PANEL-MOUNT JACKS - BLACK

Specifications:
- 5 pins over 180°
- solder connections

Order Code	type
CA086	panel-mount

6P DIN PLUGS - BLACK

Specifications:
- 5 pins over 240° + 1 centre pin
- boot in molded plastic
- solder connections

Order Code	boot color
CA083	black

6P DIN JACKS - BLACK

Specifications:
- 5 pins over 240° + 1 centre pin
- boot in molded plastic
- solder connections

Order Code	boot color
CA085	black

6P DIN PANEL-MOUNT JACKS - BLACK

Specifications:
- 5 pins over 240° + 1 centre pin
- solder connections

Order Code	type
CA087	panel mount

4P MINI DIN PLUGS - BLACK

Specifications:
• boot in molded plastic
• solder connections

Order Code	boot color
CA088	black

6P MINI DIN PLUGS - BLACK

Specifications:
• boot in molded plastic
• solder connections

Order Code	boot color
CA089	black

XLR CONNECTORS

3-PIN XLR PLUGS, NICKEL-PLATED - SHORT TYPE

Specifications:
• solder connections

Order Code	type
CA093	short type / nickel finish

3-PIN XLR JACKS, NICKEL-PLATED - SHORT TYPE

Specifications:
• solder connections

Order Code	type
CA092	short type / nickel finish

3-PIN XLR PLUGS, NICKEL-PLATED

Specifications:
• solder connections

Order Code	type
CA095	nickel finish

3-PIN XLR JACKS, NICKEL-PLATED

Specifications:
• solder connections

Order Code	type
CA094	nickel finish

3-PIN XLR PLUGS, NICKEL-PLATED - LONG TYPE

Specifications:
• solder connections

Order Code	type
CA097	nickel finish

3-PIN XLR JACKS, NICKEL-PLATED - LONG TYPE

Specifications:
• solder connections

Order Code	type
CA096	nickel finish

3-PIN XLR PLUGS, NICKEL-PLATED

Specifications:
• nickel finish
• solder connections

Order Code	boot color
CA101B	black
CA101BL	blue
CA101G	green
CA101R	red
CA101Y	yellow

3-PIN XLR JACKS, NICKEL-PLATED

Specifications:
• nickel finish
• solder connections

Order Code	boot color
CA100B	black
CA100BL	blue
CA100G	green
CA100R	red
CA100Y	yellow

3-PIN XLR PLUGS, GOLD-PLATED - LONG TYPE

Specifications:
• solder connections

Order Code	type
CA099	gold finish

3-PIN XLR JACKS, GOLD-PLATED - LONG TYPE

Specifications:
• solder connections

Order Code	type
CA098	gold finish

4-PIN XLR PLUGS, NICKEL-PLATED - SHORT TYPE

Specifications:
• solder connections

Order Code	type
CA103	nickel finish

4-PIN XLR JACKS, NICKEL-PLATED - SHORT TYPE

Specifications:
• solder connections

Order Code	type
CA102	nickel finish

3-PIN XLR PANEL-MOUNT PLUGS, NICKEL-PLATED
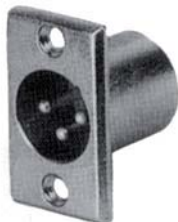
Order Code	type
CA105	nickel plated / panel mount

3-PIN XLR PANEL-MOUNT JACKS, NICKEL-PLATED

Order Code	type
CA104	nickel plated / panel mount

3-PIN XLR PANEL-MOUNT PLUGS, GOLD-PLATED

Order Code	type
CA107	gold plated / panel mount

3-PIN XLR PANEL-MOUNT JACKS, GOLD-PLATED

Order Code	type
CA106	gold finish / panel mount

4-PIN XLR PANEL-MOUNT PLUGS, NICKEL-PLATED

Order Code	type
CA109	nickel finish / panel mount

4-PIN XLR PANEL-MOUNT JACKS, NICKEL-PLATED

Order Code	type
CA108	nickel finish / panel mount

ADAPTERS FOR AUDIO

3-PIN XLR PLUG TO 1/4" PHONE PLUG

Order Code	type
CAA03	mono

3-PIN XLR JACK TO 3-PIN XLR JACK

Order Code	type
CAA02	nickel finish

3-PIN XLR PLUG TO PHONO (RCA) PLUG

Order Code	type
CAA10	nickel finish

3-PIN XLR PLUG TO PHONO (RCA) JACK

Order Code	type
CAA11	nickel finish

3-PIN XLR JACK TO PHONO (RCA) PLUG

Order Code	type
CAA13	mono

3-PIN XLR JACK TO PHONO (RCA) JACK

Order Code	type
CAA12	mono

2.5MM (3/32") PHONE PLUG TO 1/8" PHONE JACK, STEREO

Order Code	type
CAA22	nickel plated

1/8" PHONE JACK TO 1/8" PHONE PLUG, STEREO

Order Code	type
CAA21	nickel plated

1/8" PHONE JACK TO 1/4" PHONE PLUG, MONO

Order Code	type
CAA24	nickel plated

1/8" PHONE JACK TO PHONO (RCA) PLUG

Order Code	type
CAA37	nickel plated

1/8" PHONE JACK TO 1/4" PHONE PLUG, STEREO

Order Code	type
CAA29	nickel plated

GOLD-PLATED 1/8" PHONE STEREO JACK TO 1/8" PHONE STEREO PLUG

Order Code	type
CAA30	gold plated

DUAL 1/8" PHONE MONO JACKS TO 1/8" PHONE MONO PLUG

Order Code	type
CAA16	nickel plated

DUAL 1/8" PHONE STEREO JACKS TO 1/8" PHONE STEREO PLUG

Order Code	type
CAA19	nickel plated

DUAL 1/8" PHONE STEREO JACKS TO 1/4" PHONE STEREO PLUG

Order Code	type
CAA33	nickel plated

1/4" PHONE MONO JACK TO 1/8" PHONE MONO PLUG

Order Code	type
CAA14	nickel plated

1/4" PHONE MONO JACK TO 1/8" PHONE STEREO PLUG

Order Code	type
CAA18	nickel plated

1/4" PHONE MONO JACK TO PHONO (RCA) PLUG

Order Code	type
CAA36	nickel plated

DUAL 1/4" PHONE STEREO JACKS TO 1/4" PHONE STEREO PLUG

Order Code	type
CAA34	nickel plated

5P DIN JACK TO 1/4" PHONE STEREO PLUG

Specifications:
• 5P DIN connector: 5 pins over 180°

Order Code	type
CAA31	nickel plated

5P DIN PLUG TO 1/4" PHONE STEREO PLUG

Specifications:
- 5P DIN connector: 5 pins over 180°

Order Code	type
CAA32	nickel plated

PHONO (RCA) JACK TO 1/8" PHONE MONO PLUG

Order Code	type
CAA15	nickel plated

PHONO (RCA) JACK TO 1/4" PHONE MONO PLUG

Order Code	type
CAA25	nickel plated

GOLD-PLATED PHONO (RCA) JACK TO 1/4" PHONE MONO PLUG

Order Code	type	remark
CAA26	gold plated	-
CAA26/90	gold-plated	90°

PHONO (RCA) JACK TO PHONO (RCA) JACK

Order Code	type
CAA42	nickel plated

NICKEL-PLATED PHONO (RCA) JACK TO PHONO (RCA) JACK

Order Code	type
CAA43	nickel plated

ADAPTERS FOR AUDIO

PHONO (RCA) PLUG TO PHONO (RCA) PLUG

Order Code	color band	type
CAA40B	black	nickel plated
CAA40R	red	nickel plated

GOLD-PLATED PHONO (RCA) JACK TO PHONO (RCA) JACK

Order Code	type
CAA44	gold-plated

DUAL PHONO (RCA) JACKS TO 1/8" PHONE MONO PLUG

Order Code	type
CAA17	nickel plated

DUAL PHONO (RCA) JACKS TO 1/8" PHONE STEREO PLUG

Order Code	type
CAA20	nickel plated

DUAL PHONO (RCA) JACKS TO 1/8" PHONE STEREO PLUG

Order Code	type
CAA47	nickel plated

DUAL PHONO (RCA) JACKS TO 1/4" PHONE MONO PLUG

Order Code	type
CAA27	nickel plated

DUAL PHONO (RCA) JACKS TO 1/4" PHONE STEREO PLUG

Order Code	type
CAA35	nickel plated

DUAL PHONO (RCA) JACKS TO PHONO (RCA) PLUG

Order Code	type
CAA38	nickel plated

GOLD-PLATED DUAL PHONO (RCA) JACKS TO PHONO (RCA) PLUG

Order Code	type
CAA39	gold plated

GOLD-PLATED DUAL PHONO (RCA) JACKS TO PHONO (RCA) PLUG

Order Code	type
CAA46	gold plated

DUAL PHONO (RCA) JACKS TO PHONO (RCA) JACK

Order Code	type
CAA41	nickel plated

GOLD-PLATED DUAL PHONO (RCA) JACKS TO DUAL PHONO (RCA) JACKS

Order Code	type
CAA45	gold plated

TV CONNECTORS

TV/FM/SAT SPLITTERS

DISEqC SWITCH FOR 2 LNBs (2 x 1)
ANTSW1

This DISEqC switch allows you to connect 2 LNBs or 2 satellite dishes to your satellite reciever.
Features:
• works with receivers supporting DiSEqC 2
• the selection of the LNBs is done by choosing the appropriate DiSEqC port A, B (C or D) in the setup menu of the receiver
Specifications:
• frequency range: 900 - 2400Mhz
• insertion loss: 3dB
• power passing: max. 500mA
• dimensions: 2 3/4" x 63/64" x 19/32" + tabs

Packaging	EAN code	54 10329 35592 0
Carton /200	UPC code	

ECONOMIC MEASURING ACCESSORIES

BANANA PLUGS

BANANA PLUG 0.16" WITH SOLDERING CONNECTION

Specifications:
• solder connections
• length: 1.7"

Order Code	color
CM9B	black
CM9R	red

BANANA PLUG 0.16" WITH TRANSVERSE HOLE

Specifications:
• length: 1.5"
• screw connection for cables with a max. Ø of 0.06" sqt

Order Code	color
CM2B	black
CM2BL	blue
CM2G	green
CM2R	red
CM2Y	yellow

BINDING POSTS

BINDING POSTS 0.16"

Specifications:
• length: 1.7"
• drill hole: 0.3"
• panel thickness: max. 0.28"

Order Code	color
CM3B	black
CM3R	red

BINDING POSTS 0.16" SOLDER

Specifications:
• length: 1.0"
• drill hole: Ø 0.35"
• panel thickness: max. 0.2"

Order Code	color
CM4B	black
CM4BL	blue
CM4G	green
CM4R	red
CM4Y	yellow

DUAL BINDING POSTS

Specifications:
• for 0.16" banana plugs
• dimensions: 1.5" x 1.3"
• distance between connectors: 0.79"
• drill hole: Ø 0.15" (x2)

Order Code	color
CM14R	red / black
CM15R	red / black

CM14R   CM15R

ALLIGATOR CLIPS

ALLIGATOR CLIPS WITH BOOT 1.1"

Order Code	color
CM5B	black
CM5R	red

ALLIGATOR CLIPS WITH BOOT 1.7"

Order Code	color
CM6B	black
CM6R	red

ALLIGATOR CLIPS NO BOOT WITH SCREW (2.2")

Specifications:
• screw connection for cables

Order Code	color
CM8B	black
CM8R	red

SETS WITH 10 WIRES WITH BOOTED CROCODILE CLIPS

Specifications:
- cable size: 10 x 0.0004" (outer Ø : 0.71")
- colors: 2 x black, 2 x red, 2 x white, 2 x green, 2 x yellow

Order Code	cable length	booted alligator clips
CM12	21.6"	1.3"

ALLIGATOR CLIPS

INSULATED ALLIGATOR CLIPS HARD COVER (2.1")

Specifications:
- for 0.16" banana plug
- length: 2.1"

Order Code	color
CM18B	black
CM18R	red

BATTERY CLIPS

BATTERY CLIPS 10A

Specifications:
- solder connection
- length: 2,5"

Order Code	color
CM16B	black
CM16R	red

WIRE CLIPS

1.6" WIRE CLIPS

Specifications:
- solder connection
- length: 1.6"

Order Code	color
CM22B	black
CM22R	red

WIRE CLIPS 5.7" FOR CABLE CONNECTION

Specifications:
- suitable for cable and 4mm banana plug
- length: 5.7"

Order Code	color
CM23B	black
CM23R	red

TERMINAL BLOCKS

SCREW TERMINAL BLOCKS, PITCH = 0.2"
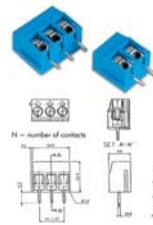
Features:
- blocks are stackable

Specifications:
- body: glass-filled polyester (ULM94VO)
- contact: tin-plated brass (CuZn)
- wire protection: stainless steel
- pitch: 5mm
- mounting hole: Ø1.5mm
- current rating: max. 16A / way
- operating temperature: -33°C to +120°C
- soldering temperature: +260°C (max. 10 seconds)
- color: blue

Features:
- blocks are stackable

Specifications:
- body: glass-filled polyester (ULM94VO)
- contact: tin-plated brass (CuZn)
- wire protection: stainless steel
- pitch: 5mm
- mounting hole: Ø1.5mm
- current rating: max. 16A / way
- operating temperature: -33°C to +120°C
- soldering temperature: +260°C (max. 10 seconds)
- color: blue

Order Code	number of contacts
SCREW02	2
SCREW03	3

ZIF CONNECTORS

ZIF IC SOCKETS

Features:
- universal: 7.62 / 15.24
- IC test sockets

Specifications:
- pitch: 0.1"

Features:
- universal: 7.62 / 15.24
- IC test sockets

Specifications:
- pitch: 0.1"

Order Code	number of contacts
28PZIF	28
40PZIF	40

SOLDERLESS TERMINALS AND CONNECTORS

TRAY CARDS

ASSORTMENT OF 100 TERMINALS AND CONNECTORS
BL/F100

Specifications:
- 100pcs

Packaging	⬒	EAN code	54 10329 30097 5
Carton	/100	UPC code	

CRIMPING TOOL SET
BL/FCT

Specifications:
• includes: VTCT tool for crimping insulated terminals, has
  cutter stripper and 80 pieces assorted insulated terminals

Packaging		EAN code	54 10329 20027 5
Carton	/50	UPC code	8 36479 00043 8

TELEPHONE AND MODULAR PLUGS

TELEPHONE CONNECTORS AND EXTENSION CABLES

MODULAR

TELEPHONE RINGER / FLASHER
TELRI

Add an extra ringer to your phone.
Features:
• 3 operation modes: flasher only / flasher + soft buzzer /
  flasher + hard buzzer
• easy installation, just plug it in
• no battery required
• wall mounting is possible
• only suitable for use with PSTN telephone lines

Packaging		EAN code	54 10329 21637 5
Carton	/50	UPC code	

COMPUTER CONNECTORS

USB CONNECTORS

Order Code	type	remark	contact rating
CC088	USB A female	single connector	24VDC / 1A
CC088B	USB A female	single connector	24VDC / 1A
CC089	USB B female	single connector	24VDC / 1A
CC089B	USB B female	single connector	24VDC / 1A
CC090	USB A female	double connector	24VDC / 1A

Packaging		EAN code	54 10329 23588 8
Carton	/25	UPC code	

CC088

Packaging		EAN code	54 10329 35862 4
Carton	/25	UPC code	

CC088B

Packaging		EAN code	54 10329 23590 1
Carton	/25	UPC code	

CC089

Packaging		EAN code	54 10329 35864 8
Carton	/25	UPC code	

CC089B

Packaging		EAN code	54 10329 23593 2
Carton	/25	UPC code	

CC090

ALKALINE

CAMELION - SUPER ALKALINE (RED SERIES)

Order Code	nom. voltage	typ. capacity	IEC	format	others	dimensions	package
LR03C	1.5V	1100mAh	LR03	AAA	AM4, Micro, MN2400, E92, 4003	Ø7/16" x 1 3/4"	4 batt. in blister
LR03C/24	1.5V	1100mAh	LR03	AAA	AM4, Micro, MN2400, E92, 4003	Ø7/16" x 1 3/4"	24 batt. in box
LR6C	1.5V	2600mAh	LR6	AA	AM3, Mignon, MN1500, E91, 4006	Ø35/64" x 2"	4 batt. in blister
LR6C/24	1.5V	2600mAh	LR6	AA	AM3, Mignon, MN1500, E91, 4006	Ø35/64" x 2"	24 batt. in box
6LR61C	9V	500mAh	6LR61	9V	E-block	1" x 11/16" x 1 7/8"	1 batt. in blister

Packaging		EAN code	42 60033 15004 2
Carton	/24	UPC code	

LR03C

Packaging		EAN code	54 10329 35152 6
Carton		UPC code	

LR03C/24

Packaging		EAN code	69 21850 60006 3
Carton	/144	UPC code	

LR6C

Packaging		EAN code	54 10329 31999 1
Carton		UPC code	

LR6C/24

Packaging		EAN code	42 60033 15006 6
Carton	/12	UPC code	

6LR61C

BUTTON CELLS & BUTTON CELL BATTERIES

CAMELION - ELECTRONIC BATTERIES

Order Code	nom. voltage	typ. capacity	IEC	format	others	dimensions	package
GP23GAC	12V	33mAh	-	GP23A	MN21, E23A, LRV08, 8LR932, 4223, V23A	Ø3/8" x 1 1/8"	5 batt. in blister
GP27GAC	12V	18mAh	-	GP27A	MN27	Ø5/16" x 1 1/8"	1 batt. in blister

Packaging		EAN code	42 60033 15330 2
Carton	/360	UPC code	

GP23GAC

Packaging		EAN code	69 21850 60348 4
Carton	/20	UPC code	

GP27GAC

LITHIUM

CAMELION - BUTTON CELLS

Order Code	nom. voltage	typ. capacity	IEC	format	others	dimensions	package
CR2032C	3.0V	230mAh	CR2032	-	5004LC	0.8" x 0.13"	5 batt. in blister

Packaging		EAN code	69 21850 60160 2
Carton	/10	UPC code	

CR2032C

WATCH BATTERIES

CAMELION

Order Code	nom. voltage	typ. capacity	dimensions	IEC	cross reference	batt. in blister
V13GAC	1.5V	125mAh	Ø0.46" x 0.21"	LR44	A76, AG13, SR44, V357	10
V362AC	1.5V	21mAh	Ø0.31" x 0.08"	LR721	D362, 362, LR721, AG11	10
V364AC	1.5V	13mAh	Ø0.27" x 0.08"	LR621	D364, 364, LR621, AG1	10
V371AC	1.5V	30mAh	-	371, LR921, AG6	-	10
V377AC	1.5V	18mAh	Ø0.27" x 0.10"	LR626	377, LR621, AG4	10
V379AC	1.5V	12mAh	Ø0.23" x 0.08"	LR521	D379, 379, LR521, AG0	10
V386AC	1.5V	108mAh	Ø0.46" x 0.17"	LR43	D386, 386, LR43, AG12	10
V389AC	1.5V	68mAh	Ø0.46" x 0.12"	LR1130	D389, 389, LR1130, AG10, SR54	10
V391AC	1.5V	42mAh	Ø0.46" x 0.08"	SR55	D391, 391, LR1120, AG8	10
V392AC	1.5V	28mAh	Ø0.31" x 0.14"	LR41	D392, 392, LR41, AG3	10
V393AC	1.5V	52mAh	Ø0.31" x 0.21"	SR48	D393, 393, LR754, AG5	10
V394AC	1.5V	50mAh	Ø0.37" x 0.14"	SR45	D394, 394, LR936, AG9	10
V395AC	1.5V	34mAh	Ø0.37" x 0.10"	SR57	D395, 395, LR926, AG7	10
V396AC	1.5V	25mAh	Ø0.31" x 0.10"	LR726	D396, 396, LR726, AG2	10

V386AC

V389AC

V391AC

V392AC

V393AC

V394AC

V395AC

V396AC

V13GAC

V362AC

V364AC

V371AC

V377AC

V379AC

BATTERY CHARGERS

BATTERY CHARGERS FOR NICD & NIMH BATTERIES

5-IN-1 USB NiMH AAA CHARGER AND POWER PACK
VL118USB

Features:
• the ideal power pack for use with your portable music player
• charge the power pack and use it as a portable power supply
• charging via PC or car adapter with 5VDC USB output
• instant power through USB
• torch with bright LED
• 2 individual charging channels
• 6 levels of protection:
    - negative delta (-dV)
    - cutoff after charging time of 3h40
    - temperature sensor
    - reverse polarity protection
    - short-circuit protection
    - defective or non-rechargeable batteries detection
• can be used with following battery types: 4 x HR3C/11 (not incl.) or 4 x HR3C (not incl.)

Specifications:
• power pack input: 5VDC (USB-powered)
• power pack output: 2 x 2.8VDC / 300mA
• USB output: 5VDC / 1A (USB2.0)
• car adapter input: 12VDC / 650mA
• car adapter output: 5VDC / 1A
• charging time:
    - NiMh AAA 1000mAh: 3.2h
    - NiMH AAA 600mAh: 2.0h
• operating temperature: 32° F ~ 77°F
• storage temperature (batteries excluded): -4°F ~ 149°F
• dimensions:
    - power back: 2 11/64" x 3 15/32" x 55/64"
    - car adapter: 100 x 42 x 20mm
• total weight (without batteries): 7.4 oz

Packaging		EAN code	
		54 10329 37985 8	
Carton		UPC code	

UNIVERSAL NiMH & NiCd SMART CHARGER WITH LCD DISPLAY
VL6278U

Features:
• for: NiMH & NiCd batteries
• LCD display: lets you monitor the batteries' status
• recharges 1 to 4 AAA, AA, C & D batteries and 1 or 2 E-block 9V-batteries (V7/8HC)
• charge and discharge function
• uses a charging system with pulses of constant current
• with negative delta-V cutoff function
• protection against short circuits and polarity reversal
• identification of defective batteries
• LED indication:
    - charging: red
    - discharging: yellow
    - ready: green

Specifications:
• power supply: DC 12V (via incl. 100~240V/50Hz AC/DC adapter)
• dimensions: 7 1/2" x 5 1/16" x 2 13/32"
• charge current:
    - AA, C & D: 1000mA
    - AAA: 500mA
    - 9V E-block: 13mA
• trickle charge current:
    - AA, C & D: 100mA
    - AAA: 50mA
    - 9v E-block: -

Packaging		EAN code	
Carton		UPC code	

NiMH / NiCd BATTERY CHARGER FOR AA OR AAA BATTERIES - AC AND CAR ADAPTER
VL9878U

Features:
• powered by the supplied AC-adapter when using indoor or by the supplied 12VDC car adaptor when used in the car
• recharges 2, 4, 6 or 8 pieces AA or AAA NiMH/NiCd batteries at a time
• safety timer to prevent overcharge
• automatic charging current selection for size AA and AAA batteries
• red LED display while charging
• reverse-polarity protection

Specifications:
• charging times: from 4 to 7 hours depending on size and type of batteries

Packaging		EAN code	
Carton		UPC code	

BATTERY CHARGERS FOR NICD & NIMH BATTERIES (4 AA BATTERIES INCL.)

Ni-MH ULTRAFAST CHARGER FOR AA, AAA BATTERIES, 4 Ni-MH AA 2500mAh BATTERIES INCLUDED
VL2500HUF

Features:
• charges 1 to 4 AA or AAA batteries in 30 minutes
• powered by a switching AC power adapter with 100-240VAC 50/60Hz input for universal use (U.S./U.K. and Europlug included)
• 4 independent channels with LED indicator for rapid charge, trickle charge or detection of defective batteries
• automatic charge current selection for AA & AAA batteries (HR3C, HR3C/11, HR6C, HR6C/20, HR6C/22, HR6C/25B)

• controlled by intelligent microprocessor
• negative delta V cut-off function
• temperature sensors protect the charger from overheating
• with safety timer
• with 12V car plug charging system
• 4 x AA 2500mAh NiMH Camelion batteries (HR6C/25B) incl.

Specifications:
• charging time:
    - AA size: 2000mAh => 30 minutes
    - AA size: 2100mAh => 32 minutes
    - AA size: 2200mAh => 33 minutes
    - AA size: 2300mAh => 35 minutes
    - AA size: 2400mAh => 36 minutes
    - AA size: 2500mAh => 38 minutes
    - AAA size: 650mAh => 25 minutes
    - AAA size: 750mAh => 29 minutes
    - AAA size: 850mAh => 32 minutes
    - AAA size: 900mAh => 34 minutes
• the charging time will vary according to the batteries' maximum capacity, the charge conditions and the amount of capacity left in each battery

Packaging		EAN code	
		54 10329 33925 8	
Carton	/24	UPC code	

USB TRAVEL CHARGER (FOR 2 BATTERIES) + 4 x AA NiMH BATTERIES (2500mAh)
VL2500USB

Features:
- pocket battery charger powered by USB port
- charges 1 to 2 AA or AAA NiMH or NiCd batteries
- possibility to charge through a 5V USB port or through a mobile phone charger (depending on model)
- with battery charging LED indication
- 4 x NiMH 2500mAh AA batteries included (HR6C/25B)

Specifications:
- charging time:
  - NiMH AA: 2500mAh => 12hrs
  - NiCd AA: 900mAh => 5hrs
  - NiMH AAA: 900mAH => 10hrs
  - NiCd AAA: 300mAh => 3.5hrs
- the charging time will vary according to the batteries' maximum capacity, the charge conditions and the amount of capacity left in each battery
- power supply: 5VDC / 500mA
- output:
  - 2 x (1.4VDC / 220mA) (AA size)
  - 2 x (1.4VDC / 100mA) (AAA size)
- operating temperature: 32°F ~104°F
- storage temperature: -4°F ~ 140°F
- dimensions: 3 5/16" x 1 11/32" x 1 9/64"
- weight: 1 1/2 lbs.

Packaging	EAN code
	54 10329 35844 0

Carton	UPC code

BATTERY TESTERS

VELLEMAN POCKET BATTERY TESTER
BATTEST

Features:
- for AAA (LR3), AA (LR6), C (LR14), D (LR20), E-block (9V) and button cell batteries / blister packed

Packaging	EAN code
	54 10329 20527 0

Carton	UPC code
/500	8 36479 00589 1

UM 1.2.3.4.5.006P(9V) AND BUTTON CELLS
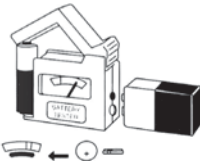
MULTI-PURPOSE BATTERY TESTER WITH LCD DISPLAY
BATTEST2

Features:
- for AAA (LR3), AA (LR6), C (LR14), D (LR20), E-block (9V), CR123A, CR2, CR-V3, 2CR5,CR-P2 and button cell batteries
- battery status indicated on LCD display
- designed for use with standard, Lithium-Ion and rechargeable batteries

Specifications:
- power supply: 1 x AAA battery (LR03C), not incl.
- dimensions: 4 5/8" x 3 1/2" x 7/8"

Packaging	EAN code
	54 10329 35933 1

Carton	UPC code
	8 36479 00814 4

1 x AAA

BATTERY TESTER
VTTEST7

Features:
- for batteries:
  - button cells: 1.5V/1mA
  - AA and N: 1.5V/50mA
  - C and D: 1.5V/150mA
  - lithium cells: 3V/1mA, 6V / 10mA, 9V/10mA, 12V/10mA, 15V/10mA, 22.5V/10mA

Specifications:
- dimensions: 3.9" x 2.5" x 1.3"
- weight: 3.0oz

Packaging	EAN code
	54 10329 23466 9

Carton	UPC code
/100	8 36479 00550 1

BATTERY HOLDERS, SNAPS AND PARTS

BATTERY SNAPS FOR E-BLOCK BATTERIES (6LR61)

BATTERY SNAP FOR 1 x 9V-CELL ("I"-TYPE)
BS-IR

Specifications:
- I-type
- ABS
- wire length: 15cm

Packaging	EAN code
	54 10329 23885 8

Carton	UPC code

BATTERY SNAP FOR 1 x 9V-CELL ("T"-TYPE)
BS-TR

Specifications:
- T-type
- ABS

Packaging	EAN code
	54 10329 30044 9

Carton	UPC code

BATTERY SNAP FOR 1 x 9V-CELL ("I"-TYPE)
SNAP9V

Specifications:
- I-type
- low-cost

Packaging	EAN code
	54 10329 23144 6

Carton	UPC code
/50	

BATTERY HOLDERS FOR AAA-SIZE BATTERIES (LR3)

BATTERY HOLDER FOR 1 x AAA-CELL (WITH SOLDER TAGS)
BH411D

Specifications:
• with solder tags

Packaging
Carton /50
EAN code 54 10329 29961 3
UPC code

BATTERY HOLDER FOR 4 x AAA-CELL (WITH SOLDER TAGS)
BH443D

Specifications:
• with solder tags

Packaging
Carton /50
EAN code 54 10329 29801 2
UPC code
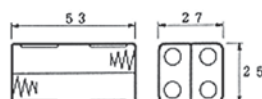
BATTERY HOLDERS FOR AA-SIZE BATTERIES (LR6)

BATTERY HOLDER FOR 1 x AA-CELL (WITH SOLDER TAGS)
BH311D

Specifications:
• with solder tags

Packaging
Carton /50
EAN code 54 10329 24241 1
UPC code

BATTERY HOLDER FOR 2 x AA-CELL (WITH SNAP TERMINALS)
BH321B

Specifications:
• with snap terminals

Packaging
Carton
EAN code 54 10329 30016 6
UPC code
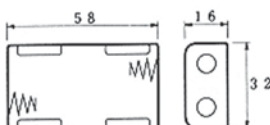
BATTERY HOLDER FOR 3 x AA CELLS (WITH LEADS)
BH331A

Specifications:
• with leads (150mm)

Packaging
Carton /50
EAN code 54 10329 30018 0
UPC code
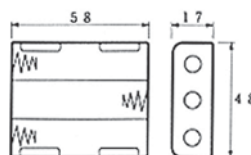
BATTERY HOLDER FOR 4 x AA-CELL (WITH SNAP TERMINALS)
BH341B

Specifications:
• with snap terminals

Packaging
Carton /50
EAN code 54 10329 29954 5
UPC code
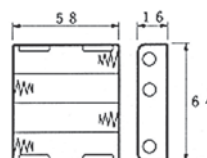
BATTERY HOLDER FOR 4 x AA-CELL (WITH USB CONNECTOR) + SWITCH
BH341USB

Packaging
Carton
EAN code 54 10329 37296 5
UPC code

BATTERY HOLDERS FOR C-SIZE BATTERIES (LR14)

BATTERY HOLDER FOR 1 x C-CELL (WITH SOLDER TAGS)
BH211D

Specifications:
• with solder tags

Packaging		EAN code	54 10329 29971 2
Carton	/60	UPC code	

Dimensions: 62, 25, 30
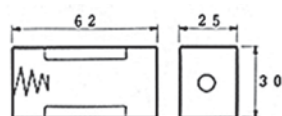
BATTERY HOLDER FOR 2 x C-CELL (WITH SNAP TERMINALS)
BH221B

Specifications:
• with snap terminals

Packaging		EAN code	54 10329 29974 3
Carton	/50	UPC code	

Dimensions: 106, 23, 55
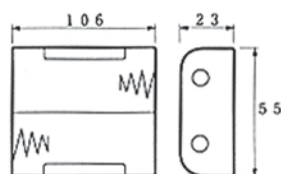
BATTERY HOLDER FOR 4 x C-CELL (WITH SNAP TERMINALS)
BH243B

Specifications:
• with snap terminals

Packaging		EAN code	54 10329 28213 4
Carton	/50	UPC code	

Dimensions: 106, 22, 59
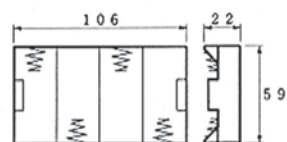
BATTERY HOLDERS FOR D-SIZE BATTERIES (LR20)

BATTERY HOLDER FOR 1 x D-CELL (WITH SOLDER TAGS)
BH111D

Specifications:
• with solder tags

Packaging		EAN code	54 10329 29965 1
Carton	/50	UPC code	

Dimensions: 68, 27, 35
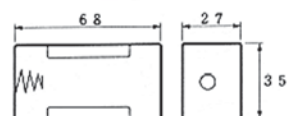
BATTERY HOLDER FOR 2 x D-CELL (WITH SNAP TERMINALS)
BH121B

Specifications:
• with snap terminals

Packaging		EAN code	54 10329 29803 6
Carton	/10	UPC code	

Dimensions: 71, 31, 72
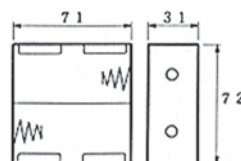
BATTERY HOLDER FOR 4 x D-CELL (WITH SNAP TERMINALS)
BH142B

Specifications:
• with snap terminals

Packaging		EAN code	54 10329 41571 6
Carton	/25	UPC code	

Dimensions: 133, 32, 74
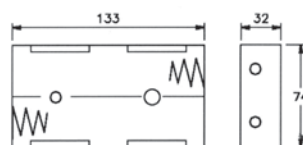
BATTERY HOLDERS FOR E-BLOCK BATTERIES (6LR61)

BATTERY HOLDER FOR 1 x 9V CELL (WITH LEADS)
BH9V

Specifications:
• with leads

Packaging		EAN code	54 10329 28220 2
Carton	/100	UPC code	

Dimensions: 55, 31, 14, 20
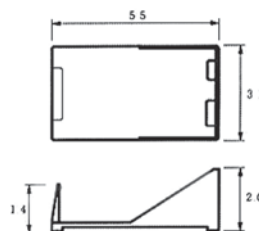
BUZZERS & SIRENS

BUZZERS

SINGLE-PULSE BUZZERS

The Velleman electric piezo buzzers are specifically designed for applications requiring a highly reliable alarm or signal with a completely solid state and no electromechanical contact (oscillating circuit is built in). They are replacing the conventional electromagnetic buzzers because of their low power consumption, the extremely clear and penetrating sound, the absence of electrical noise, their compact design and their limited weight. A variety of models is available for various tone functions.

Order Code	tone type	operating voltage	rated voltage	current consumption	osc. frequency	sound level	connector type	body color	weight
SV1	single / pulse	1-13V DC	12V DC	30mA	2.9kHz	105dB	leads	white	0.77oz

Packaging — EAN code 54 10329 29411 3
Carton /50 — UPC code 8 36479 00412 2

SV1

SUBMINIATURE BUZZERS

Specifications:
• buzzer with built-in oscillator
• flange mounting
• ABS case

Order Code	tone type	operating voltage	rated voltage	current consumption	osc. frequency	sound level	connector type	body color	weight
SV4	single	1.5-15V Dc	12V DC	12mA	2.8kHz	90dB	leads	black	0.35oz

Packaging — EAN code 54 10329 27319 4
Carton /100 — UPC code 8 36479 00415 3

SV4

PCB BUZZERS

PCB MINI BUZZERS

Features:
• extremely compact, ultrathin construction
• no electrical noise
• low current consumption yet high sound pressure level

Order Code	tone type	operating voltage	rated voltage	current consumption	osc. frequency	sound level	connector type	body color	weight
SV4/12-S	single	8-16V DC	12V DC	15mA	3.2kHz	85dB	pcb	beige	0.056oz
SV4/5-SN	single	4.5-5.5Vdc	5V DC	50mA	2.3kHz±0.4	85dB	pcb	black	0.056oz

Packaging — EAN code 54 10329 27609 6
Carton /1000 — UPC code 8 36479 00416 0

SV4/12-S

Packaging — EAN code 54 10329 43192 1
Carton — UPC code

SV4/5-SN

ECONOMICAL PCB MINI BUZZERS

Order Code	tone type	operating voltage	rated voltage	current consumption	osc. frequency	sound level	connector type	body color	weight
SV8	single	3-16V DC	12V DC	6mA	4kHz	85dB	pcb	black	0.035oz

Packaging — EAN code 54 10329 23890 2
Carton /100 — UPC code 8 36479 00418 4

SV8

Order Code	tone type	operating voltage	rated voltage	current consumption	osc. frequency	sound level	connector type	body color	weight
SV2	single	4-15V DC	12V DC	15mA	2.8kHz	85dB	pcb	black	0.31oz

Packaging — EAN code 54 10329 27315 6
Carton /1000 — UPC code 8 36479 00414 6

SV2

PANEL-MOUNTED BUZZERS

Order Code	tone type	operating voltage	rated voltage	current consumption	osc. frequency	sound level	connector type	body color	weight
SV5	single / pulse	3 - 28V DC	12V DC	8mA	3.5kHz	90dB	screw	gray	0.77oz
SV10	single / pulse	3-28V DC	12V DC	8mA	2.9kHz	90dB	faston	black	1.2oz

Packaging — EAN code 54 10329 23889 6
Carton /500 — UPC code 8 36479 00417 7

SV5

Packaging — EAN code 54 10329 32806 1
Carton /40 — UPC code 8 36479 00413 9

SV10

SOLID-STATE BUZZERS

Features:
• buzzer with built-in oscillator
• flange mounting
• ABS case

Order Code	tone type	operating voltage	rated voltage	current consumption	osc. frequency	sound pressure	connector type	body color	weight
SVM06	single	3-7V DC	6V DC	20mA	300-500Hz	75dB	leads	black	0.35oz
SVM12	single	7-17V DC	12V DC	15mA	300-500Hz	75dB	leads	black	0.35oz
SVM24	single	16-30V DC	24V DC	20mA	300-500Hz	75dB	leads	black	0.35oz

PIEZO TRANSDUCERS
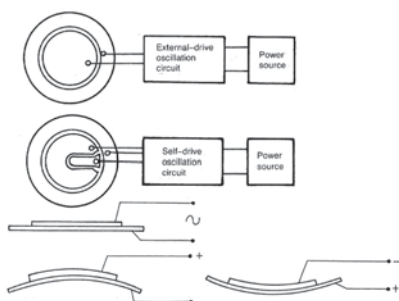
PIEZO TRANSDUCER 5Vac 4.0kHz 85dB LEAD TYPE
TV1
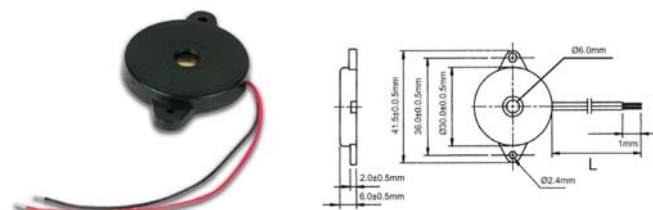
Specifications:
- tone type: external drive
- operating voltage: 3-28Vac
- rated voltage: 5Vac
- current consumption: 1.5mA
- resonant frequency: 4.0 ± 0.5kHz
- sound pressure level: 85dB
- connector type: leads
- body colour: black
- weight: 0.14oz

Packaging	Carton	EAN code	UPC code
	/20	54 10329 30311 2	

PIEZO TRANSDUCER 30Vac 0.5-20Hz 75dB LEAD TYPE
TV4
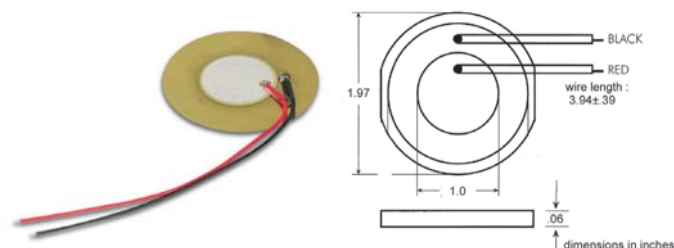
Specifications:
- tone type: piezo speaker
- operating voltage: 30Vac
- rated voltage: 15Vac
- current consumption: 1.5mA
- resonant frequency: 0.5-20 ± 0.5kHz
- sound pressure level: 75dB
- connector type: leads
- body colour: metal
- weight: 0.11oz

Packaging	Carton	EAN code	UPC code
	/50	54 10329 29450 2	

SIRENS

MINI PIEZO SIREN 6-15VDC / 140mA 107dB W/LEADS
SV/PS1

Specifications:
- ABS
- wired siren
- operating voltage: 6-15Vdc
- current consumption (at 12Vdc with siren): 200mA
- oscillating frequency: 1.5-3.5kHz
- sound pressure level (at 1m): 107dBA
- dimensions: 1.5" x 1.7" x 2.2"
- weight: 1.65oz
- mounting holes: 0.87"

Packaging	Carton	EAN code	UPC code
	/100	54 10329 23651 9	8 36479 00405 4

ELECTRONIC SIREN 6-12V DC / 1300mA 125dB W/LEADS
SV/PS5

Specifications:
- ABS
- wired siren
- operating voltage: 6-12Vdc
- current consumption (at 12Vdc with siren): 1300mA
- osc. frequency: 0.9-4kHz
- sound pressure level (at 1m): 125dBA
- dimensions: 3.9" x 4.3"(Ø)
- weight: 15oz
- mounting holes: 2.0" x 1.9"

Packaging	Carton	EAN code	UPC code
	/24	54 10329 23376 1	8 36479 00407 8

SMALL SIREN 5-15V DC / 250mA 120dB W/LEADS
SV/PS6

Specifications:
- ABS
- wired siren
- good dimensions/sound ratio
- operating voltage: 5-15Vdc
- current consumption (at 12Vdc with siren): 250mA
- osc. frequency: 1.5-4kHz
- sound pressure level (at 1m): 120dBA
- dimensions: 2.1" x Ø2.2"
- weight: 3.7oz
- mounting holes: 1.18"

Packaging	Carton	EAN code	UPC code
	/100	54 10329 23886 5	8 36479 00408 5

PIEZO SIREN 6-12V DC / 160mA 115dB W/LEADS
SV/PS7

Specifications:
• for general applications
• ABS
• wired siren
• operating voltage: 5.0 ~ 15Vdc
• current consumption (at 12Vdc with siren): 400mA
• osc. frequency: 1.5-3.5kHz
• sound pressure level (at 1m): 110dBA
• dimensions: 3.1" x Ø3.0"
• weight: 5.3oz
• mounting holes: 2.2" x 1.5"

Packaging	Carton	EAN code	UPC code
	/50	54 10329 29453 3	8 36479 00409 2

EXTERNAL SIREN FOR CONCEALED INSTALLATION
SV/PS93
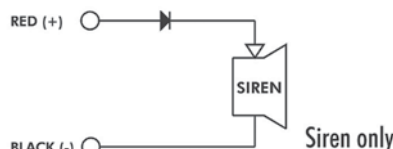
Outdoor siren for concealed installation.
Specifications:
• operating power: 10 - 14V DC / 150mA max.
• siren output: 120dB
• power cord: 10.6" (± 10%)
• can easily be affixed to a wall
• operating frequency: 2.4kHz - 3.7kHz (± 30%)
• operating temperature: -4°F to +140°F max. (10 min.)
• color: ivory
• dimensions: 4.8" x 2.8" x 1.4"

Packaging	Carton	EAN code	UPC code
	/100	54 10329 23887 2	8 36479 00410 8

SIREN + BLUE STROBE IN HOUSING + LED
SV/PSL3B

Features:
• UV-proof, hi-impact (polycarbonate housing)
• four strobe lights
• protected against polarity reversal
• flashlight or siren with flashlight
• LED light
Specifications:
• operating voltage: 6-15Vdc
• power consumption: 200mA (siren) / 250mA (strobe)
• siren output: 110dB
• colour: blue
• dimensions: 4.72" x 2.91" x 1.66"

Packaging	Carton	EAN code	UPC code
	/50	54 10329 33439 0	

SIREN + RED STROBE IN HOUSING + LED
SV/PSL3R

Features:
• UV-proof, hi-impact (polycarbonate housing)
• four strobe lights
• protected against polarity reversal
• flashlight or siren with flashlight
• LED light
Specifications:
• operating voltage: 6-15Vdc
• power consumption: 200mA (siren) / 250mA (strobe)
• siren output: 110dB
• colour: red
• dimensions: 4.72" x 2.91" x 1.66"

Packaging	Carton	EAN code	UPC code
	/50	54 10329 33440 6	

SWITCHES

ROCKER SWITCHES

POWER ROCKER SWITCHES

POWER ROCKER SWITCHES - 10A/250VAC

Specifications:
• contact rating: 10A/250Vac, 16A/125Vac
• electrical life: 20000 cycles
• mechanical life: 50000 cycles
• contact resistance: 50mohm
• insulation resistance: min. 100Mohm at 500Vdc
• dielectric strength: 1500Vac / 1 minute
• materials:
   - housing: 66 nylon (UL94V-2)
   - actuator: 66 nylon (UL94V-2)
   - movable contacts: copper, silver-plated
   - stationary contacts: copper, silver-plated
   - terminals: copper, silver-plated
   - contact: spring-loaded

R901-SERIES
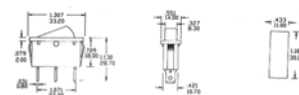
Order Code	type	cap	remark
R901A	ON-OFF SPST	red	with red neon light

R905 TO R906-SERIES
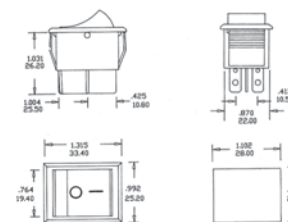
Order Code	type	cap	remark
R905B	ON-ON DPDT	black	-

PUSH-BUTTON SWITCHES

PUSH-BUTTON SWITCHES

Specifications:
- dielectrical strength: 1500V AC
- contact resistance: 30mohm max.
- insulation resistance: 100Mohm

R1400-R1500 PUSH-BUTTON SWITCHES
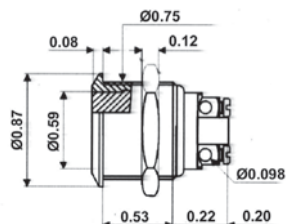
Features:
- anti-vandal

Specifications:
- contacts: off-(on) silver
- material: brass nickel
- contact resistance: 35mohm max.
- insulation resistance: 500V DC 100Mohm min.
- dielectric strength: 1 min. 1000V AC
- mechanical life: 50000 cycles
- electrical life: 10000 cycles
- drill Ø: 0.75"

Order Code	type	ratings
R1400A	OFF-(ON) SPST	48V / 2A max.

KEY PUSH-BUTTON SWITCHES

SQUARE-KEY PUSH-BUTTON SWITCHES

SQUARE-KEY PUSH-BUTTON SWITCHES
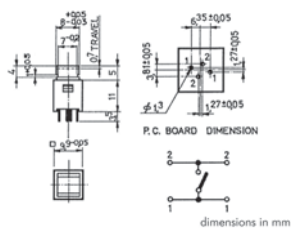
Specifications:
- mechanical operation: momentary click
- travel: 1/32"
- operating force: 2.1N
- contacts: silver-plated
- contact rating: 20mA - 35Vdc
- contact resistance: < 25mohm
- operating temperature: -4°F to 158°F

Order Code	type	
S500	off-(on)	different caps available

ROUND-KEY PUSH-BUTTON SWITCHES

ROUND-KEY PUSH-BUTTON SWITCHES - SQUARE
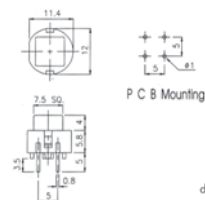
Specifications:
- mechanical operation: momentary click
- travel: 0.8mm
- operating force: 1.3N
- contacts: silver-plated
- contact rating: 10mA - 35Vdc
- contact resistance: < 100mohm
- operating temperature: -20°C to +85°C

Order Code	description	colour
D6	square key switch 7.5mm	red

TACTILE SWITCHES

TACTILE SWITCH 0.24" x 0.24" HEIGHT : 0.28"
KRS0610
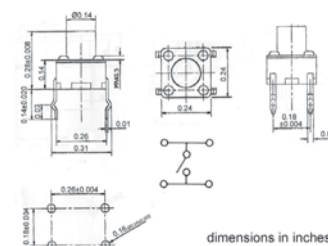
Specifications:
- dimensions: 0.24" x 0.24"
- height: 0.28"

Packaging	Carton	EAN code	UPC code
		54 10329 33885 5	

TACTILE SWITCH 0.24" x 0.24" HEIGHT : 0.20"
KRS0612

Specifications:
- dimensions: 0.24" x 0.24"
- height: 0.20"

Packaging	Carton	EAN code	UPC code
		54 10329 44361 0	8 36479 00592 1
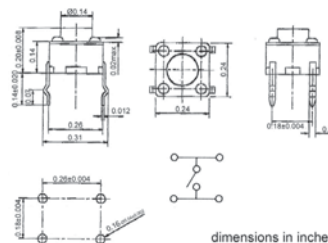
SWITCHES

DIP SWITCHES

Specifications:
• electrical and mechanical specifications:
  - contact rating (carry):
    · (a): 50Vdc 100mA in constant situation
    · (b): 24Vdc 50mA with make-and-break
  - contact resistance (at current 100mA):
    · (a): initially max. 30mohm
    · (b): 100mohm max. after life test
  - insulation resistance (at voltage 500Vdc): min. 1000Mohm between adjacent terminals
  - capacitance: 5pF between adjacent terminals
  - dielectric breakdown voltage: 500Vdc / 1minute
  - operating temperature range: -40°C to +70°C, no failures
  - shock: DIP switches withstand a saw-tooth waveform of 20gr 11ms, with no contact opening > 10 microseconds
  - vibration: MIL-STD-202F-method 201A, frequency : 10-55-10Hz/1 min., direction : X, Y, Z three directions that are perpendicular to each other. No mechanical damage or intermittent change of switch setting during or after testing
  - markings: special side or top markings are optional
• packing:
  - all DIP switches are shipped in standard IC tubes with all poles in the 'off' position

STANDARD DIP SWITCHES

PIANO DIP SWITCHES
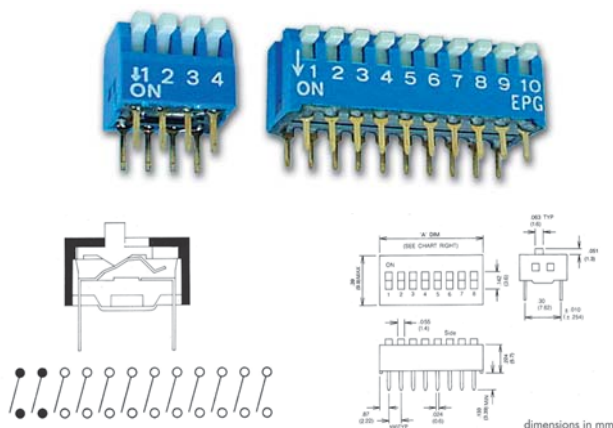
Specifications:
• materials and finish:
  - case: UL94-VO, PBT. PBT is glass-fibre reinforced
  - cover: UL94-VO, PBT. PBT is glass-fibre reinforced
  - actuators: UL94-VO, PBT. PBT is glass-fibre reinforced
  - terminals: phosphor bronze with 3 micro inches of gold plating over nickel
  - top seal: polyester film
Specifications:
• mechanical life: min. 5000 operations per switch
• electrical life: min. 2000 operations per switch, 50mA/24Vdc
• ratings:
  - non-switching: 100mA, 50Vdc
  - switching: 50mA, 24Vdc
• circuit:
  - single-pole single-throw (SPST)
  - our standard : push down = 'on'
  - (push down for 'off' is optional)

Packaging	Carton	EAN code	UPC code
		54 10329 26869 5	

Order Code	number of switches	length
DS-4P	4	11.40mm

MICROSWITCHES

STANDARD 12A SERIES

Specifications:
• operating force: 60g
• contact resistance: initially max. 15mohm
• insulation resistance: min. 100Mohm (at 500V DC)
• dielectric strength: 1000V AC for 1 minute
• mechanical life: min. 1000000 operations
• electrical life: min. 100000 operations (full load)
• dimensions: 0.63" x 1.09" x 0.41"
• ratings: 12A / 125V AC, 6A / 250V AC
• return force: 7g
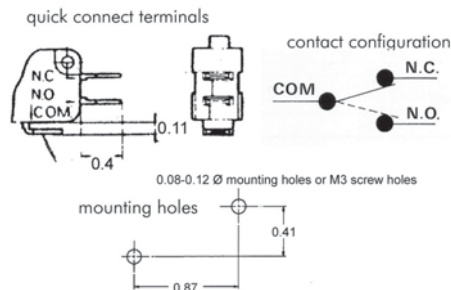
MICRO SWITCH NO ACTUATOR
MS12

Features:
• no actuator

Packaging	Carton	EAN code	UPC code
			8 36479 00359 0
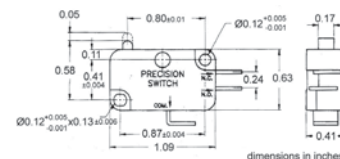
12A MICRO SW CHANGEOVER LONG LEVER
MS12-L

Features:
• long lever

Packaging	Carton	EAN code	UPC code
			8 36479 00360 6
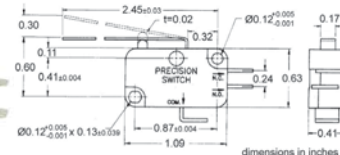
MICRO SWITCH 12A, LONG LEVER WITH ROLLER
MS12-R
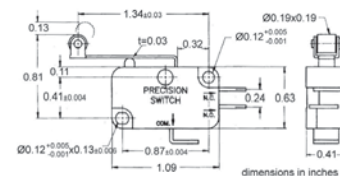
Features:
• long lever with roller
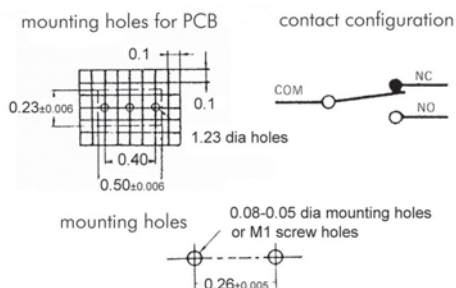
Packaging	Carton	EAN code	UPC code
			8 36479 00361 3

SUPERMINIATURE BASIC SWITCHES

mounting holes for PCB

contact configuration

0.1
0.23±0.006
0.1
1.23 dia holes
0.40
0.50±0.006

COM
NC
NO

mounting holes

0.08-0.05 dia mounting holes or M1 screw holes

0.26±0.005

Specifications:
- contact resistance: initially max. 15mohm
- insulation resistance: 100Mohm min. (at 500V DC)
- dielectric strength: 1000V AC for 1 minute
- mechanical life: min. 1000000 operations
- electrical life: min. 100000 operations at full load
- dimensions: 0.26" x 0.50" x 0.23"

SUPERMINIATURE MICROSWITCH 3A
MS3-LPCB

Features:
- with lever

Packaging	EAN code
Carton	UPC code 8 36479 00666 9

0.55
t=0.11
0.12
0.34
0.27

dimensions in inches

MINIATURE BASIC SWITCHES, 5A

solder terminal

mounting holes

0.37±0.0004

0.25
0.13
0.25
0.12-0.06 dia holes

contact configuration

COM
NC
NO

Specifications:
- contact resistance: initially max. 30mohm
- insulation resistance: min. 100Mohm at 500V DC
- dielectric strength: 1000V AC for 1 minute
- mechanical life: min. 1000000 operations
- electrical life: min. 200000 operations
- ratings: 5A / 125V DC, 3A / 250V AC
- dimensions: 0.40" x 0.78" x 0.25"

5A MICRO SW CHANGEOVER LONG LEVER
MS5-L

Features:
- long lever

Packaging	EAN code
Carton	UPC code 8 36479 00363 7

1.48
0.16
t=0.011
0.47
0.67

dimension in inches

MICROSWITCH 5A, LEVER WITH LONG ROLLER
MS5-R

Features:
- roller long

Packaging	EAN code 54 10329 29430 4
Carton	UPC code 8 36479 00364 4

0.57
t=0.012
0.13 x 0.19
0.57
0.76
0.35
0.29

dimensions in inches
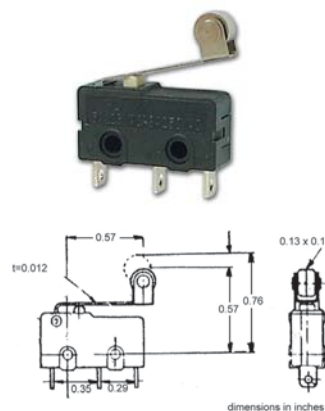
REED SWITCHES & MAGNETS

REED SWITCHES

REED SWITCH 1 x NO CONTACT
REEDSW2

NEW

Ø0.5 [0.020]
Ø2.2 [0.087]
14 [0.551]
22.05 [0.868]
44.1 [1.736]
mm [*]
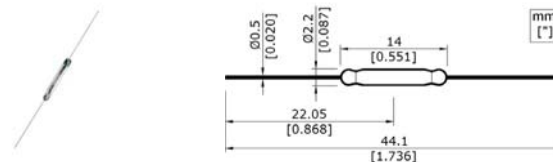
Specifications:
- switch: 1 x N.O.
- type: Meder KSK-1A66-1020
- max. contact rating: 10W
- max. switching voltage: 200Vdc
- max. switching current: 0.5A
- max. initial contact resistance: 200mohm
- min. breakdown voltage: 200Vdc
- min. insulation resistance: 10Gohm
- capacitance: 0.2pF

Packaging	Carton	EAN code 54 10329 43648 3	UPC code

KEYBOARDS

TELEPHONE KEYBOARDS

12 KEY KEYBOARD - COMMON OUTPUT - BLISTER-PACKED
12KEY

Features:
• common output
• blister-packed
Specifications:
• contact rating: 24V DC / 20mA
• contact resistance: 200ohm max.

Packaging		EAN code	54 10329 23794 3
Carton	/125	UPC code	8 36479 00000 1
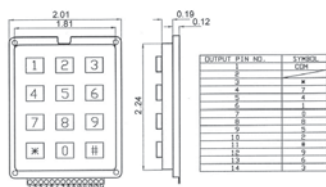
dimensions in inches

16 KEY KEYBOARD - MATRIX OUTPUT - BLISTER PACKED
16KEY

Features:
• matrix
• blister packed
Specifications:
• contact rating: 24V DC / 20mA
• contact resistance: 200ohm max.

Packaging		EAN code	54 10329 23795 0
Carton	/125	UPC code	8 36479 00008 7
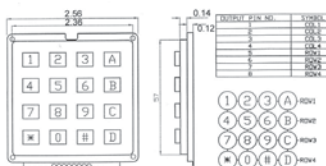
dimensions in inches

FANS & HEATSINKS

FANS

FANS DC

ECONOMICAL

direction of air delivery

0.18 (except BSS12/4LC : 0.14)
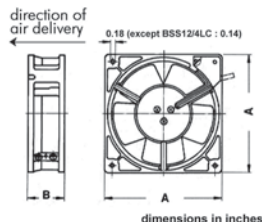
dimensions in inches

Specifications:
• construction: plastic housing and blades (to UL94V-0 rating)
• operating temperature:
  - sleeve bearing: 14°F to 149°F
  - ball bearing: -23°F to 167°F
• insulation resistance: 10Mohm min. at 500V DC
• dielectric strength: 5mA max. at 500V AC (one minute)

Order Code	type	size	bearing	rated voltage	max. airflow	current	speed	noise (at 1m)	connection
BSS12/4LC	SP401012M	1.6" x 1.6" x 0.5"	sleeve	10.2-13.8 Vdc	0.18 m³ / min	0.09A	5000rpm	25dBA	leads
BSS12/6LC	SP602512M	2.4" x 2.4" x 1.0"	sleeve	12V DC	21yd³ / hr	0.11A	3200rpm	25dBA	leads

FANS DC - VELLEMAN

BLS12/120
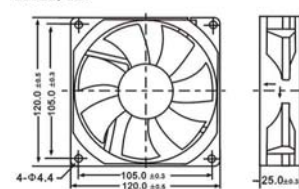
Specifications:
• material: plastic
• operating temperature: -20°C to +40°C

Order Code	size (A x A x B)	bearing	rated voltage	air flow	current	speed	noise (at 1m)	connection	weight
BLS12/120	4.72" x 4.72" x 0.98"	sleeve	12Vdc	165.5yd³/hr	0.28A	2000rpm	35.5dBA	leads	5.78oz.
BLS12/40	1.57" x 1.57" x 0.40"	sleeve	12Vdc	15.7yd³/hr	0.1A	6000rpm	25dBA	leads	0.5oz.
BLS12/60	2.36" x 2.36" x 0.98"	sleeve	12Vdc	39.9yd³/hr	0.14A	3500rpm	22.5dBA	leads	2.05oz.
BLS12/80	3.15" x 3.15" x 0.98"	sleeve	12Vdc	73.25yd³/hr	0.14A	2600rpm	29.5dBA	leads	2.89oz.
BLS12/92	3.62" x 3.62" x 0.98"	sleeve	12Vdc	96.8yd³/hr	0.16A	2400rpm	31.1dBA	leads	3.63oz.

FANS AC

SUNON

direction of air delivery
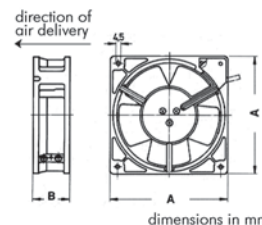
dimensions in mm

Specifications:
• materials:
  - blade: thermoplastic PBT (UL94-VO)
  - frame: die-cast ALU
• dielectric strength: 1500Vac for 2 seconds
• insulation resistance: 500Vdc, 100Mohm
• tolerance:
  - speed: ± 5%
  - airflow: ± 10%
• airflow: UL-recognised E77551, CSA-certified LR53000, VDE-approval 1350
• operating temperature:
  - sleeve bearing: -10°C to +70°C
  - ball bearing: -20°C to +80°C

Order Code	type	size (A x A x B)	bearing	voltage	air flow	current	speed	noise (at 1m)	connection
BSS220	SF23080AT2082HSL	3.1" x 3.1" x 1.0"	sleeve	220-240Vac (50-60Hz)	38-46yd³ / hr	0.07-0.07A	2350-2800rpm	29-33dBA	leads

FAN ACCESSORIES

FINGER GUARDS FOR BLOWERS

Order Code	
G120	for blower 4.7" x 4.7"
G40	for blower 1.6" x 1.6"
G60	for blower 2.4" x 2.4"
G80	for blower 3.1" x 3.1"

CPU COOLERS

486

CPU COOLER FOR 486
BSSCPU
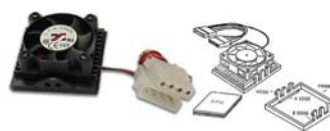
Designed for 486 CPUs or other ICs with the same outline.
Features:
- high heat transfer rate
- DUC (Device Under Cooling) reduces room temperature
- DUC prolongs life of the CPU
- simple and fast installation
- no need to move DUC during installation
- uses standard PC connectors

Specifications:
- low acoustic noise: < 26dB
- low profile
- material meets UL94V-O
- dimensions: 1.9" x 1.8" x 0.7"
- weight: 1.94oz
- comes with a pair of connectors (MOLEX)
- power supply: 12V DC - 0.1A

Packaging	
EAN code	54 10329 20556 0
Carton	/200
UPC code	8 36479 00049 0
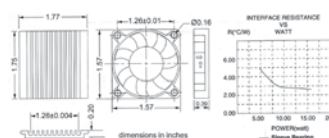
PELTIER THERMOELECTRIC COOLING MODULES

PELTIER THERMO-ELECTRIC COOLING MODULE 3A
PELTIER1

Specifications:
- Melcor type: CP1.0-127-06L
- I max.: 3A
- delta T max.: 149°F
- voltage: 15.4V
- Q max.: 25.7W
- number of couples: 127
- dimensions: 1.2" x 1.2" x 0.14"
- weight: 0.42oz

Packaging	
Carton	/70
EAN code	54 10329 29284 3
UPC code	8 36479 00614 0

PELTIER THERMO-ELECTRIC COOLING MODULE 6A
PELTIER2
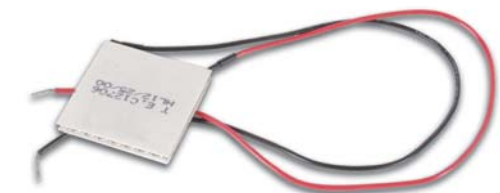
Specifications:
- I max.: 6.0A
- delta T max.: 152.6°F
- voltage: 15.4V
- Q max.: 51.4W
- number of couples: 127
- Melcor type: CP1.4-127-06L
- dimensions: 1.6" x 1.6" x 0.15"
- weight: 0.77oz

Packaging	
Carton	/60
EAN code	54 10329 27840 3
UPC code	8 36479 00615 7

HEATSINKS

CUSTOM HEATSINKS

Order Code	dimensions
HS4003	1 37 / 64" x 3 5 / 32"
HSVM100	75 x 175 x 28mm (approx.)

HS4003

FUSES & ACCESSORIES

FUSES

FUSES 5 X 20MM
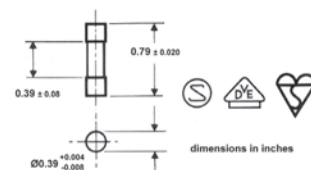
Features:
- low breaking capacity

Specifications:
- construction: glass cartridge, silvered caps
- specifications: IEC127, BS4265 and CEE4
- voltage rating: 250V AC
- breaking capacity: 35A
- endurance: cycling test as specified by IEC127 and BS4265
- ambient temperature: 5°F to 95°F according to IEC/BS, up to 158°F

FUSES 5 X 20MM - FAST

Features:
- "fast-acting"

Specifications:
- test specifications:
  - opening time:
    - 1.5 In: t>1H
    - 2.1 In: max. 30min.
    - 2.75 In: 50mS< t <2S
    - 4 In: 10mS< t <300mS
    - 10 In: max. 20mS
- packaging: 10 pcs/pack

Order Code	current	packaging
FF0.05N	50mA	10pcs/box
FF0.06N	60mA	10pcs/box
FF0.1N	100mA	10pcs/box
FF0.125N	125mA	10pcs/box
FF0.16N	160mA	10pcs/box
FF0.2N	200mA	10pcs/box
FF0.25N	250mA	10pcs/box
FF0.315N	315mA	10pcs/box
FF0.4N	400mA	10pcs/box
FF0.5N	500mA	10pcs/box
FF0.63N	630mA	10pcs/box
FF0.8N	800mA	10pcs/box
FF1N	1A	10pcs/box
FF1.25N	1.25A	10pcs/box
FF1.6N	1.6A	10pcs/box
FF2N	2A	10pcs/box
FF2.5N	2.5A	10pcs/box
FF3N	3.15A	10pcs/box
FF4N	4A	10pcs/box
FF5N	5A	10 pcs/box
FF6.3N	6.3A	10pcs/box
FF8N	8A	10pcs/box
FF10N	10A	10pcs/box
FF15N	15A	10pcs/box

FUSES 5 X 20MM - SLOW

Features:
• "time lag"
Specifications:
• test specifications:
  - opening time:
    · 1.5 In: t>1H
    · 2.1 In: max. 2min.
    · 2.75 In: 600mS< t <10S
    · 4 In: 150mS< t <3S
    · 10 In: max. 300mS
• packaging: 10 pcs/pack

Order Code	current	packaging
FU0.05N	50mA	10pcs/box
FU0.08N	80mA	10pcs/box
FU0.1N	100mA	10 pcs/box
FU0.125N	125mA	10 pcs/box
FU0.16N	160mA	10pcs/box
FU0.2N	200mA	10pcs/box
FU0.25N	250mA	10pcs/box
FU0.315N	315mA	10 pcs/box
FU0.4N	400mA	10pcs/box
FU0.5N	500mA	10pcs/box
FU0.63N	630mA	10pcs/box
FU0.8N	800mA	10pcs/box
FU1N	1A	10pcs/box
FU1.25N	1.25A	10pcs/box
FU1.5N	1.5A	10pcs/box
FU2N	2A	10pcs/box
FU2.5N	2.5A	10pcs/box
FU3.15N	3.15A	10 pcs/box
FU4N	4A	10 pcs/box
FU5N	5A	10 pcs/box
FU6.3N	6.3A	10 pcs/box
FU8N	8A	10pcs/box
FU10N	10A	10pcs/box
FU12N	12A	10pcs/box
FU20N	20A	10pcs/box

FUSE KIT

FUSE SET 5 x 20mm FAST
K/FF
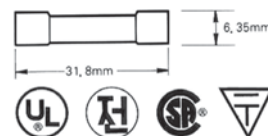
Packaging	Carton	EAN code	UPC code
	/100	54 10329 30801 8	8 36479 00840 3

FUSES 6.35 X 32MM

Specifications:
• construction: glass cartridge, silvered caps
• specifications: IEC127, BS4265 and CEE4
• voltage rating: 250Vac
• endurance: cycling test as specified by IEC127 and BS4265
• ambient temperature: +15°C to +35°C according to IEC/BS, up to +70°C
• packaging: 10 pcs/pack

FUSES 6.35 X 32MM - FAST

Features:
• "fast-acting"
Specifications:
• test specifications:
  - opening time:
    · 1.5 In: t>1H
    · 2.1 In: max. 20sec.
    · 2.75 In: 20mS< t <1500mS
    · 4 In: 8mS< t <400mS
    · 10 In: max. 80mS

Order Code	current	packaging
6FF0.1N	100mA	10pcs/box
6FF0.16N	160mA	10pcs/box
6FF0.25N	250mA	10pcs/box
6FF0.315N	315mA	10pcs/box
6FF0.4N	400mA	10pcs/box
6FF0.5N	500mA	10pcs/box
6FF0.63N	630mA	10pcs/box
6FF0.8N	800mA	10pcs/box
6FF1N	1A	10pcs/box
6FF1.6N	1.6A	10pcs/box
6FF2N	2A	10pcs/box
6FF2.5N	2.5A	10pcs/box
6FF3.15N	3.15A	10pcs/box
6FF4N	4A	10pcs/box
6FF5N	5A	10pcs/box
6FF6.3N	6.3A	10pcs/box
6FF8N	8A	10pcs/box

FUSES 6.35 X 32MM - SLOW

Features:
• "slow-blow"
Specifications:
• test specifications:
  - opening time:
    · 1.5 In: t>1H
    · 2.1 In: 800mS< t <30S
    · 2.75 In: 200mS< t <6S
    · 4 In: 80mS< t <2S
    · 10 In: 15mS< t <300mS

Order Code	current	packaging
6FU0.05N	50mA	10pcs/box
6FU0.1N	100mA	10pcs/box
6FU0.16N	160mA	10pcs/box
6FU0.25N	250mA	10pcs/box
6FU0.315N	315mA	10pcs/box
6FU0.4N	400mA	10pcs/box
6FU0.5N	500mA	10pcs/box
6FU0.63N	630mA	10pcs/box
6FU0.8N	800mA	10pcs/box
6FU1N	1A	10pcs/box
6FU1.6N	1.6A	10pcs/box
6FU2N	2A	10pcs/box
6FU2.5N	2.5A	10pcs/box
6FU3.15N	3.15A	10pcs/box
6FU4N	4A	10pcs/box
6FU5N	5A	10pcs/box
6FU6.3N	6.3A	10pcs/box
6FU8N	8A	10pcs/box
6FU12N	12A	10pcs/box

CAR FUSES

FUSE SETS

10-PIECE CAR FUSE SET WITH INDICATOR LIGHT SET (7.5 - 30A)
BL/AFUL

10-piece set of car fuses with integrated light bulb. Bulb lights when fuse is blown enabling easy tracking of blown fuse.
Specifications:
• contains: 2 x 7.5A, 2 x 10A, 2 x 15A, 2 x 20A, 1 x 25A and 1 x 30A
• type: ATC
• max. voltage: 32V

Packaging	Carton	EAN code	UPC code
		54 10329 36346 8	

10-PIECE MINI CAR FUSE SET (7.5 - 30A)
BL/AFUM

10-piece set of mini car fuses
Specifications:
• contains: 2 x 7.5A, 2 x 10A, 2 x 15A, 2 x 20A, 1 x 25A and 1 x 30A
• type: AST
• max. voltage: 32V

Packaging	Carton	EAN code	UPC code
		54 10329 36345 1	

10-PIECE MINI CAR FUSE SET WITH INDICATOR LIGHT (7.5 - 30A)
BL/AFUML

10-piece set of mini car fuses with integrated light bulb. Bulb lights when fuse is blown enabling easy tracking of blown fuse.
Specifications:
• contains: 2 x 7.5A, 2 x 10A, 2 x 15A, 2 x 20A, 1 x 25A and 1 x 30A
• type: AST
• max. voltage: 32V

Packaging	Carton	EAN code	UPC code
		54 10329 36347 5	

CAR FUSES WITH INDICATOR LIGHT

Features:
• car fuse with integrated light bulb, lights when fuse is blown enabling easy tracking of blown fuse

Order Code	rating	colour	type	rated voltage	light bulb	110% load	135% load	200% load	350% load
AFU03L	3A	violet	-	12V	12V / 0.038A	t > 4h	0.75 sec. < t < 1800 sec.	0.15 sec. < t < 5 sec.	t < 80ms
AFU05L	5A	orange	faston	12V	12V / 0.038A	t > 4h	0.75 sec. < t < 1800 sec.	0.15 sec. < t < 5 sec.	t < 80ms
AFU10L	10A	red	faston	12V	12V / 0.038A	t > 4h	0.75 sec. < t < 1800 sec.	0.15 sec. < t < 5 sec.	t < 80ms
AFU15L	15A	blue	faston	12V	12V / 0.038A	t > 4h	0.75 sec < t < 1800 sec	0.15 sec < t < 5 sec	t < 80ms
AFU20L	20A	yellow	faston	12V	12V / 0.038A	t > 4h	0.75 sec. < t < 1800 sec.	0.15 sec. < t < 5 sec.	t < 80ms
AFU25L	25A	white (transparent)	faston	12V	12V / 0.038A	t > 4h	0.75 sec. < t < 1800 sec.	0.15 sec. < t < 5 sec.	t < 80ms
AFU30L	30A	green	faston	12V	12V / 0.038A	t > 4h	0.75 sec. < t < 1800 sec.	0.15 sec. < t < 5 sec.	t < 80ms
AFU7.5L	7.5A	brown	faston	12V	12V / 0.038A	t > 4h	0.75 sec. < t < 1800 sec.	0.15 sec. < t < 5 sec.	t < 80ms

MINI CAR FUSES WITH INDICATOR LIGHT

Features:
• car fuse with integrated light bulb, lights when fuse is blown enabling easy tracking of blown fuse

Order Code	rating	colour	rated voltage	light bulb	110% load	135% load	200% load	350% load
AFUM10L	10A	red	24V	12V / 0.038A	t > 4hrs	0.75 secs < t < 1800 secs	0.15 secs < t < 5 secs	t < 80ms
AFUM15L	15A	blue	24V	12V / 0.038A	t > 4hrs	0.75 secs < t < 1800 secs	0.15 secs < t < 5 secs	t < 80ms
AFUM20L	20A	yellow	24V	12V / 0.038A	t > 4h	0.75 sec. < t < 1800 sec.	0.15 sec. < t < 5 sec.	t < 80ms
AFUM25L	25A	white (transparent)	24V	12V / 0.038A	t > 4h	0.75 sec. < t < 1800 sec.	0.15 sec. < t < 5 sec.	t < 80ms
AFUM30L	30A	green	24V	12V / 0.038A	t > 4h	0.75 sec. < t < 1800 sec.	0.15 sec. < t < 5 sec.	t < 80ms
AFUM3L	3A	violet	24V	12V / 0.038A	t > 4h	0.75 sec. < t < 1800 sec.	0.15 sec. < t < 5 sec.	t < 80ms
AFUM5L	5A	orange	24V	12V / 0.038A	t > 4h	0.75 sec. < t < 1800 sec.	0.15 sec. < t < 5 sec.	t < 80ms
AFUM7.5L	7.5A	brown	24V	12V / 0.038A	t > 4h	0.75 sec. < t < 1800 sec.	0.15 sec. < t < 5 sec.	t < 80ms

AFUM10L

AFUM15L

AFUM20L

AFUM25L

AFUM30L

AFUM3L

AFUM5L

AFUM7.5L

FUSE ACCESSORIES

PCB FUSE HOLDERS

PCB FUSE HOLDERS 5X20MM

5x20mm PCB FUSE HOLDER
FUSE/H
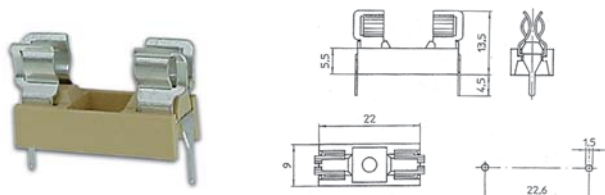
Specifications:
- base: heat-resistant plastic
- contacts: nickel-plated brass
- ratings: 250Vac / 6.3A
- for PCB mounting

Packaging	Carton	EAN code	UPC code
	/500	54 10329 25646 3	

5x20mm FUSE HOLDER (W/2 SIDE SOLDERING TAGS)
FUSE/HH
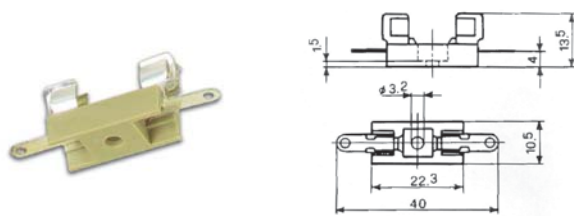
Specifications:
- 6.3A / 250Vac
- base: heat-resistant plastic
- contacts: nickel-plated brass
- 2 solder tags

Packaging	Carton	EAN code	UPC code
		54 10329 27345 3	

PCB FUSE HOLDERS 5 X 20MM - LOW-COST

5x20mmLOW-COST PCB FUSE HOLDER
FUSE/HL
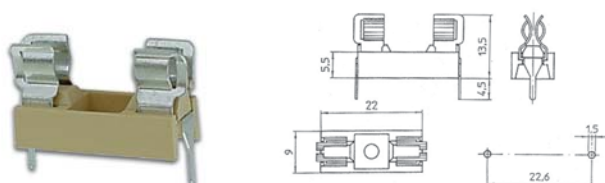
Specifications:
- base: heat-resistant plastic
- contacts: nickel-plated brass
- ratings: 250Vac / 6A
- solderlips

Packaging	Carton	EAN code	UPC code
		54 10329 27344 6	

FUSE HOLDER COVER
FUSE/HCL

Features:
- cap for: FUSE/HL

Specifications:
- material: phenolic laminate

Packaging	Carton	EAN code	UPC code
		54 10329 28423 7	

RELAYS

VERTICAL RELAYS

CONTACT RATING : 10A / 30VDC-220VAC,1 X INVERTER (HG4T24)
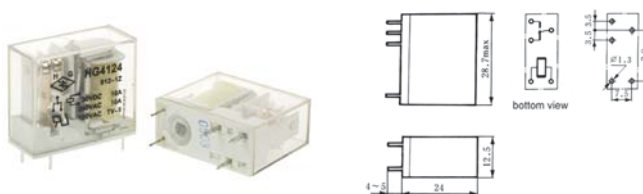
Features:
- heavy-duty switching power up to 2200VA
- compact size allows mounting in a confined space

Specifications:
- contact: 1 x inverter
- nom. power consumption: 560mW
- dielectric strength: 1000VAC / 50Hz (1 minute)
- temperature range: -40°C to +70°C
- internal contact material: AgCo10

Order Code	coil voltage	coil resistance
VR10V121C	12Vdc	270 ohm

CONTACT RATING : 16A / 30V DC - 10A / 220V AC 1 X INVERTER (G2R1E)
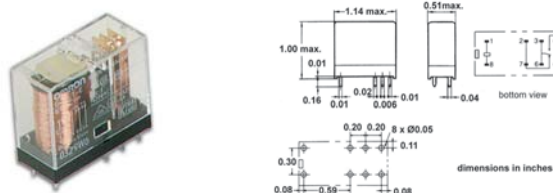
Features:
- suitable for switching power up to 4000VA
- compact size allows mounting in a confined space

Specifications:
- contact: 1 x inverter
- nom. power consumption: 600mW
- dielectric strength: 5000V AC
- temperature range: -40°F to 131°F
- internal contact material: AgCd0

Order Code	coil voltage	coil resistance
VR16V241C	24V DC	1100ohm

MINIATURE POWER RELAYS

CONTACT RATING : 15A / 28V DC-125V AC 1 X INVERTER (JZC-22F)

dimensions in inches

Features:
• compact and light design
• low coil power consumption
• used in home appliances, automatic systems, electronic equipment, instruments and meters

Specifications:
• contact: 1 x inverter
• nom. power consumption: 450mW
• dielectric strength: 1000V / 50Hz (1 minute)
• temperature range: -40°F to 158°F
• internal contact material: AgCd0

Order Code	coil voltage	coil resistance
VR15M121C	12V DC	360ohm

HEAVY-DUTY CAR RELAYS

CONTACT RATING : 30A / 12VDC

CAR RELAY 1 X INVERTER FASTON

BOTTOM VIEW

Specifications:
• contact: 1 x inverter
• housing: ABS
• lips: 6.35mm (1/4") FASTON

Order Code	rating	operating current	intern contact material
960	12V DC / 20-30A	± 140mA	-

SOCKET FOR CAR RELAYS

Order Code	description
SO960	with 1.97ft cable in 5 colours

SO960

PANEL CONTROL LAMPS & MINIATURE LAMPS

LED LAMPS WITH INTEGRATED RESISTOR

BLACK HOUSING

Features:
• lead connections
• nut mounting
Specifications:
• housing: ABS black

Order Code	voltage	color
12VBFG	12VDC	green flashing
12VBFR	12VDC	red flashing
12VBFY	12VDC	yellow flashing
12VBG	12VDC	green
12VBR	12VDC	red
12VBY	12VDC	yellow

12VBFG

12VBFR

12VBFY

12VBG

12VBR

12VBY

WATER-RESISTANT

Features:
• lead connections
• nut mounting
Features:
• water-resistant

Order Code	voltage	color	housing
12VTFR	12V	red flashing	black

12VTFR

ROUND 8MM PANEL CONTROL LAMPS

Specifications:
• solder terminals

Order Code	voltage	colour
DRDF220RL	220V	red
DRDF220VL	220V	green

DRDF220RL

DRDF220VL

LEDS

LED SET

Order Code
K/LED1

Packaging		EAN code	5410329328610
Carton	/66	UPC code	836479007529

K/LED1

LOW-COST LEDS

LOW-COST LEDS 5MM

LOW-COST WATERCLEAR LEDS 5MM - NARROW LENS
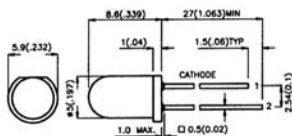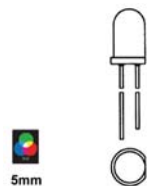
Order Code	case	emitting colour + material	wave length	case colour	luminous intensity	viewing angle	forward voltage
L-5WCN/5	5mm	super white GaN/SiC	465nm	water clear	20000mCd (If=20mA)	20°	3.2V

LOW-COST LEDS 5MM
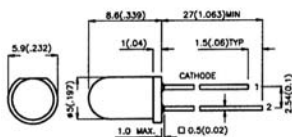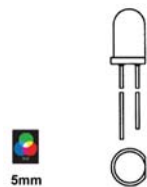
Order Code	case	emitting colour + material	wave length	case colour	luminous intensity	viewing angle	forward voltage
L-5WCN/3	5mm	super white GaN/SiC	465-475nm	water-clear	7000mcd (If = 20mA)	15°	3.5V

HIGH POWER LEDS

HIGH POWER LEDS 1W

Features:
- High-power LED driver: K8071 or VM143/1W
- super high-flux output and high luminance
- very long operating life (up to 50 000h)
- low thermal resistance
- SMT solderability
- no UV output
- superior ESD protection
- warning: not to be used without additional heatsink

Order Code	colour	luminous flux	colour temp.	viewing angle	thermal resistance	forward current / voltage	power dissipation	temperature Tj
L-HP1PWN1	pure white	80lm	6000K	90°	16°C/W	0.35A / 3.2V	1.6W	max. 125°C

HIGH POWER LEDS 3W

Features:
- High-power LED driver: K8071 or VM143/1W
- super high-flux output and high luminance
- very long operating life (up to 50 000h)
- low thermal resistance
- SMT solderability
- no UV output
- superior ESD protection
- warning: not to be used without additional heatsink

Order Code	colour	luminous flux	dominant wavelength	colour temp.	viewing angle	thermal resistance	forward current / voltage	power dissipation	temperature Tj
L-HP3BN	blue	36lm	465nm	-	110°	48°C/W	1A / 3.5V	4.8W	max. 125°C
L-HP3GN	green	170lm	520nm	-	140°	48°C/W	1A / 3.5V	4.8W	max. 125°C
L-HP3PWN	pure white	170lm	- nm	6000K	110°	48°C/W	1A / 3.5V	4.8W	max. 125°C
L-HP3RN1	red	100lm	625nm	-	90°	48°C/W	1A / 2.2V	4.8W	max. 257° F
L-HP3YN	amber yellow	36lm	590nm	-	90°	48°C/W	1A / 2.2V	4.8W	max. 125°C

STANDARD LED LAMPS

3MM STANDARD LED LAMPS

3MM STANDARD LED LAMPS WATER-CLEAR
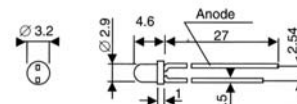
Order Code	case	emitting colour + material	wave length	case colour	luminous intensity (If = 20mA)	viewing angle
L-934MBC	3mm	GaN	430nm	water-clear	20 - 90mcd	20°

5MM STANDARD LED LAMPS

5MM STANDARD LED LAMPS DIFFUSED

Order Code	case	emitting colour + material	wave length	case colour	luminous intensity (If = 20mA)	viewing angle
L-53SRD-E	5mm	GaAlAs	660nm	red diffused	90 - 110mcd	60°

5MM STANDARD LED LAMPS CLEAR

Order Code	case	emitting colour + material	wave length	case colour	luminous intensity (If = 20mA)	viewing angle
L-7113SRC-E	5mm	GaAlAs	640nm	water clear	1800 - 2800mcd	20°

SUPER BRIGHT LED LAMPS

5MM LEDS
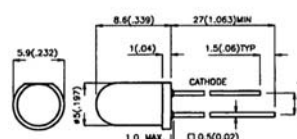
Order Code	case	emitting color + material	wave length	case-color	luminous intensity (If = 20mA)	viewing angle
L-53SRC-E	5mm	GaAlAs	660nm	water-clear	2000 - 3500mcd	30°

>> www.vellemanusa.com

FLEXIBLE LED LIGHT STRIPS

Application: backlighting of diffused glas in illuminated advertising
- integration of LED light into transparent or diffused glass for emergency signs
- border marker
- background illumination
- escape route markers
- stair markers

FLEXIBELE LEDMODULES - LDB1-SERIE - MONOCHROOM

Features:
• ROHS compliant
Specifications:
• power supply: 12VDC
• current per LED: 18mA ± 2mA
• min. cut length: 3 LEDs
• life span: ± 70 000h
• dimensions: 5/8" x 12 1/8"

Order Code	color	LED quantity	power consumption
LDB1-HS3018AB	blue	18 pcs	2.16W
LDB1-HS3018AG	green	18 pcs	2.16W
LDB1-HS3018AR	red	18 pcs	2.16W
LDB1-HS3018AW	white	18 pcs	2.16W
LDB1-HS3018AY	yellow	18 pcs	2.16W

LDB1-HS3018AB

LDB1-HS3018AG

LDB1-HS3018AR

LDB1-HS3018AW

LDB1-HS3018AY

TRANSFORMERS, COILS & MOTORS

SIDE-TAG TRANSFORMERS

Specifications:
• transformer can be screwed onto a PCB
• operating temperature: -4°F to +158°F
• dielectric strength: > 5000V
• meets the following norms: BS 3535, VDE 0551, IEC 742
• a thermal fuse can be fitted
• primary AC line: 230V - 50/60Hz (parallel and series connection)
• other VA's and sizes available on request: up to 250VA

25VA

primary = 1 - 7
2 sec = 8 - 9
13 - 14

25VA EI 66/23
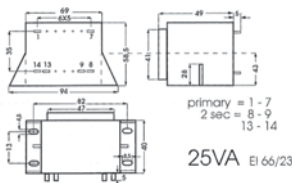
Order Code	voltage	current
2090250MST	2 x 9V	2 x 1.389A

DEPARASITE SELFS
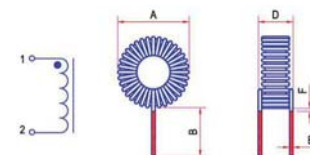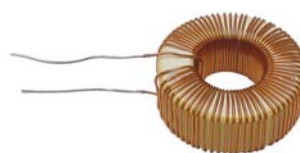
The Velleman linear chokes are used mainly as RF chokes. They are indispensable in the field of power electronics e.g. with mains power supply units, the control of DC or stepping motors, chopper amplifiers,... This type of choke greatly reduces power loss when used in mains filters.
Specifications:
• operating temperature: -4°F to 176°F

Order Code	SELFDEP
Imax	5A
DC-load	50µH
ohmic v.	30mohm
out Ø wire	0.91"
in Ø wire	-
thickness	0.35"
O-load	-
AC-load	-
energy	-
lead sect	-
core type	-

MOTORS

DC MOTORS

Order Code		MOT1N	MOT2N	MOT3N
voltage	operating range	1.5-3V	2.5-6V	6-24V
	nominal	3V	6V	12V
no load	speed	14200rpm	14500rpm	11000rpm
	current	0.3A	0.21A	0.18A
at max. efficiency	speed	11780rpm	12530rpm	8768rpm
	current	1.33A	1.34A	0.726A
	torque	15.7gcm	46.2gcm	62.5gcm
	output	2.37W	5.94W	5.617W
	eff.	59.5%	74.1%	59.58%
stall torque		1.60oz-in	4.72oz-in	4.27oz-in
dimensions (in)	A	0.26	0.40	0.35
	B	0.45	0.46	0.45
	C	0.93	1.20	1.28
	D	Ø0.94	Ø0.94	Ø1.10
	E	1.50	1.77	2.01
	F	Ø0.08	Ø0.08	Ø0.09
	G	Ø0.24	Ø0.24	Ø0.39
	H	0.75	0.55	Ø1.10
	I	0.45	Ø0.09	M2.5 (.0984") x 0.018
	J	Ø0.09	Ø0.94	0.63
	K	Ø0.94		

MOT1N
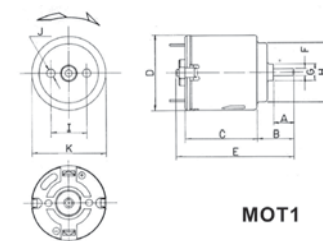
MOT1N

MOT1
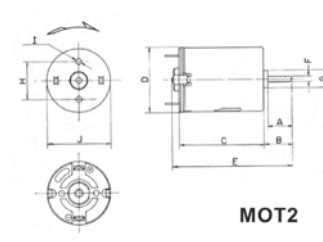
MOT2N

MOT2N

MOT2
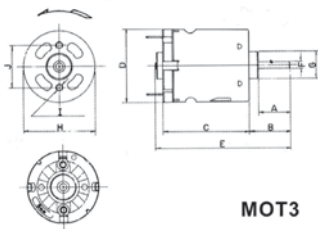
MOT3N

MOT3N

MOT3

STEPPER MOTORS

applications: •• office machines •• automatic machines •• split air conditioners
colors •• B1: B1 : pink •• 2: A1 : orange •• 3: A2 : yellow •• 4: B2 : blue •• 5: GND : red •• 6: GND2 (for MOTS2) : brown

Order Code	MOTS1
resistance	280 ohms
rated voltage	12V DC
current	32mA
impedance	380ohm
phase	4
step angle / step	5.625° / 64
reduction ratio	1/64
detent torque	4.86oz-in
pull-in torque	4.17oz-in
max. starting pulse rate	550pps
max. slewing pulse rate	90pps
temperature range	77°F
noise	40dB
cable	420mm AWG 1095#28
terminal	JST SPH-002T-P0.5S
insulation strength	AC 600V - 1 sec cut-off current: 10mA

MOTS1
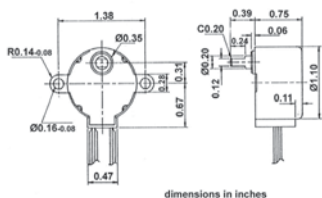
MOTS1

dimensions in inches

SEMICONDUCTORS & SENSORS

TRANSISTORS

TRANSISTOR SETS

TRANSISTOR SET
K/TRANS1

Features:
• quantity: ± 100 pieces
• contents:
  - BC547B: ± 28
  - BC557B: ± 28
  - BC337: ± 12
  - BC327: ± 12
  - BC517: ± 6
  - BC516: ± 6
  - BD139: ± 4
  - BD140: ± 4

Packaging	Carton	EAN code	UPC code
	/150	54 10329 34182 4	8 36479 00921 9

QUARTZ CRYSTALS & CRYSTAL OSCILLATORS

QUARTZ CRYSTALS

QUARTZ CRYSTALS

fig. 1
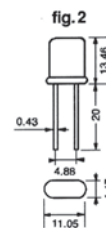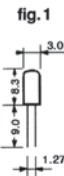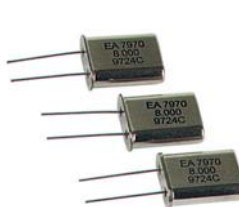
fig. 2

Specifications:
• heat-conductive silicon insulator for quartz crystals: S/HC49
Specifications:
• tolerance: ± 30ppm

Order Code	frequency	load capacity	resonance resistance	CO	drive level	case
X4.1943	4.194304MHz	30pF	60 ohm	7pF	2mW	fig. 2

DIODES

DIODE SETS

120 pcs DIODE SET
K/DIODE1

Features:
• quantity: 120 pieces
• contents:
  - diodes
  - bridge rectifier

Packaging	Carton	EAN code	UPC code
	/100	54 10329 34183 1	8 36479 00780 2

TRANSMITTER - RECEIVER MODULES

433MHz ASK RECEIVER MODULE (900-6895) - DIGITAL OUTPUT
RX433D

Packaging	Carton	EAN code	UPC code
	/1	54 10329 33755 1	
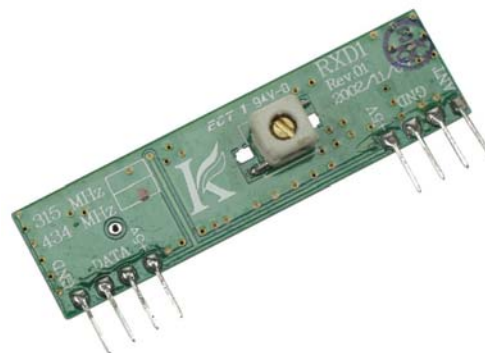
RECEIVER MODULE (900-6895)
RX433N
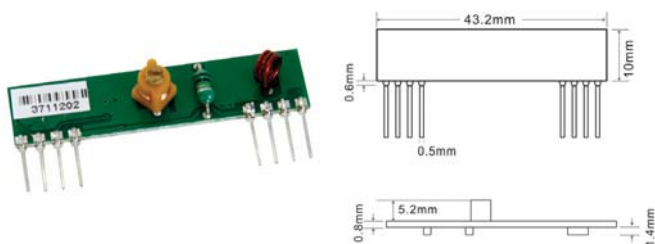
Specifications:
- range: 220yd in open air
- frequency: 433MHz
- modulation: ASK
- sensitivity: -106dBm
- power supply: 4.5-5.5V DC
- digital and linear output
- pin numbers:
  - 1: gnd
  - 2: digital output
  - 3: linear output
  - 4: Vcc
  - 5: Vcc
  - 6: gnd
  - 7: gnd
  - 8: antenna (11 3/4" - 13 3/4")

Packaging	Carton	EAN code	UPC code
		54 10329 37920 9	

NTC THERMISTORS

NTC THERMISTORS

For temperature compensation, temperature measurement and control.
Features:
- material: epoxy-coated

Specifications:
- dimensions: Ø5mm

Order Code	nom. resistance	B-constant (±7%)	max. permissible current	thermal dissipation constant	thermal time constant
NTC50K0	50 kohm	4400°K	200mA	6mW/°C	18sec.

SEMICONDUCTORS & SENSORS

ULTRASONIC SENSOR TRANSDUCERS

dimensions in mm
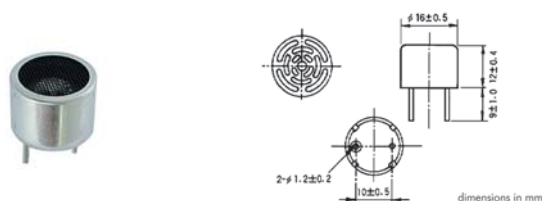
Specifications:
- max. input voltage: 20Vrms
- operating temperature: -4°F to +185°F
- range: 0.6 to 20ft
- nominal frequency: 40kHz
- sensitivity: -67dB min.
- sound pressure: 112dB min.

Order Code	description
MA40A5R	ultrasonic sensor transducer - receiver
MA40A5S	ultrasonic transducer - transmitter

LCD PRODUCTS

LCD ALPHANUMERIC MODULES

Order Code	?supply for LCD driver (Vdd-Vo)			?supply for logic (Vdd-Vss):	ratings					weight
	at 0°C	at 25°C	at 50°C	at 25°C	operating temperature	storage temperature	viewing area	dot size	character size	
PC1602WRS-KWA-E	4.8V typ.	4.6V typ.	4.4V typ.	5.0V typ.	0°C to +50°C / 32°F to +122°F	-20°C to +70°C / -4°F to 158°F	36 x 10mm / 1.42 x 0.394"	0.33 x 0.35mm / 0.013 x 0.0138"	3.15 x 1.85mm / 0.124 x 0.0394"	13g (0.0287lbs)

Packaging	EAN code
	54 10329 37563 8
Carton	UPC code
	8 36479 00944 8

PC1602WRS-KWA-E

PASSIVE COMPONENTS

RESISTIVE COMPONENTS

CARBON FILM RESISTORS

CARBON FILM RESISTOR SET 1/4W (RA-SERIES)

High-quality carbon film resistors with a connecting wire that is easily soldered.
Features:
- applications: TV's, audio and video equipment, telephone receivers and communication systems, instrumentation, home appliances, ...

Specifications:
- operating temperature range: -67°F to 311°F
- tolerance: 5%
- max. operating voltage: 250V

Order Code	quantity	serie	number of values	power rating	operating temperature range	tolerance	max. operating voltage
K/RES-E12	610 pieces (10 pcs per value)	E12	61 (from 10E to 1M)	1/4W	-67°F to +311°F	5%	250V
K/RES-E3	480 pieces (30 pcs per value)	E3	16 (from 10E to 1M)	1/4W	-67°F to +311°F	5%	250V

Packaging	EAN code
	54 10329 23839 1
Carton /100	UPC code
	8 36479 00699 7

K/RES-E12

Packaging	EAN code
	54 10329 24180 3
Carton /100	UPC code
	8 36479 00826 7

K/RES-E3

CAPACITORS

CAPACITOR SETS

Order Code	quantity	number of values			
			21 x	14 x	7 x
K/CAP1	224 pieces	14 (from 10pF to 220nF)	10pF, 100pF, 1nF, 10nF, 100nF	22pF, 47pF, 220pF, 470pF, 2.2nF, 4.7nF, 22nF, 47nF	220nF
K/CAP2	120 pieces	10 (from 1µF to 1000µF)	1µF/50V, 2.2µF/50V, 4.7µF/50V, 10µF/50V, 22µF/50V, 47µF/25V, 100µF/25V	220µF / 25V, 470µF / 25V, 1000µF / 25V	

Packaging	⊡	EAN code	54 10329 32792 7
Carton	/66	UPC code	8 36479 00824 3

K/CAP1

Packaging	⊡	EAN code	54 10329 32793 4
Carton	/66	UPC code	8 36479 00825 0

K/CAP2

WIMA CAPACITORS

WIMA MKS4

WIMA capacitors have reliable internal end terminations. They use a simple concept : the wire makes electrical contact with the complete surface of the electrode, which ensures minimal inductance. This results in capacitors with a good attenuation and self-resonance (see technical data and graphs). Capacitors that meet strict requirements PCM 7.5 - 37.5mm.

Metallised polyester film.
Specifications:
• dielectric material: polyethylene terephthalate film
• capacitor electrodes: vacuum-deposited aluminium
• encapsulation: flame-retardant plastic case, UL 94 V-0, with epoxy resin seal / colour : red / marking : black
• test specifications: in accordance with CECC30400 and IEC 384-2
• testing category: 55/100/21 in accordance with IEC
• test voltage: 1.6 Ur, 2 sec.
• temperature range: -67°F to +212°F
• capacitance tolerances: ± 20% (± 10%)

Packaging		Carton	/1	EAN code	54 10329 29676 6	UPC code	

Order Code	pitch	operating voltage (max.)	capacitance
15MPS220	0.59"	630V	0.22µF

ENCLOSURES

ACCESSORIES

SCREW KITS

BOLT SET 330 PCS (PHILIPS SCREWS, NUTS & WASHERS)
K/SC1

Specifications:
• material: zinc-plated steel
• screws:
  - M2x12mm: 20pcs
  - M2x19mm: 20pcs
  - M3x12mm: 20pcs
  - M3x19mm: 20pcs
  - M4x12mm: 20pcs
  - M4x25mm: 10pcs
• full nuts:
  - M2: 40pcs
  - M3: 40pcs
  - M4: 30pcs
• washers:
  - M2: 40pcs
  - M3: 40pcs
  - M4: 30pcs

Packaging	⊡	EAN code	54 10329 30447 8
Carton	/72	UPC code	8 16353 01029 6

CABLE FIXINGS

example of packaging

CABLE CLIPS

ROUND - WHITE
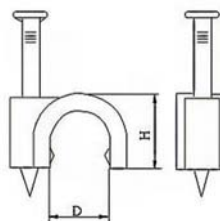
Features:
• material: PE
• type: flat nail clip

Order Code	colour	cable Ø	height (H)	dimensions nail	packing unit
CFCR10W	white	10mm	11.4mm	2.25 x 23mm	box (100pcs)
CFCR4W	white	4mm	5.3mm	1.7 x 14mm	box (100pcs)
CFCR6W	white	6mm	7.4mm	1.85 x 16mm	box (100pcs)
CFCR8W	white	8mm	9.4mm	1.95 x 19mm	box (100pcs)

FLAT - WHITE
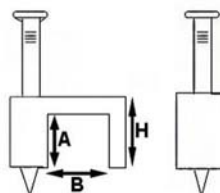
Features:
• material: PE
• type: flat nail clip

Order Code	colour	cable height (A)	cable width (B)	height (H)	dimensions nail	packing unit
CFCF10W	white	5.7mm	10mm	8.6mm	2.3 x 21mm	box (100pcs)
CFCF4W	white	3.8mm	4mm	6mm	1.7 x 14mm	box (100pcs)
CFCF6W	white	4.1mm	6mm	6.5mm	1.7 x 16mm	box (100pcs)
CFCF8W	white	5mm	8mm	7.5mm	2.1 x 19mm	box (100pcs)

ROUND - GREY
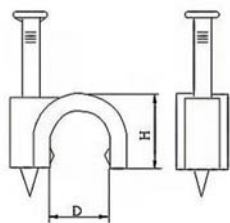
Order Code	colour	cable Ø	height (H)	dimensions nail	packing unit
CFCR10G	grey	10mm	11.4mm	2.25 x 23mm	box (100pcs)
CFCR4G	grey	4mm	5.3mm	1.7 x 14mm	box (100pcs)
CFCR6G	grey	6mm	7.4mm	1.85 x 16mm	box (100pcs)
CFCR8G	grey	8mm	9.4mm	1.95 x 19mm	box (100pcs)

FLAT - GREY

Order Code	colour	cabel height (A)	cable width (B)	height (H)	dimensions nail	packing unit
CFCF10G	grey	5.7mm	10mm	8.6mm	2.3 x 21mm	box (100pcs)
CFCF4G	grey	3.8mm	4mm	6mm	1.7 x 14mm	box (100pcs)
CFCF6G	grey	4.1mm	6mm	6.5mm	1.7 x 16mm	box (100pcs)
CFCF8G	grey	5mm	8mm	7.5mm	2.1 x 19mm	box (100pcs)

PLASTIC ENCLOSURES

PLASTIC HOUSINGS - WCAH-SERIES

PLASTIC POLYSTYRENE HOUSINGS

Order Code	dimensions	color
WCAH2507	10.2" x 7.5" x 3.3"	gray

ABS "PLASTIC" ENCLOSURES

Specifications:
• vertical grooves on the inside to fix PCB's

Order Code	dimensions	color
WCAH2851	6.3" x 3.7" x 2.2"	black
WCAH2853	5.1" x 2.8" x 1.8"	black
WCAH2855	3.3" X 2.2" X 1.2"	black

ENCLOSURES - G-SERIES

G100-SERIES (SEALED DIE-CAST ALUMINUM ENCLOSURES)

Enclosures for sensitive electronic assemblies and for pneumatic, hydraulic and electrical devices in commercial and industrial environments. These enclosures provide effective EMI- and RFI-shielding. Designed according to IP65 of IEC529 and NEMA4 (dust and hoseproof).
The mounting holes and the fixing screws for the lid are outside the sealed area, which prevents moisture and dust from entering the enclosure.
The lid incorporates a recessed neoprene gasket.
Bosses on the internal base allow the fixing of PCBs and are suited for an earthing connection, etc...
Internal guide slots allow vertical PCB mounting.
The lid-mounting screw holes are threaded and the screws themselves are captive and recessed.
2 or 4 holes make horizontal PCB mounting possible.

Order Code	material	dimensions
G102	aluminum alloy	3.5" x 1.4" x 1.2"
G104	aluminum alloy	2.5" x 2.3" x 1.4"
G106	aluminum alloy	4.5" x 2.6" x 1.2"
G111	aluminum alloy	4.5" x 2.6" x 2.2"
G113	aluminum alloy	4.5" x 3.5" x 2.2"
G115	aluminum alloy	5.8" x 4.3" x 3.0"
G1201	aluminum alloy	6.7" x 4.8" x 2.2"
G124	aluminum alloy	8.7" x 5.7" x 2.2"
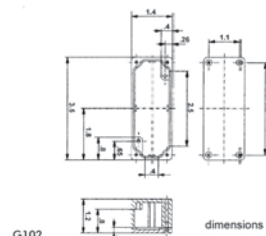
G102
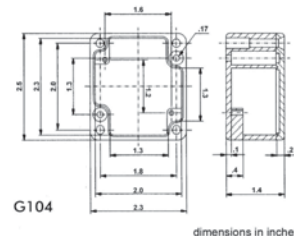
G104
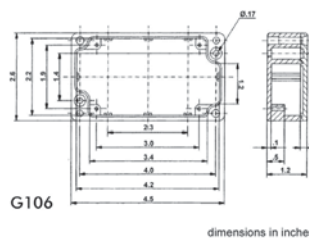
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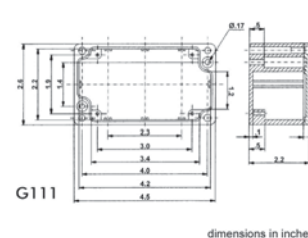
G111

G113

G115

G1201
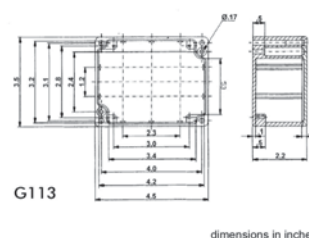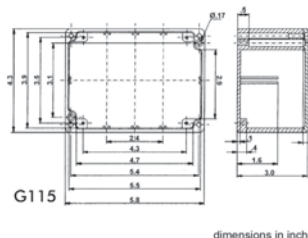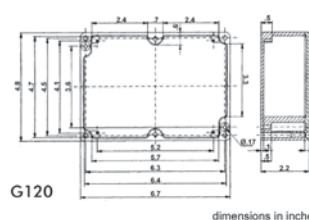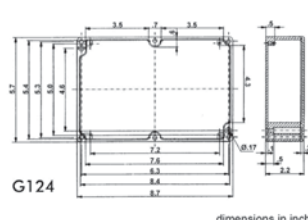
G124

G200-SERIES (SEALED POLYCARBONATE ENCLOSURES)

These enclosures consist of polycarbonate (operating temperature : -40°F to +257°F).

The lid and the base are equipped with a tongue and groove sealing system with a neoprene gasket. The mounting holes and the lid-fixing screws are outside the sealed area, which prevents moisture and dust from entering the enclosure. Internal guide slots allow the vertical mounting of PCB assemblies.

Designed to meet IP65 of IEC529 and NEMA4 (dust- and hoseproof).

The bosses on the internal base allow the horizontal fixing of PCBs or the connection of terminals, etc. with threaded brass inserts.

Order Code	material	dimensions	color	remark
G203	polycarbonate	4.5" x 2.6" x 1.6"	light gray	-
G203C	polycarbonate	4.5" x 2.6" x 1.6"	light gray with clear lid	-
G218C	polycarbonate	8.7" x 5.7" x 2.2"	light gray with clear lid	ideal to be used with the MONZW, B/W monitor
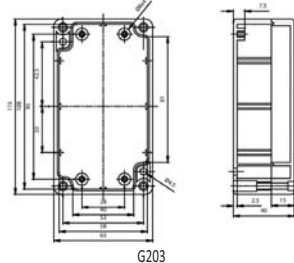
G203
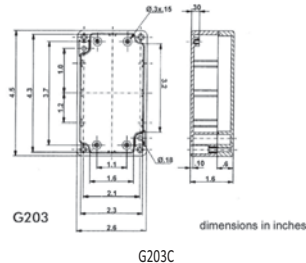
G203C
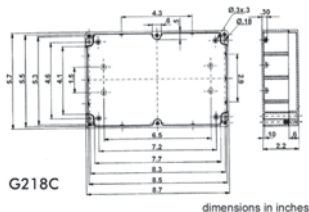
G218C

G300-SERIES (SEALED ABS ENCLOSURES)

These enclosures consist of high-impact ABS (operating temperature : -4°F to +212°F).

The lid and the base equipped with a tongue and groove sealing system with a neoprene gasket. The mounting holes and the lid-fixing screws are outside the sealed, which prevents moisture and dust from entering the enclosure. Internal guide slots allow the vertical mounting of PCB assemblies.

Designed to meet IP65 of IEC529 and NAMA4 (dust- and hoseproof).

The bosses on the internal base allow the horizontal fixing of PCBs or the connection of terminals, etc. with threaded brass inserts.

Order Code	material	dimensions	color
G302	ABS	2.5" x 2.3" x 1.4"	dark gray
G304	ABS	4.6" x 2.6" x 1.6"	dark gray
G308	ABS	4.5" x 2.6" x 2.2"	dark gray
G311	ABS	4.5" x 3.5" x 2.2"	dark gray
G313	ABS	6.7" x 4.8" x 2.2"	dark gray
G317	ABS	8.7" x 5.7" x 2.2"	dark gray
G331	ABS	4.5" x 3.5" x 3.1"	dark gray
G340	ABS	6.7" x 4.8" x 3.1"	dark gray
G346	ABS	7.7" x 3.1" x 2.2"	dark gray
G353	ABS	8.7" x 5.7" x 3.0"	dark gray
G362	ABS	2.1" x 2.0" x 1.4"	dark gray
G366	ABS	3.2" x 3.1" x 2.2"	dark gray
G368	ABS	6.3" x 3.1" x 2.2"	dark gray

Order Code	material	dimensions	color
G369	ABS	6.3" x 3.1" x 3.3"	dark gray
G373	ABS	7.9" x 4.7" x 2.9"	dark gray
G378	ABS	10.4" x 7.3" x 4.0"	dark gray
G386	ABS	4.7" x 4.7" x 2.4"	dark gray
G387	ABS	4.7" x 4.7" x 3.5"	dark gray
G396	ABS	6.3" x 6.3" x 2.4"	dark gray
G399	ABS	6.3" x 6.3" x 3.5"	dark gray
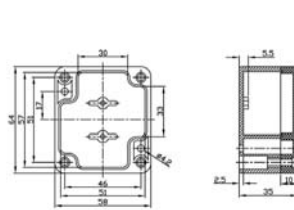
G302
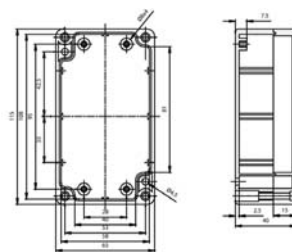
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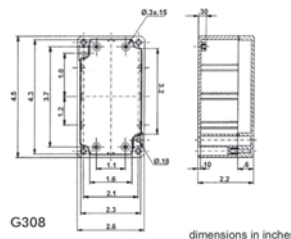
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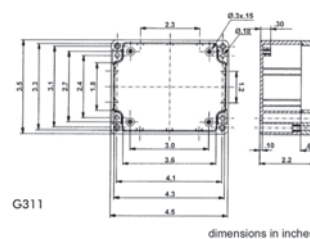
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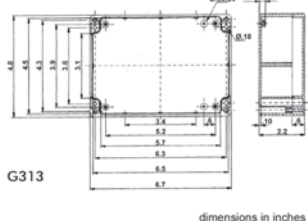
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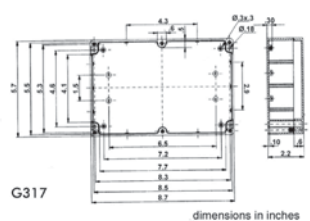
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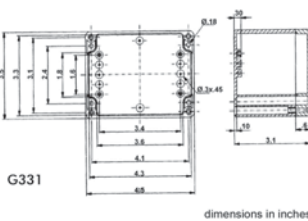
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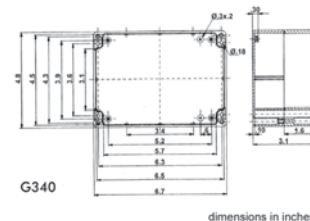
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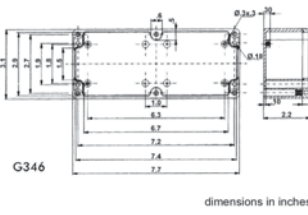
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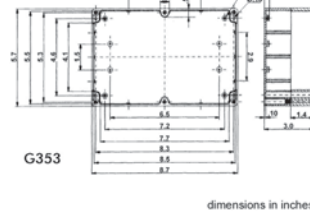
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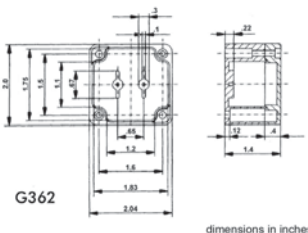
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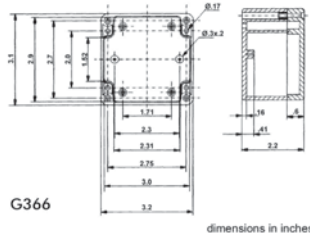
G366

G400-SERIES (MOLDED PLASTIC ENCLOSURES)
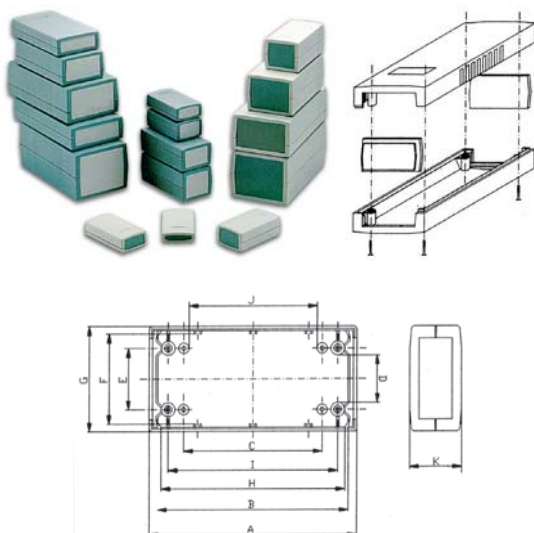
Ideally suited for instrumentation and telecommunication equipment, from hand-held to lab and desktop sizes.

Molded in high-impact ABS, fire-retardant according to UL94-VO. These cases in molded plastic have a two-piece design with a tongue and groove joint between the top and bottom half. This design offers environmental sealing according to IP54 of IEC529. The top and bottom case are lightly relieved, creating a non-scratch surface with a high-quality finish.

Guide slots are provided for vertical PCB mounting and bosses make horizontal PCB mounting possible.

Order Code	material	dimensions	color	A	B	C	D	E	F	G	H	I	J	K
G401	molded plastic	3.5" x 2.2" x 0.6"	dark gray	3.5"	3.3"	2.0"	1.08"	1.4"	1.59"	2.0"	3.13"	2.7"	1.67"	0.6"
G403	molded plastic	3.5" x 2.0" x 0.9"	dark gray	3.5"	3.3"	2.0"	1.08"	1.4"	1.59"	2.0"	3.13"	2.7"	1.67"	0.9
G404	molded plastic	3.5" x 2.0" x 1.3"	dark gray	3.5"	3.3"	2.0"	1.08"	1.4"	1.59"	2.0"	3.1"	2.7"	1.67"	1.3"
G407	molded plastic	4.7" x 2.4" x 1.2"	dark gray	4.7"	4.4"	3.1"	1.0"	1.4"	1.7"	2.4"	4.3"	3.9"	2.8"	1.2"
G410	molded plastic	4.7" x 2.4" x 1.6"	dark gray	4.7"	4.4"	3.2"	1.0"	1.4"	1.7"	2.4"	4.3"	3.9"	2.8"	1.6"
G412	molded plastic	4.7" x 2.4" x 2.0"	dark gray	4.7"	4.4"	3.1"	1.0"	1.4"	1.7"	2.4"	4.3"	3.9"	2.8"	2.0"
G413	molded plastic	5.9" x 3.1" x 1.2"	dark gray	5.9"	5.4"	4.3"	1.8"	2.2"	2.5"	3.1"	5.4"	5.0"	3.9"	1.2"
G416	molded plastic	5.9" x 3.1" x 1.8"	dark gray	5.9"	5.4"	4.3"	1.8"	2.2"	2.5"	3.1"	5.4"	5.0"	3.9"	1.8"
G418	molded plastic	5.9" x 3.1" x 2.4"	dark gray	5.9"	5.4"	4.3"	1.8"	2.2"	2.5"	3.1"	5.4"	5.0"	3.9"	2.4"
G421	molded plastic	7.5" x 3.9" x 1.6"	dark gray	7.5"	7.1"	5.9"	2.6"	3.0"	3.3"	3.9"	6.9"	6.6"	5.5"	1.6"
G422	molded plastic	7.5" x 3.9" x 2.4"	dark gray	7.5"	7.1"	5.9"	2.6"	3.0"	3.3"	3.9"	6.9"	6.6"	5.5"	2.4"
G425	molded plastic	7.5" x 3.9" x 3.1"	dark gray	7.5"	7.1"	5.9"	2.6"	3.0"	3.3"	3.9"	6.9"	6.6"	5.5"	3.1"

G700-SERIES (FIRE-RETARDANT INSTRUMENTAL ENCLOSURES)

Ideally suited for instrumentation and telecommunication equipment. Molded in high-impact ABS, these plastic cases have a two-piece design with a tongue and groove joint between the top and bottom half. The ABS end panels were specially designed .

The two halves are slightly relieved, creating a non-scratch surface with a high-quality finish. Guide slots are provided for vertical PCB mounting. Bosses enable the user to firmly secure the lid and the end panels. The G700-series is fitted with four rubber feet except for with the G738.

Order Code	material	dimensions	color	remark
G738	ABS	5.5" x 4.3" x 1.4"	light gray top with black end panels	-
G747	ABS	8.9" x 6.5" x 1.6"	light gray top with black end panels	-
G758	ABS	10.2" x 7.1" x 2.6"	light gray top with black end panels	-
G758V	ABS	10.2" x 7.1" x 2.6"	light gray top with black end panels	with venting holes

G738

G747

G758

G758V
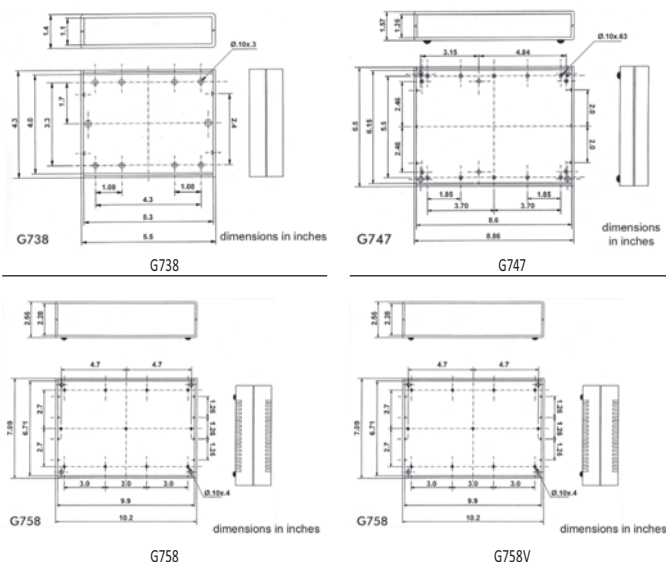
G1000 - SERIES

UTILIBOX

This plastic utility box is more than good value and is available in 2 sizes.

It is molded in impact-resistant ABS and has card guides spaced at intervals of 7.9" to allow flexibility in the spacing of the components or the creation of compartments. The guides will accept cards with a max. thickness of 0.06".

Order Code	material	dimensions	color
G1068	ABS	3.7" x 1.9" x 1.5"	gray
G1098	ABS	5.4" x 3.0" x 2.0"	gray

G1068

G1098
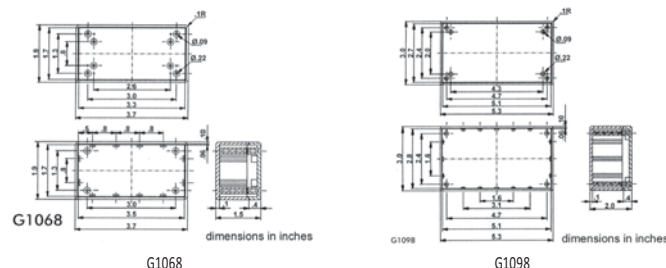
GBS SERIES (SEALED DIE-CAST ALUMINUM ENCLOSURES WITH FLANGE)

Enclosures for sensitive electronic assemblies and for pneumatic, hydraulic and electrical devices in commercial and industrial environments. These enclosures provide effective EMI and RFI shielding. Designed according to IP65 of IEC529 and NEMA4 (dust- and hoseproof).

The mounting holes and the fixing screws for the lid are located outside the sealed area, which prevents moisture and dust from entering the enclosure.

The lid incorporates a recessed neoprene gasket.

Bosses on the internal base allow the fixing of PCB's and are suited for an earthing connection, etc...

Internal guide slots allow vertical PCB mounting.

The lid-mounting screw holes are threaded and the screws themselves are captive and recessed.

Two or four holes make horizontal PCB mounting possible.

Features:
• material: aluminum alloy

Order Code	dimensions
GBS11MF	8 47/64" x 5 3/4" x 2 11/64"
GBS13MF	4 31/64" x 2 33/64" x 1 3/16"
GBS15MF	4 31/64" x 2 33/64" x 2 11/64"
GBS23MF	4 23/32" x 3 15/16" x 1 3/8"
GBS25MF	4 31/64" x 3 35/64" x 2 11/64"
GBS27MF	6 47/64" x 4 49/64" x 2 11/64"
GBS29MF	5 33/64" x 3 15/16" x 2 61/64"
GBS33MF	6 1/2" x 5" x 2 61/64"
GBS37MF	3 1/2" x 1 3/8" x 1 3/16"
GBS39MF	6 47/64" x 4 49/64" x 4 11/64"
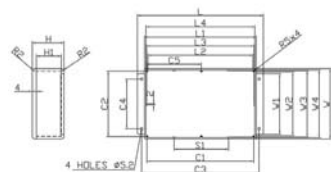
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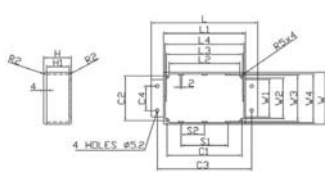
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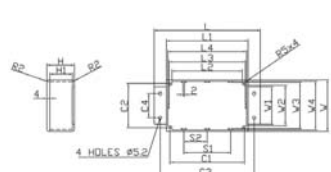
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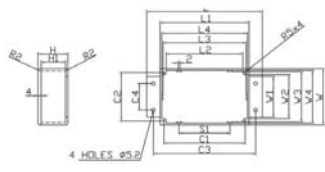
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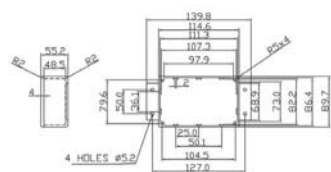
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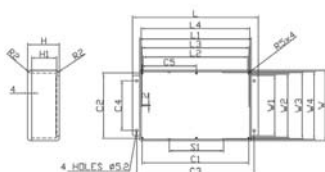
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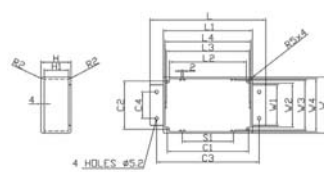
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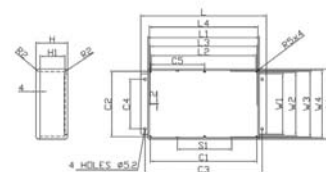
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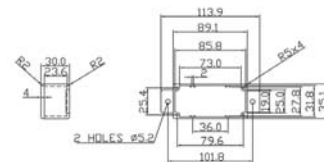
GBS37MF

ENCLOSURES TEKO-SERIES

TOP COVER ENCLOSURES

The top cover range offers a practical, economical packaging solution for small or medium-sized electronic devices or circuitry.

The design permits easy machining and the top panel is well suited for the installation of meters, readouts, etc.

Mounting PCB's is easy thanks to the integral PCB guides on the inside.

The enclosures are made of ABS or polystyrene with either aluminium or plastic panels.
ABS enclosure with square corners and a 1mm aluminium panel. Glossy surface finish. Lid and housing are joined with four screws.

OPTATIVE
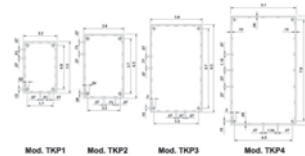
Mod. TKP1 Mod. TKP2 Mod. TKP3 Mod. TKP4

Order Code	material	dimensions	color	weight
TKP3B	ABS and aluminum	6.3" x 3.8" x 2.4"	petrol blue	5.4oz
TKP4B	ABS and aluminum	8.5" x 5.1" x 3.0"	petrol blue	9.7oz

VELLEMAN HIGH-Q CASES

PANEL SETS

PANEL SETS FOR MODEL C
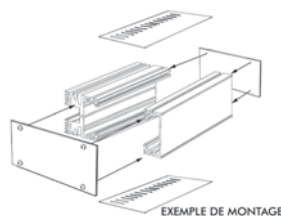
Features:
• black anodized aluminum

Order Code	contents
HB220921	panel set (under and above) and screws (without ALP and HSP profiles)

SPECIAL SERIES FOR VELLEMAN KITS

PLASTIC HOUSING FOR K2649
B2649

Specifications:
• for: K2649

Packaging		EAN code	54 10329 24137 7
Carton	/1	UPC code	

PLASTIC HOUSING FOR K5600G OR K5600R
B5600

Specifications:
• for: LED display with green LEDs K5600G or red LEDs K5600R
• dimensions: 19.0" x 3.4" x 1.0"

Packaging		EAN code	54 10329 30877 3
Carton	/100	UPC code	8 36479 00620 1

SG2 ADAPER HOUSING FOR K6713/K6200
B6713

Specifications:
• dimensions: 2.87 x 1.57 x 1.97"

Packaging		EAN code	54 10329 29953 8
Carton	/1	UPC code	

DIN-RAIL ENCLOSURE
B8006   **NEW**

Features:
• dimensions: 163 x 74 / 130x90
Specifications:
• for: K8006 BASE UNIT FOR HOME MODULAR LIGHT SYSTEM
• for: K8056 8-CHANNEL REMOTE RELAY CARD
• for: VM129 8 Channel Relay Card
• for: VM118 8-CHANNEL REMOTE CONTROL
• for: K8090 8-CHANNEL USB RELAY CARD
• for: VM8090 8-CHANNEL USB RELAY CARD

Packaging		EAN code	54 10329 33051 4
Carton		UPC code	

BEZEL ENCLOSURE FOR K8035
B8035

Features:
• for: K8035
• contains: box, bezel, printed front, 4 buttons, 8 fixation screws, manual
• 3 different ways to install the bezel: flush with wall, upon wall, panel mounting
• attractive design
• can be resprayed in your favourite color

Packaging		EAN code	54 10329 24177 3
Carton	/1	UPC code	

K8045 BEZEL ENCLOSURE
B8045

Features:
• for: K8045
• contains: box, bezel, printed front, 4 buttons, 8 fixation screws and a manual
• 3 different installation methods: flush with wall, upon wall, panel mounting
• attractive design
• can be resprayed in your favourite color

Packaging		EAN code	54 10329 24178 0
Carton	/1	UPC code	

HPS SERIES CARRYING BAG
BAGHPS

Packaging		EAN code	54 10329 21388 6
Carton	/200	UPC code	8 36479 00669 0

HARD CARRY CASE FOR PERSONAL SCOPES
CASEHPS

Packaging		EAN code	54 10329 21644 3
Carton	/10	UPC code	

PLEXIGLASS ENCLOSURE FOR K8099
CKB8099

Pre-drilled plexiglass panels for K8099 enclosure
Specifications:
• dimensions: 130 x 75 x 35mm / 5.12 x 2.95 x 1.37"

Packaging		EAN code	54 10329 42476 3
Carton		UPC code	

INDEX

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