GE Energy
Industrial Solutions

WORLDWIDE PARTNER

HabiTEQ™

Home & Building Automation

- Energy efficiency
- Outstanding comfort
- Enhanced safety

GE imagination at work

Contents

HabiTEQ™ - Home & Building Automation

Development of innovative technology impacts our daily lives offering a wealth of new possibilities which includes our very own home or working space.

This is particularly true for the electrical installation – the heart of every building. This area holds great potential for designing properties with greater flexibility, energy saving and outstanding comfort without compromising lifestyle.

The **HabiTEQ™** automation solutions and components are tailored for your building - offering a platform of opportunities to achieve a versatile system satisfying the most demanding customers needs.

HabiTEQ™ components

Offer a single and simple integrated system instead of separate control solutions...

In comparison with classic electrical installations, the HabiTEQ™ intelligent building control system offers noticeable advantages.
All the different functional subsystems within your living space are seamlessly integrated via a 2–wire BUS to a single communicating system, controlled by a powerful central controller. This enables the optimal, energy efficient interaction of the subsystems, which is almost impossible with conventional technology.
The system allows a large number of interactive functions to be realised, including:

| Lighting control | Heating/ventilation control | Climate control | Shutter control | Safety monitoring | Energy management | Central automation |

HabiTEQ™ solutions

One step ahead of the rest – offering a complete solution rather than simply components.

This intelligent pre-wired "plug and play" automation solution has been designed for easy installation and time saving.
HabiTEQ™ is a tailor-made solution using a selection of components optimized for your living or working space with the necessary protection pre-wired in a suitable enclosure, requiring only a competent electrician to get things up and running.
Once in place the system can be configured using a simple windows programme on a PC through USB /ethernet.

HabiTEQ™ Flexible solution fo electrical installati

Seamlessly integrating safety, security, lighting, climate, automation of mechanical loads such as shutters and blinds, and many more!
HabiTEQ™ provides comfort, control and convenience through multiple stylish user interfaces (touch screen, switches, etc.)

comfort

convenience

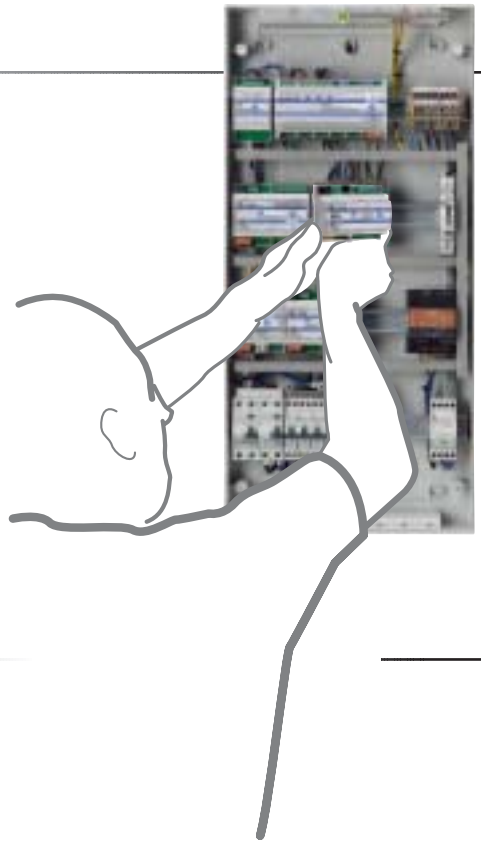
or smart & simple ons!

Easy to install and customize. Using a PC through a choice of serial or ethernet link adds tangible value to installers of commercial buildings and home owners whatever the property: apartments, family homes, villas, etc.

security

building

Easy to install



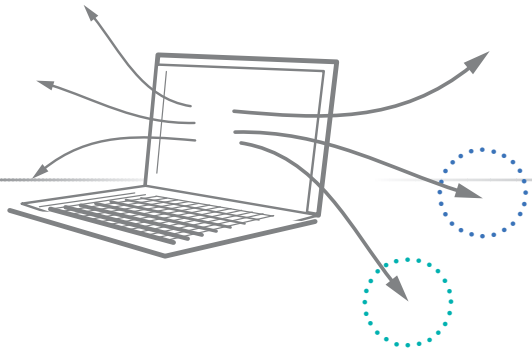
Modular building blocks, easily scalable!

- Fast 2-wire system BUS with no polarity, no restrictions on topology
- Quick and easy system configuration
- Fast and simple installation

Value for money

Track and control energy usage with a simple pulse meter

- Flexible functionality – easily enhance and adapt with limited or no additional hardware
- Up to 50% cost saving on system installation & setup(1)

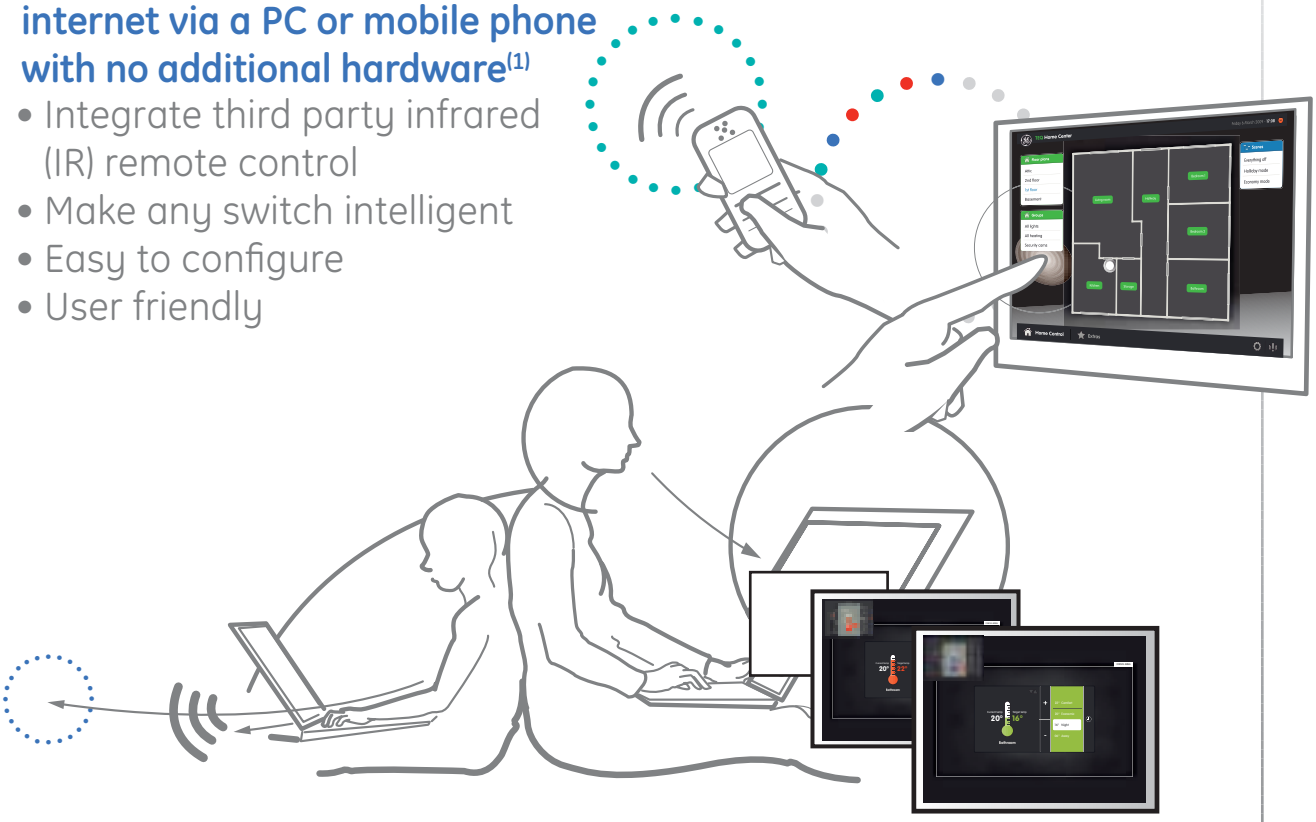


(1) Compared to other popular distributed systems.

Flexibility

Visualize and control through the internet via a PC or mobile phone with no additional hardware(1)

- Integrate third party infrared (IR) remote control
- Make any switch intelligent
- Easy to configure
- User friendly



Integration with larger systems through the ethernet(2) for buildings

Remote access
Multiple clients

Redundancy
Manual override on field modules

Open Standards

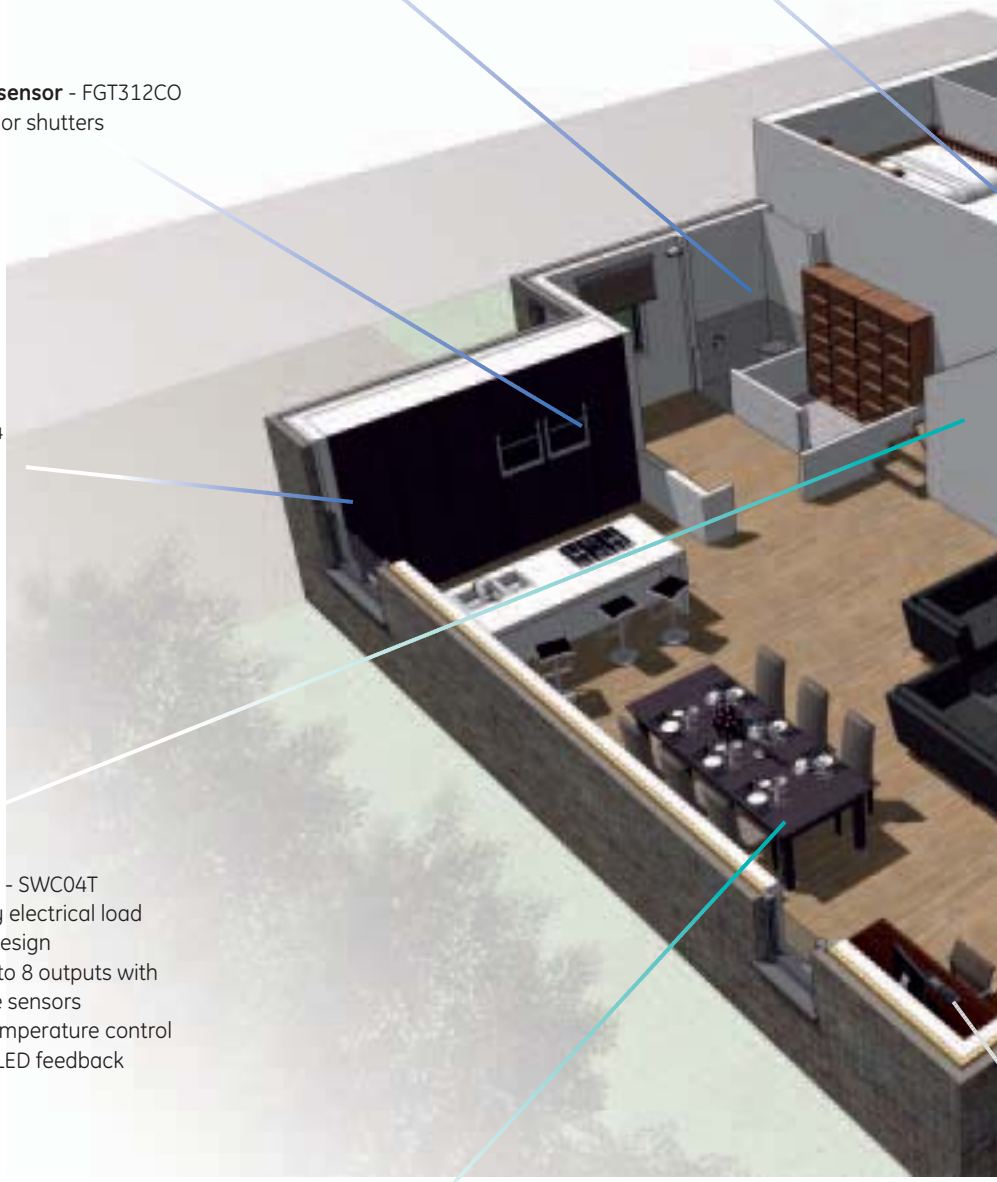
(1) Controller with ethernet port.
(2) Using the event handler protocol, supplied on request.

Home solution

Motion sensor - PIR
EV100 (indoor) DI502 (outdoor)
- Sensor with high immunity to false motion
- For automatic lighting and heating

Smoke sensor - DP721R
Smoke sensor pre-warning

Carbon monoxide sensor - FGT312CO
- Opens ventilation or shutters



Gas sensor - FGELPG24
- Opens the shutters

Smart switch - SWC04T
- Controls any electrical load
- With Niko® design
- Controls up to 8 outputs with temperature sensors
- Multizone temperature control
- Multicolour LED feedback

Interface module - SMS01
- Any mobile phone
- Controls any electrical load with text

LCD control panel - THI01
- Up to 96 outputs
- IR receiver
- Temperature sensors built-in with thermostat function

Relay module - REL04/08
- Contactor
- Controls any load linked to a clock or for a preset time

Touch panel - TSC5.8
- Monochrome touch panel
- Simple interface
- With temperature sensor

IP camera - BL30CE
- Security
- See who is at the door

Input module - INP08/16
- Any external sensor with the INP module (INP = wind detector)
- Automatically opens or closes a canopy as a result of wind speed

Dimmer - DIM04/500
- Set the mood, relax and enjoy

Touch panel-PC - TCPC/NAV10.1
- Central home control with energy visualization

Input module - INP04 / INP02
- Can be integrated in any switch

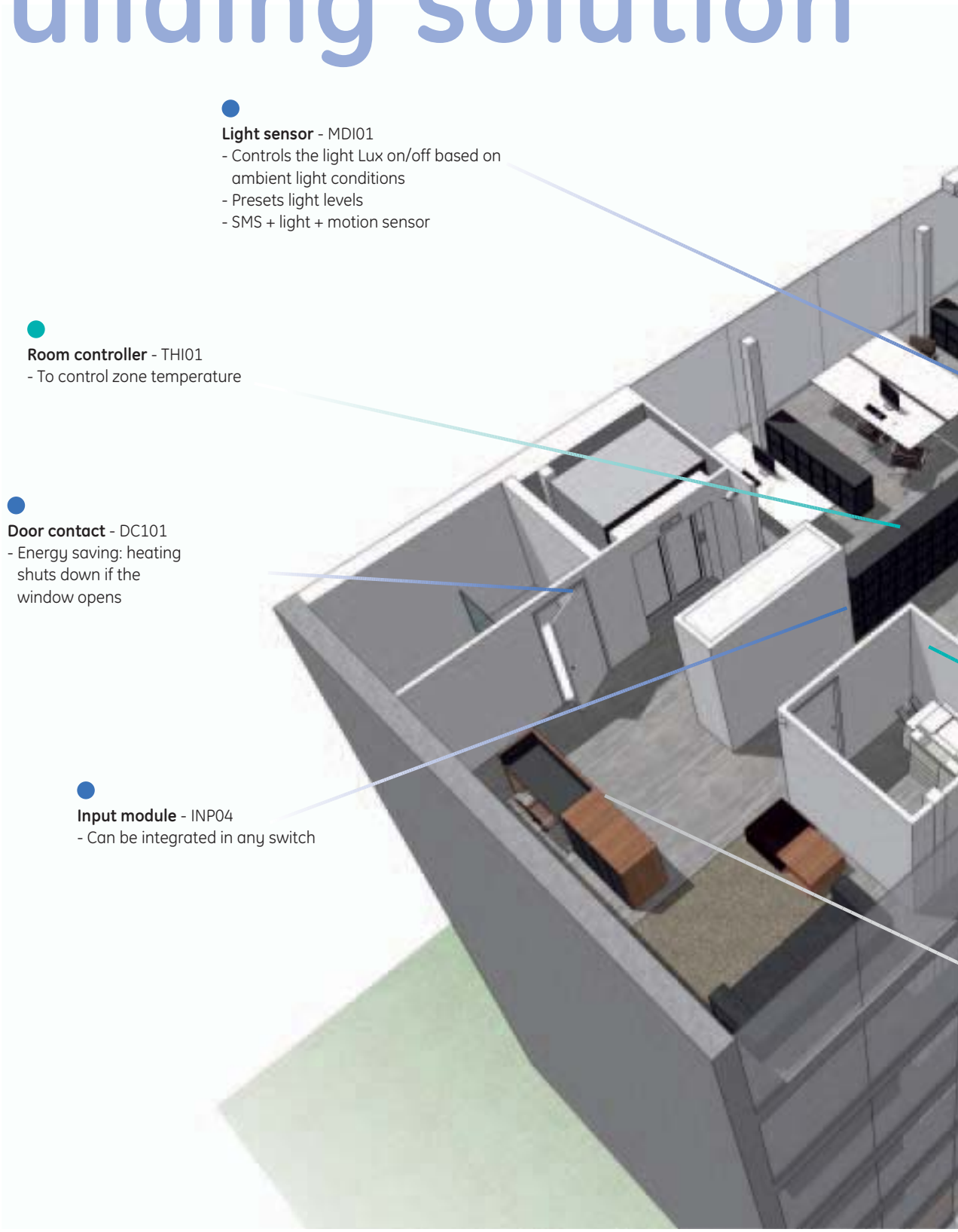
Building solution

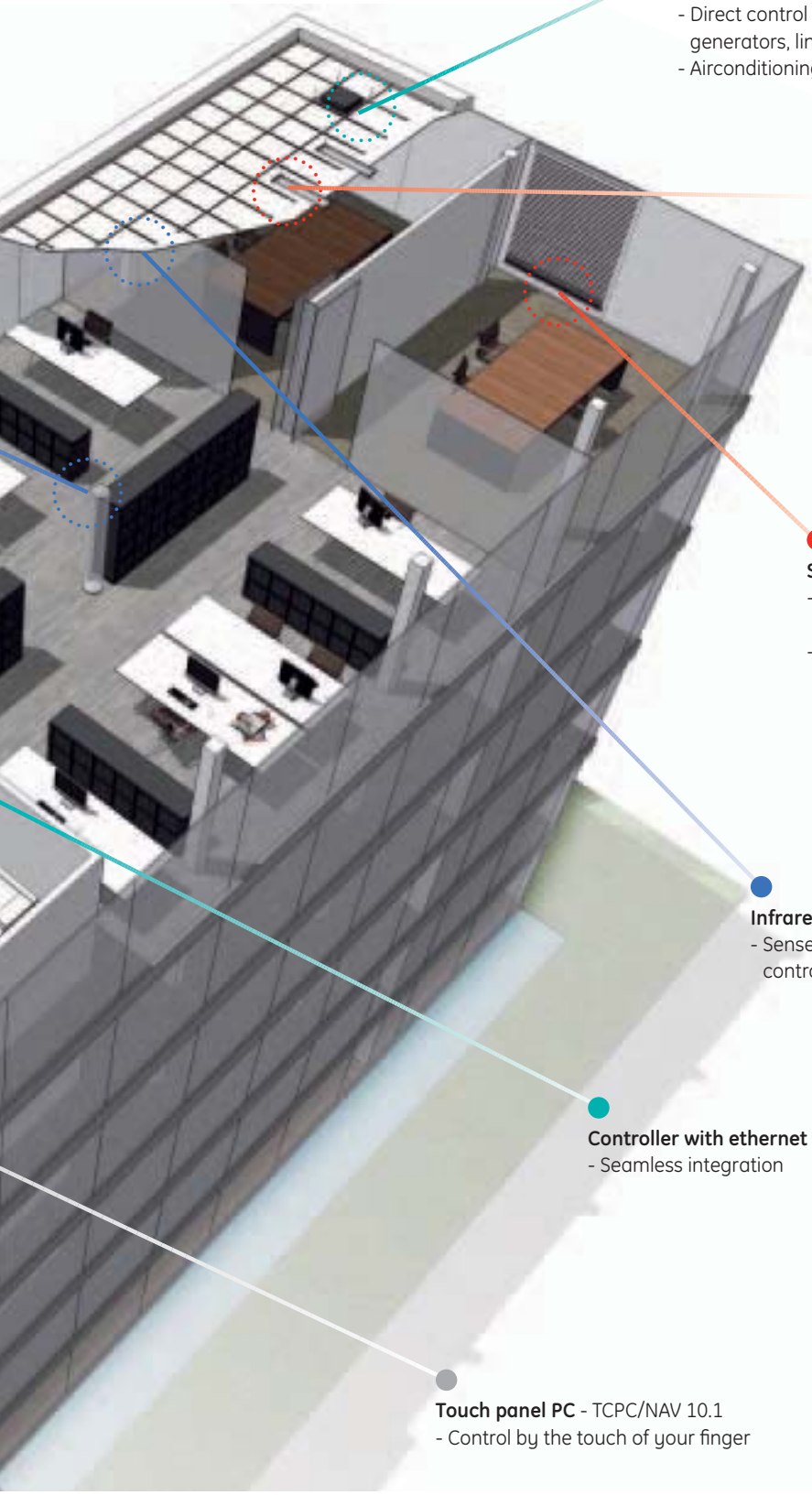
Light sensor - MDI01
- Controls the light Lux on/off based on ambient light conditions
- Presets light levels
- SMS + light + motion sensor

Room controller - THI01
- To control zone temperature

Door contact - DC101
- Energy saving: heating shuts down if the window opens

Input module - INP04
- Can be integrated in any switch





Infrared generator - IRG04
- Direct control of airconditioning with infrared generators, linked to presence of open windows
- Airconditioning goes to standby if a window opens

Dimmer - ANR04
- Dimming of fluorescent lamps
- Reduces light levels to the perfect amount of light in combination with the light sensor

Shutter up / down - ROL02
- Shutters / blinds... positioned perfectly
- Stand alone or linked to a smart sensor light

Infrared sensor - EV669 / DD669
- Senses 360° motion and controls lights and heating

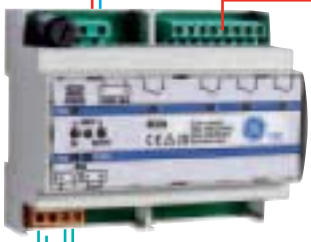
Controller with ethernet - CTD
- Seamless integration

Touch panel PC - TCPC/NAV 10.1
- Control by the touch of your finger

Relays / Load control

Controllers

230Vac/50Hz



REL04
4 relay module
ROL02
REL08

CTD01
CTD01E
CTD02
CTD02E
Controller with USB and ethernet

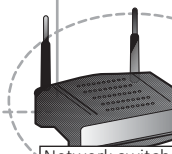
2-wire communication BUS


Lamp


Heater


Shutter


USB interface


Network switch

Ethernet LAN

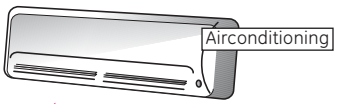

WEB - interface


Residential WIFI camera


GE Home center

SMS01
Mobile interface module


Audio/video system

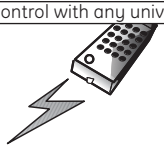

Airconditioning

Infrared generator

IRG04


Motion & light sensor

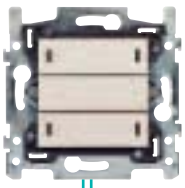
Control with any universal remote (IR)

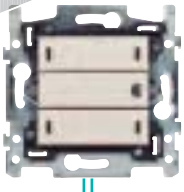


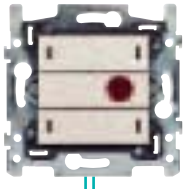
Niko® Smart switch

with thermostat

with IR receiver







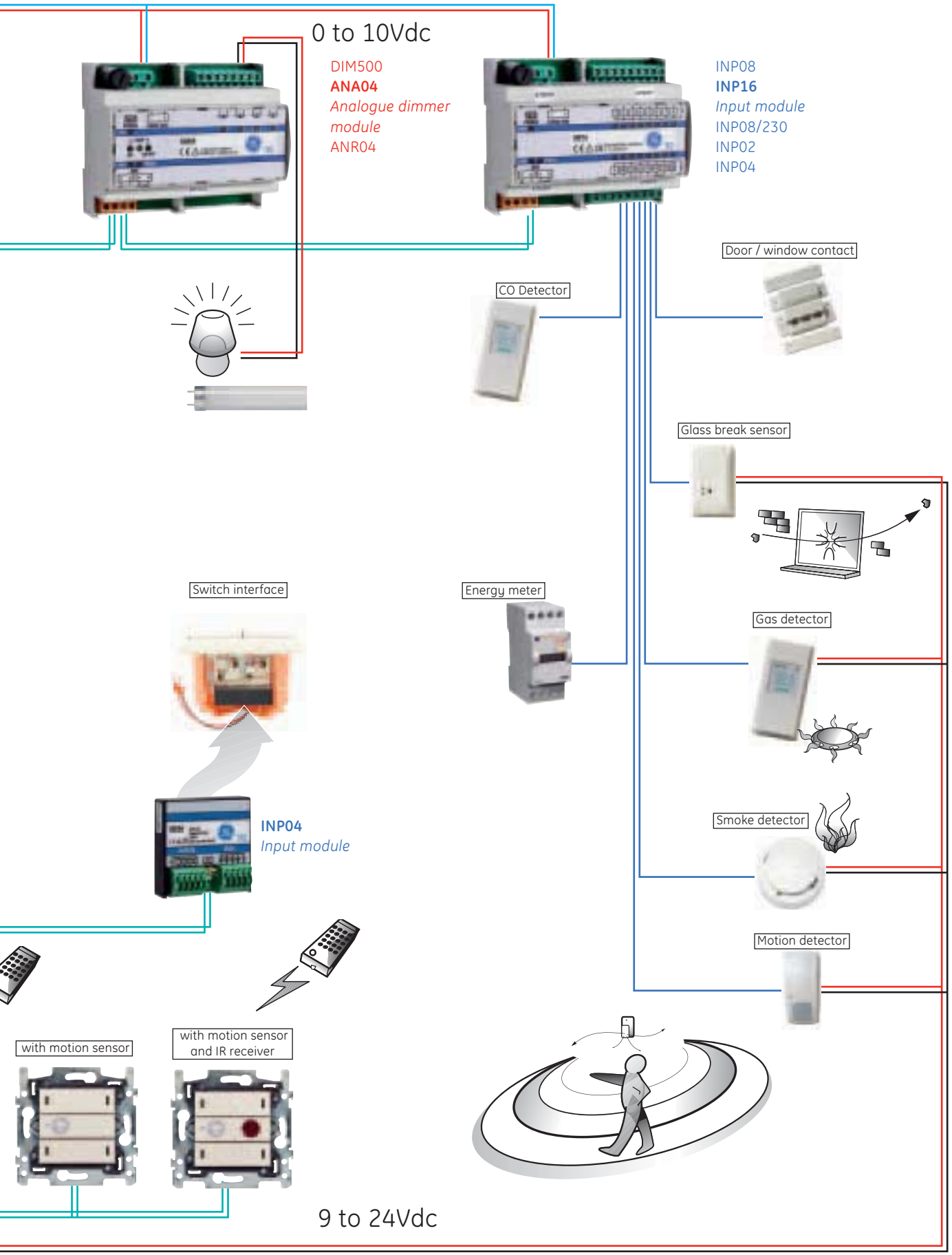
Monochrome touch screen

2 line display with IR/ temperature sensor

External power supply

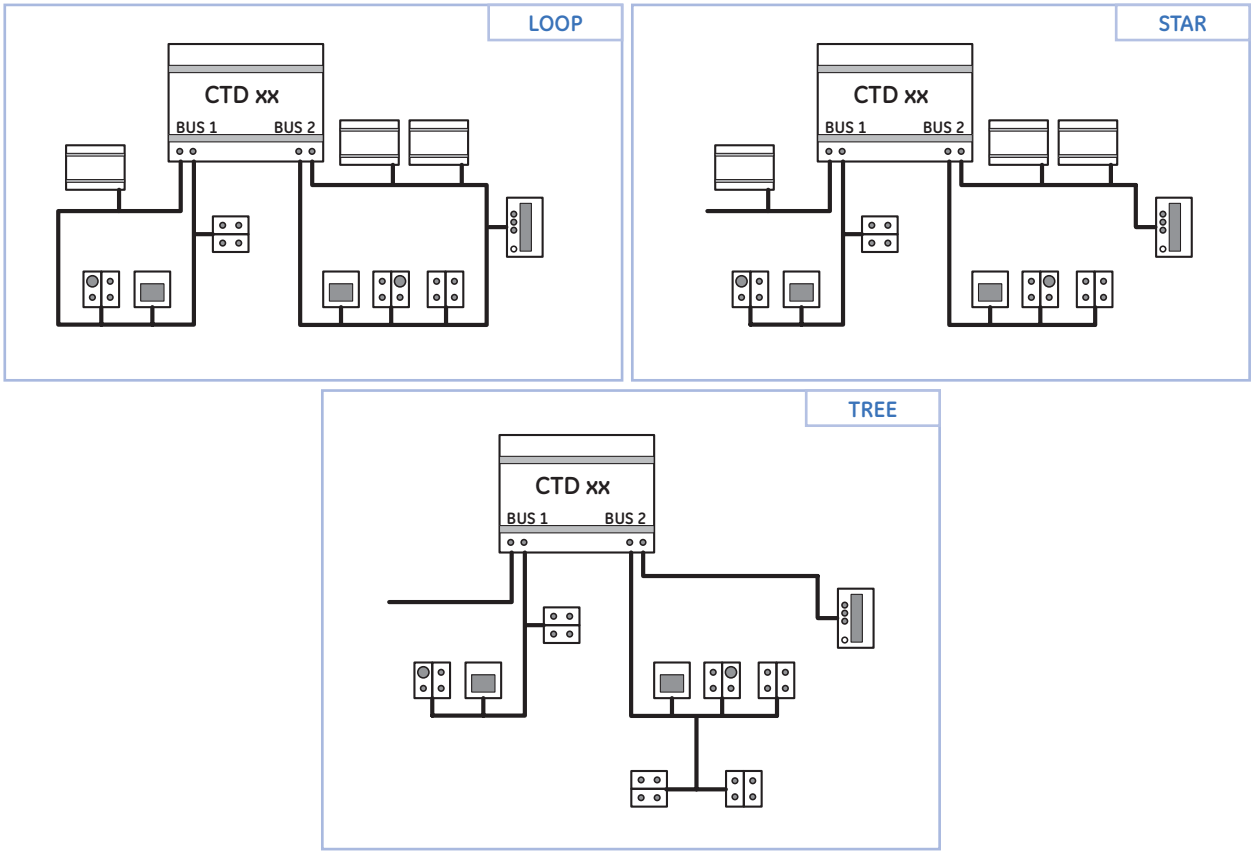
Lighting control

Input modules



System Topologies

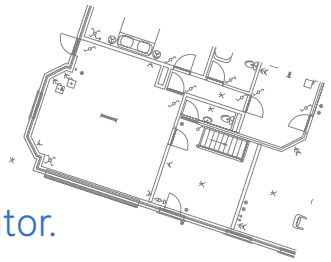
Flexible BUS topology... star, loop, tree or any combination with no polarity... enables quick and easy installation



System overview

- 2-wire bi-directional BUS communication.
- BUS supplies power to the I/O module and has no polarity
- I/O reaction speed: 400 outlets = 0.3 sec
- Simultaneous communication
- Current based BUS principle = high resistance against external influences
- Cable: shielded twisted pair section 2 x 1.0 mm^2
  Distance max. 200m (open), max. 400 m (closed)

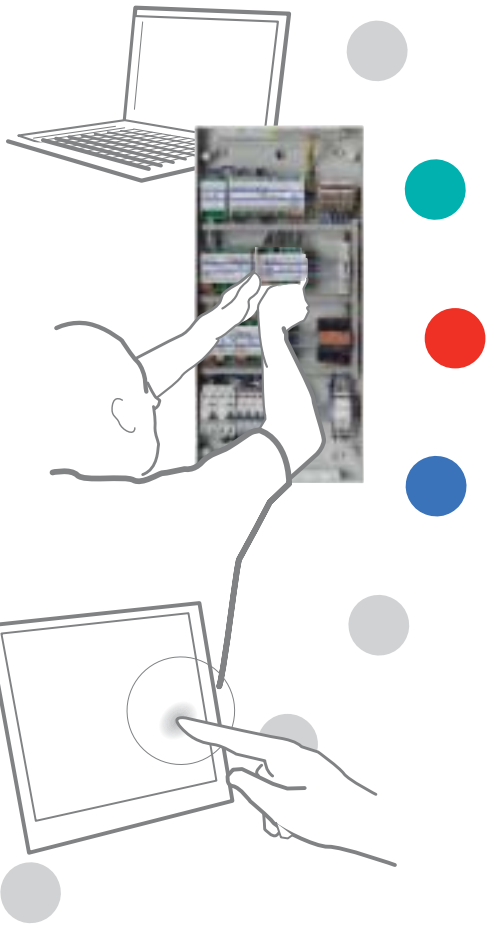
Your home or building automation solution... is just six steps away



1 Enter installation details on floor plan.

2 Transfer installation details to the configurator.

3 Output of parts list and HabiTEQ™ distribution board.



4 Place the order for your HabiTEQ™ distribution board & other accessories (switches, touchscreen etc..)

5 Install & connect

6 Configure & startup

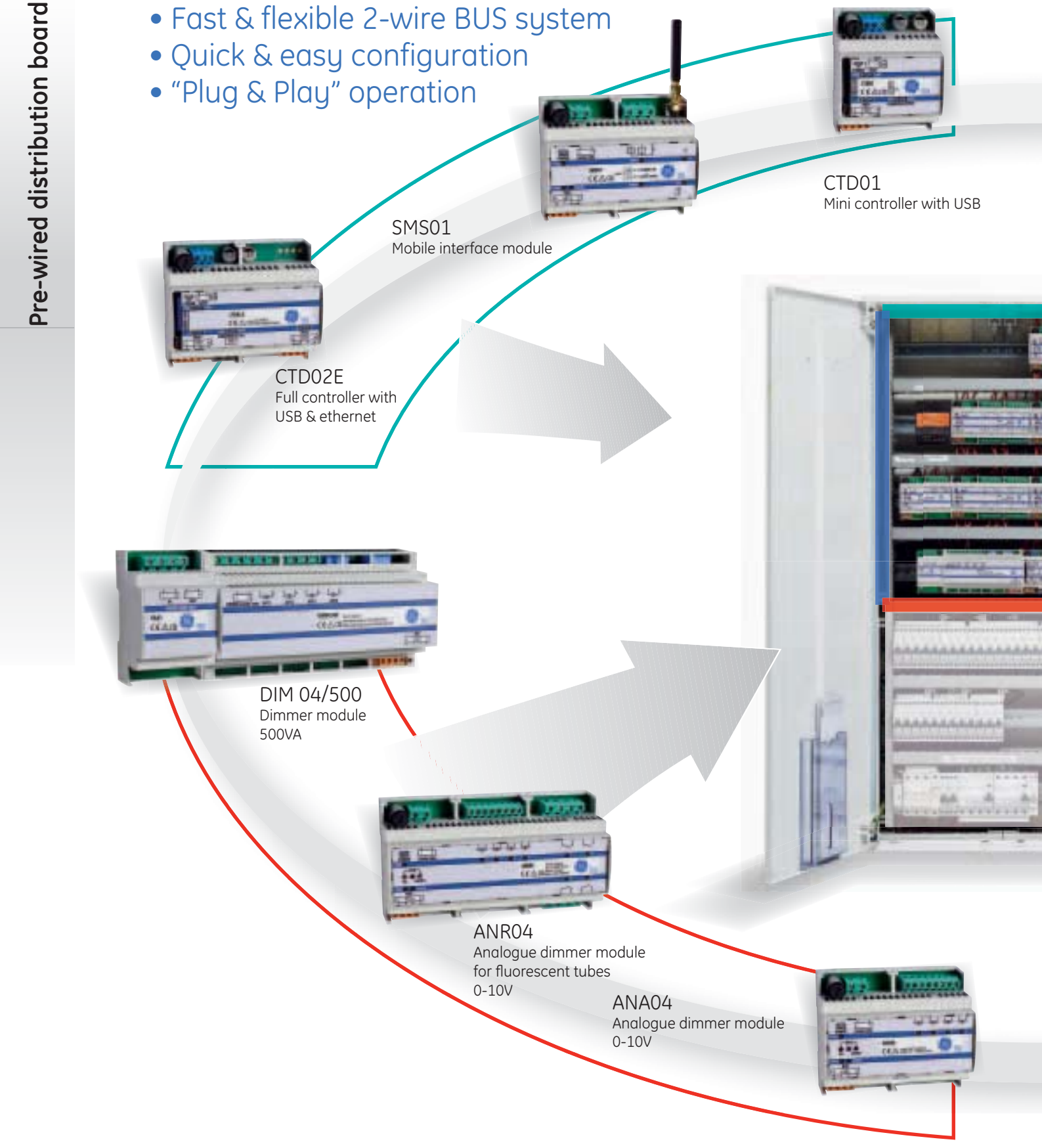
Simple installation – Can be done by your local electrician

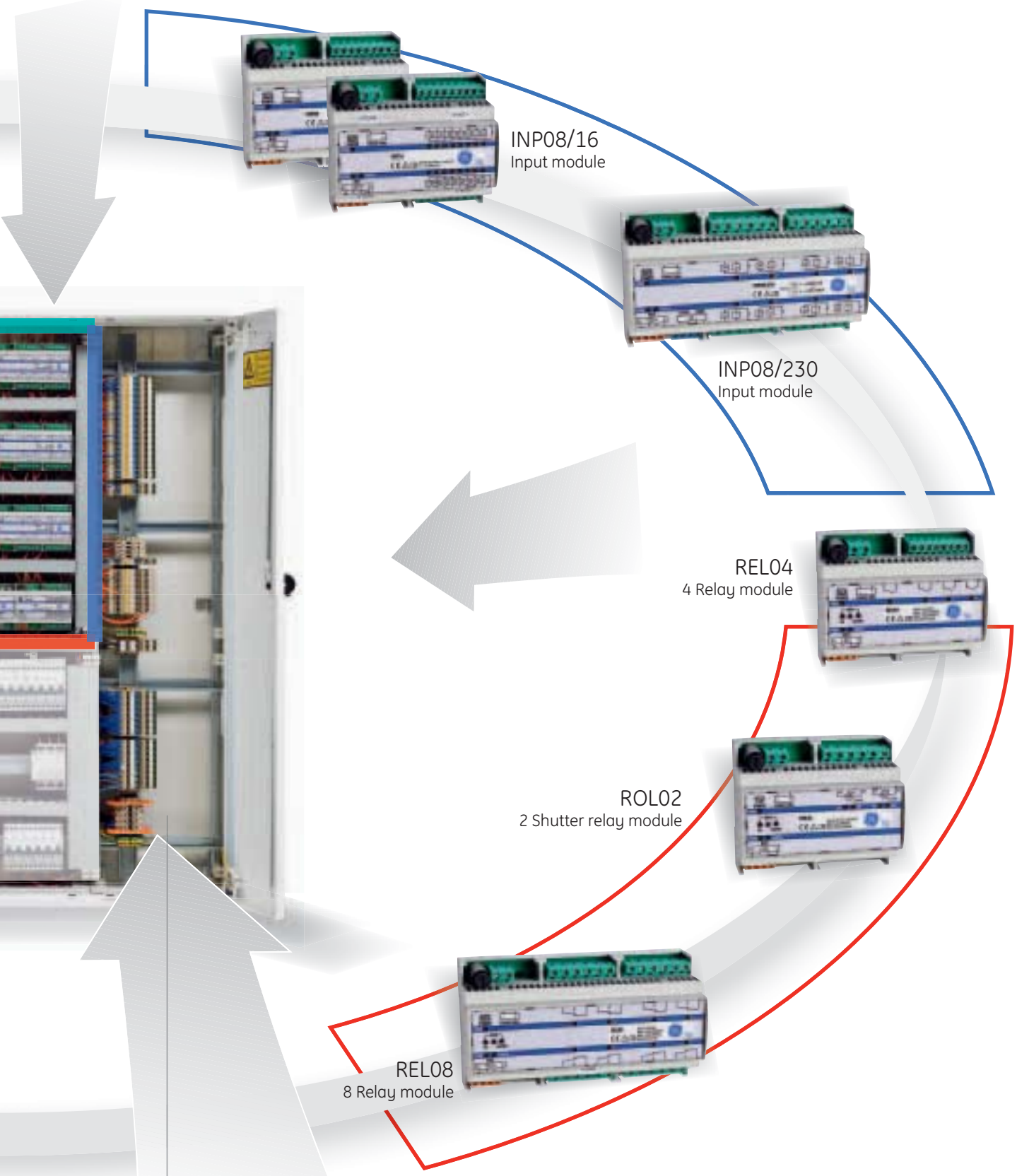
- Quick & easy system setup through PC
- "HabiTEQ™ System Manager" free software. For online support go to the homepage of our website and click on Portfolio Residential. www.ge.com/ex/industrialsolutions

Pre-wired distribution board

Automation components

- Fast & flexible 2-wire BUS system
- Quick & easy configuration
- "Plug & Play" operation





Separate cable compartment (enclosure types C-D-E-F)
Enclosure shown is type C7 (see page 22)

Pre-wired distribution board
Protection devices

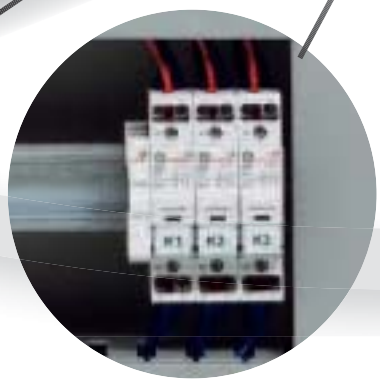
- Quick & Easy installation
- Circuit and people protection

MCB's for
line protection

RCD's for people protection

Surge protection

Overvoltage
protection



Contactors for
controlled socket-outlets

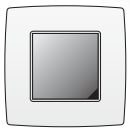
Controlled outputs

M Motor

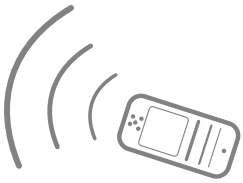
R Relay

D Dimmer

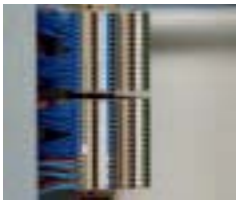
Potential free and 230Vac binary inputs
Connections from push-buttons, magnetic contacts and external detectors to input module.



BUS connection



Screwless terminals
for quick connection



Conventional cabled and controlled socket-outlets

8 types of enclosures to suit every requirement

Type A
Fix-o-Rail 150
Surface Mounting

Rows	Type A	Code	H x W x D	Mod/ Row	Total Mod
4	FOR 150	**A4**	750x355x150	18	72

- Standard:
- equipped with modular devices
- external wiring direct onto input modules
- cables from socket circuits directly into MCB's
- wiring of controlled outputs on terminals
- single phase 40A incomer

Type B-F
Fix-o-Rail 144 F
Flush Mounting

Picture shown B6F

Rows	Type B-F	Code	H x W x D	Mod/ Row	Total Mod
4	FOR 144F	**B4F**	800x740x(35)140	24	96
5	FOR 144F	**B5F**	950x740x(35)140	24	120
6	FOR 144F	**B6F**	1100x740x(35)140	24	144

- Standard:
- equipped with modular devices
- external wiring direct onto input modules
- cables from socket circuits directly into MCB's
- wiring of controlled outputs on terminals

Free software to design your automation solution

Type B-S
Fix-o-Rail 144 S
Surface Mounting

Picture shown B6S

Rows	Type B-S	Code	H x W x D	Mod/ Row	Total Mod
4	FOR 144S	**B4S**	800x740x140	24	96
5	FOR 144S	**B5S**	950x740x140	24	120
6	FOR 144S	**B6S**	1100x740x140	24	144

• Standard:
- equipped with modular devices
- external wiring direct onto input modules
- cables from socket circuits directly into MCB's
- wiring of controlled outputs on terminals

Type B
VP-SYSTEM MV/MS
MW= Wall Mounting
MS= Floor Standing

Picture shown B8

Rows	Type B	Code	H x W x D	Mod/ Row	Total Mod
4	VP MW	**B4**	650x550x210	24	96
5	VP MW	**B5**	800x550x210	24	120
6	VP MW	**B6**	950x550x210	24	144
7	VP MW	**B7**	1100x550x210	22	154
8	VP MW	**B8**	1250x550x210	22	176
9	VP MW	**B9**	1400x550x210	22	198
12	VP MS	**BS12**	1980x550x210	20	240

• Standard:
- equipped with modular devices
- external wiring direct onto input modules
- cables from socket circuits into terminals
- wiring of controlled outputs on terminals

8 types of enclosures to suit every requirement

Type C
VP-SYSTEM MW/MS
MW= Wall Mounting
MS= Floor Standing

Picture shown C7

Type D
VP-SYSTEM MW/MS

Picture shown D9

Rows	**Type C**	Code	H x W x D	Mod/ Row	Total Mod
5	VP MW	**C5**	800x800x210	22	110
6	VP MW	**C6**	950x800x210	22	132
7	VP MW	**C7**	1100x800x210	22	154
8	VP MW	**C8**	1250x800x210	22	176
9	VP MW	**C9**	1400x800x210	22	198
12	VP MS	**CS12**	1980x800x210	22	264

Rows	**Type D**	Code	H x W x D	Mod/ Row	Total Mod
5	VP MW	**D5**	800x1050x210	34	170
6	VP MW	**D6**	950x1050x210	34	204
7	VP MW	**D7**	1100x1050x210	34	238
8	VP MW	**D8**	1250x1050x210	34	272
9	VP MW	**D9**	1400x1050x210	34	306
12	VP MS	**DS12**	1980x1050x210	34	408

• Standard:
- equipped with modular devices
- separate cable compartment (in- and outgoing cables)
- cables from socket circuits onto terminals
- wiring of controlled outputs into terminals
- wiring of inputs on terminals

• Standard:
- equipped with modular devices
- separate cable compartment (in- and outgoing cables)
- cables from socket circuits onto terminals
- wiring of controlled outputs into terminals
- wiring of inputs on terminals

Type E
VP-SYSTEM MW

Picture shown E8

Type F
QuiXtra™ 630

Picture shown FS12

Rows	Type E	Code	H x W x D	Mod/ Row	Total Mod
5	VP MW	**E5**	800x1300x210	38	190
6	VP MW	**E6**	950x1300x210	38	228
7	VP MW	**E7**	1250x1300x210	38	266
8	VP MW	**E8**	1400x1300x210	38	304
9	VP MW	**E9**	1980x1300x210	38	342

• Standard:
- equipped with modular devices
- separate cable compartment (in- and outgoing cables)
- cables from socket circuits onto terminals
- wiring of controlled outputs into terminals
- wiring of inputs on terminals

Rows	Type F	Code	H x W x D	Mod/ Row	Total Mod
5	QuiXtra 630	**F5**	750x1240x250	36	180
6	QuiXtra 630	**F6**	900x1240x250	36	216
7	QuiXtra 630	**F7**	1050x1240x250	36	252
8	QuiXtra 630	**F8**	1200x1240x250	36	288
9	QuiXtra 630	**FS9**	1600x1240x250	36	324
10	QuiXtra 630	**FS10**	1750x1240x250	36	360
12	QuiXtra 630	**FS12**	2050x1240x250	36	432

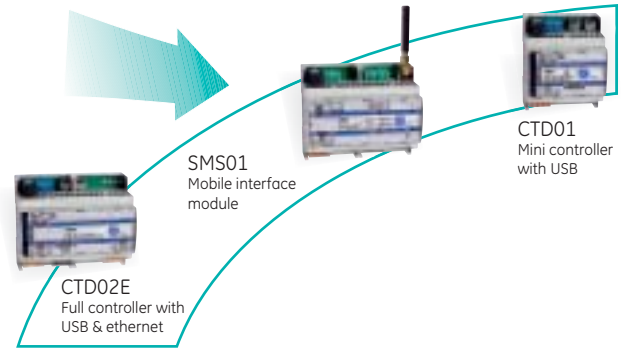
• Standard:
- equipped modular devices
- separate cable compartment (in- and outgoing cables)
- main compartment with transparent door
- cables from socket circuits onto terminals
- wiring of controlled outputs into terminals
- wiring of inputs on terminals
• Optional: main compartment with plain door

Automation components

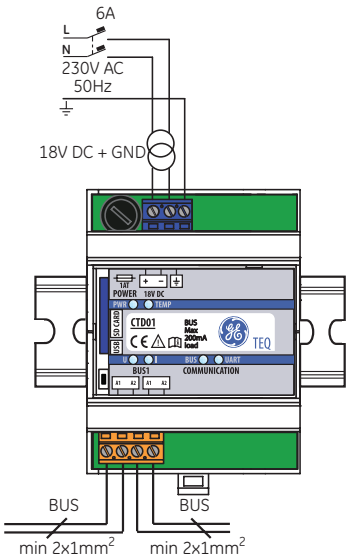
Controllers

The controller is the central brain of the HabiTEQ automation system and delivers the necessary power and data to all the connected modules. The controller is available in 6 different versions to suit your installation size.

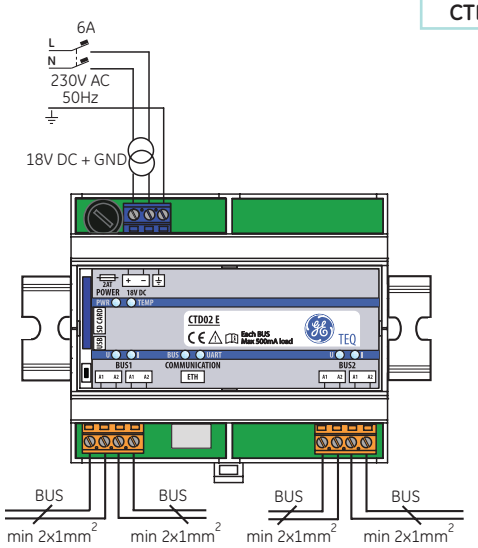
The power supply is delivered via a stabilized 18Vdc/2A lead (included). In case of a loss of the supply voltage a built-in back-up memory will save all data for at least 4 years.



CTD01

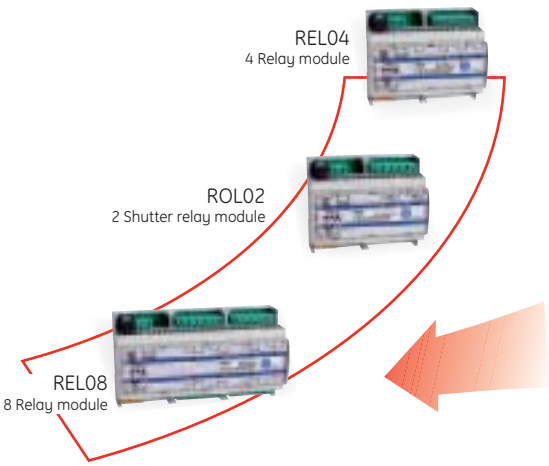


CTD02E



Controller	CTD01	CTD01E	CTD02	CTD02E	CTD03	CTD03E
Power supply	18Vdc / 2A (supplied with controller)					
Output BUS (per BUS)	13.8Vdc / 200mA	13.8Vdc / 200mA	13.8Vdc / 500mA	13.8Vdc / 500mA	13.8Vdc / 500mA	13.8Vdc / 500mA
Power consumption	4W CTD01 /CTD01E		6W CTD02 / CTD02E		7W CTD03 / CTD03E	
Approx. number of modules	12 to 15		35 per BUS	35 per BUS	35 per BUS	35 per BUS
Number of BUS connections	1		2		3	
Logical functions	Digital logical functions - (AND/OR/ IF.. THEN.. ELSE) ; Analogue logical functions (x, / , + , -, <, >, =)					
Protection - fuse	1 AF					
Fitting	DIN-rail					
Dimensions	4 modules (72mm)		6 modules (107mm)			
Built-in communication	USB	USB & ethernet	USB	USB & ethernet	USB	USB & ethernet
Sequences or scenes/clock	92 /100					
Back-up memory time	4 years (on board 2GB -SD Card)					

General specifications for DIN-rail automation modules	
Operating temperature	10 to 50°C without condensation
Storage temperature	-10 to 60°C without condensation
Maximum humidity	93%, without condensation
Protection degree	IP20, EN 60529
Fitting	DIN-rail to DIN EN 50022



Relay modules

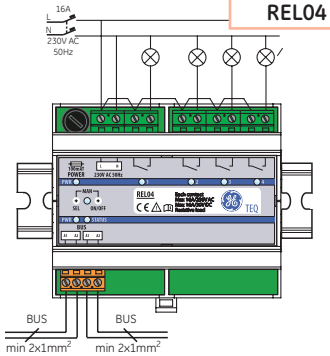
A choice of 3 different relay modules is offered to suit your switching application.

The relay module has 4 or 8 normally open, independently controlled contacts that can switch up to 16A each. The relay module does not have any specific function. It can handle all switching functions: monostable (bell), bistable (on/off), timer, interval, thermostat output, etc.

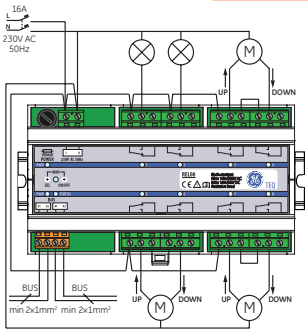
For shutter/blind/curtain control, the shutter module ROL02 must be used. For heavy inductive loads (multiple fluorescent lights) with a high capacity or bipolar applications, contactors need to be added. The relay module contact will then activate the coil of the contactor.

Each of the relay outputs have a unique serial number (e.g REL08) enabling programming anywhere and anytime. All programming remains internally stored in a nonvolatile memory. Following a loss of supply the outputs return to their previous position. A bipolar automatic fuse with a maximum of 16A must be placed on the feeder.

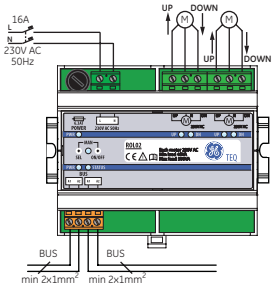
REL04



REL08



ROL02



Relay modules	REL04	REL08	ROL02 (Shutter/Blinds)
Power supply	AC 230V +/- 10%, 50..60Hz - maximum		
Max. protection needed	16A/2P		
BUS load	10mA at nominal 13.8V		
Maximum consumption	9W (all relays ON)	15W (all relays ON)	9W (all relays ON)
Internal fuse	500mA		
Insulation voltage	3kVac (tested)		
Fitting	DIN-rail		
Type	OUT1 – OUT4: 4 potential-free NO single contacts	OUT1 – OUT8: 8 CO contacts	UP1/2 – DN1/2: 4 potential-free NO single contacts
			UP1 – DN1 and UP2 – DN2: internally locked contacts
Rated current	16A (resistive at 230Vac and 30Vdc)		-
Rated load	Resistive load (cos phi = 1) / 16A at 230Vac / 16A at 30Vdc Inductive load (cos phi = 0.4; L/R=7ms) / 8A at 230Vac / 8A at 30Vdc		Minimum load: 40W on 230Vac
Maximum switching power	Resistive load (cos phi = 1) / 3680VA at 230Vac / 480W at 30Vdc Inductive load (cos phi=0.4; L/R = 7ms) / 1840VA at 230Vac / 240W at 30Vdc		Maximum load: 560W on 230Vac
Set/Reset time	15ms max. / 5ms max.		
Endurance	20mil. mechanical operations		
LED indication	Green LED: power supply		
	Red LED: Start-up 2s. and during programming		
	Orange LED: 1-X : Output 1 to x active Orange LED: manual mode		Orange LED:UP, DN: Up1 / Down 1 /Up2 / Down 2 active Orange LED: manual mode
Dimensions	6 modules	9 modules (157mm)	6 modules

Dimmer modules

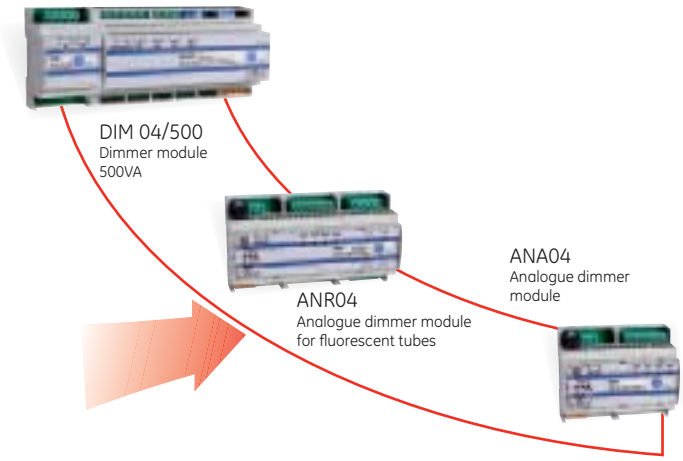
3 different dimmer modules are offered to suit a variety of dimming applications. The modules are controlled and programmable through the bus operating digitally with 8-bit precision. An optical separation between the inputs and outputs guarantees safe operation.

Multiple possibilities for dimmer control

1. One-button dimmer "▽" enables the reduction the number of control buttons.
2. Two-button dimmer: "△" and "▽" button enhancing the operating comfort.

When a button is kept depressed, the transit time from zero to maximum is 5.1s. A short pulse (< 0.3s) will take the dimmer to zero or to the maximum value in 2.5s.

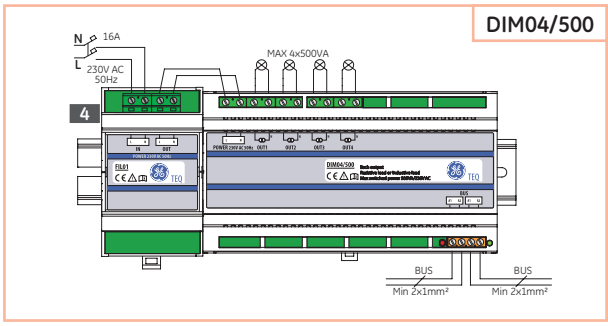
The maximum value can be adjusted from 20 to 100%. The lighting can also be dimmed automatically after a set time of 1s to 255min. Ideal for bedrooms... If the dimmers are controlled by a sequence the rise time and fall time can be adjusted independently between 0.3s and 20min. Each module has a unique serial number enabling programming anywhere and anytime. After a loss of power the outputs return to their latest position.



Dimmer module DIM04/500

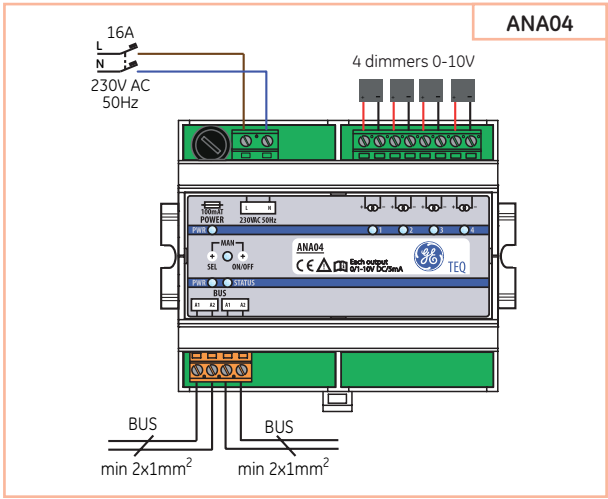
Module for a DIN-rail, suitable for dimming 4 loads of 500VA. The phase offset of each load is measured separately thus allowing the use of resistive (light bulbs) and inductive loads (conventional transformers). Electronic transformers can be used if they operate according to the phase leading principle. On the 500VA dimmer modules, each dimmer output is fused internally with a 4AF fuse. A 2P MCB 16A max. must be placed on the mains power.

Note an additional filter module will be supplied with 500VA dimmers.



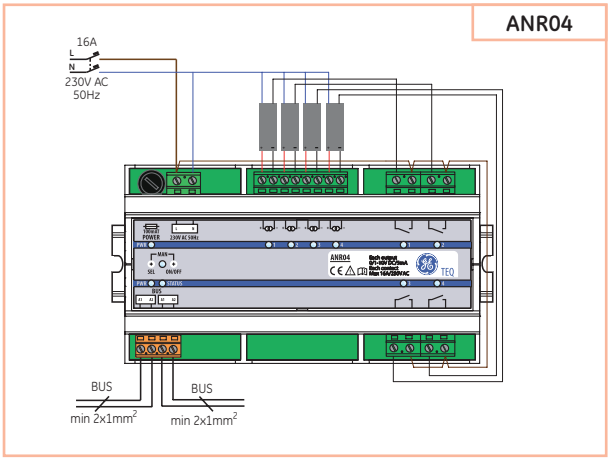
Analogue dimmer ANA04

Suitable for controlling four analog dimmers operating with input voltages of 0-10V. This module can be used for dimming very large capacities. It must be noted that the control voltages must not be connected to the mains. The negative terminals are internally linked. The control and programming are done through the 2-wire BUS, one or two button dimmer control. A 2P MCB 16A max. must be placed on the mains power.



Analogue dimmer ANR04

Each analog output controls a relay contact, which releases when the output is on 0. This contact can disrupt the mains voltage so that the fluorescent lamps go out completely. It must be noted that the control voltages must not be connected to the mains. The negative terminals are internally linked. The control and programming is done through the 2-wire BUS, including the option of using one or two push-buttons for the dimmer control. A 2P MCB 16A max. must be placed on the mains power.



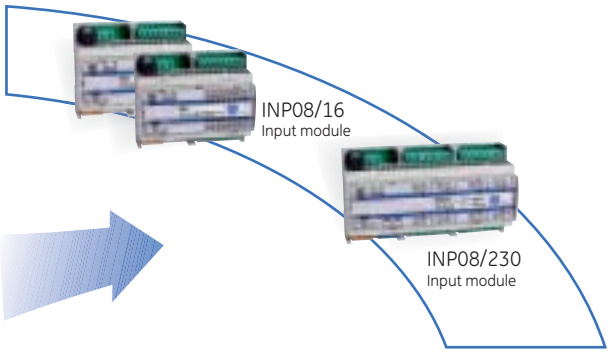
Dimmers	DIM04/500 + Line filter	ANA04	ANR04
	Forward phase dimmer modules	Analogue dimmer modules	
Power supply	230Vac, 50Hz maximum		
Max. protection needed	16A/2P		
BUS load	10mA at 13.8V		
Standard consumption	2.3VA		6VA
Internal fuse	4AF / output	100mAT single phase	
Fitting	DIN-rail		
Insulation voltage	3kV		
Type	OUT1 – OUT4: Dimmable outputs 500VA / channel	OUT1 – OUT4: Analogue outputs 0-10V /channel	
	-		SW1 – SW4: 4 potential-free NO single contacts
Maximum load	Incandescent load 500VA at 230Vac Halogen lamps 500VA at 230Vac	Max. 10mA for analogue output	Max. 10mA for analogue output
Minimum load	30% of maximum output	-	
LED indication	Green LED: power supply		
	Red LED: Start-UP 2s. and during programming	Orange LED - Manual override Orange light 1-4: Output 1 to 4 active	
Rated current	-		16A
Endurance	-		20mil. operations
Rated load	-		Resistive load (cos phi = 1) 16A at 230Vac 16A at 30Vdc
			Inductive load (cos phi = 0.4; L/R=7ms) 8A at 230Vac 8A at 30Vdc
Maximum switching power	-		Resistive load (cos phi=1) 3680VA at 230Vac 480W at 30Vdc
			Inductive load (cos phi=0.4; L/R=7ms) 1840VA at 230Vac 240W at 30Vdc
Dimensions	9 modules + 3 modules for filter	6 modules	9 modules

Input modules

3 different input modules are available in the HabiTEQ to connect external contacts such as solar/wind detector, movement detector, door switches, push-buttons and analogue sensors. 8/16 optical isolated inputs are provided, which must be potential-free.

The input contacts can be selected and set using the PC software:

- Push-button = button that is open when inactive (e.g. doorbell)
- Normal open = contact that is open when inactive
- Normal closed = contact that is closed when inactive
- Switch = single-pole conventional switch. The maximum length of each input is 200m. The cable type is irrelevant as long as the 2 wires are each 1mm². (Contact load 1mA) Each of the 8 inputs has two serial numbers. The common (first connector on the right top and bottom) is connected internally. One may connect these together with other INP16 modules.



Always use potential-free contacts! Never connect or disconnect modules while the bus is energized!

INP08/230

There are 8 optically insulated inputs.
Each input needs a voltage to be active.
This can be:

- 12Vac/dc if connected between B and C (consumption approximately 10mA)
- 230Vac if connected between A and C (consumption approximately 1W)
- Orange LED lights positioned near inputs 1-8 indicate if input is active.

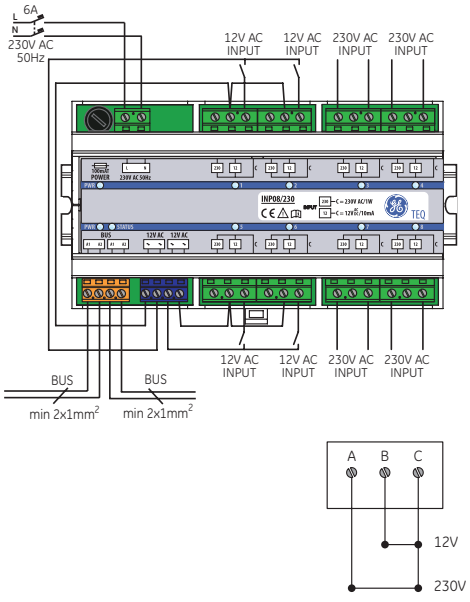
If there are inputs with potential-free contacts they can be connected to the module via 12Vac. The required voltage is provided on the top and bottom sides of the module.

INP08/INP16

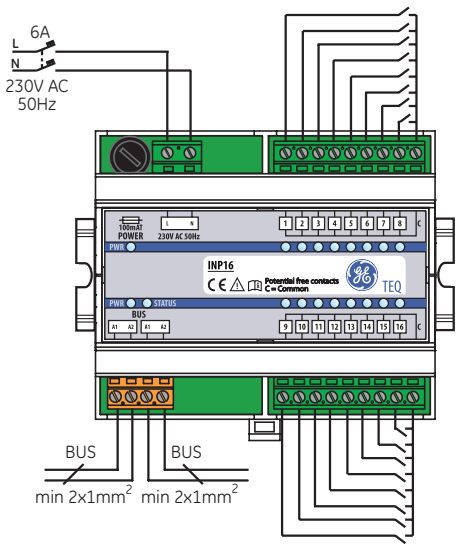
There are 8 or 16 optically insulated inputs.
Each input needs a voltage to be active.
This can be 12Vac/dc if connected between B and C (consumption approximately 10mA)

If there are inputs with potential-free contacts they can be connected to the module via 12Vac. The required voltage is provided on the top and bottom sides of the module.

INP08/230

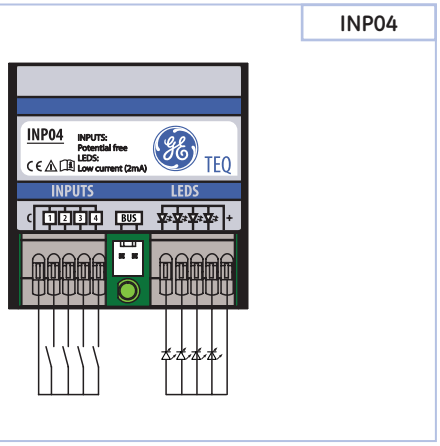


INP16



INP02/04

This module can be used to interface with any conventional switch to the BUS. The size of the module permits installation within the switch flush mounted box.



INP04

Product description

Module for connecting external contacts such as regular switches and push-buttons, solar/wind detector, motion detector, smoke detectors, ...

On the INP02/04, 2/4 potential free contacts and 2/4 low-current LEDs (2mA without serial resistor) can be connected. The maximum length of the conductor between the INP02/04 and the potential free input is 20 meters.

The cable type or its section is irrelevant.

An INP02/04 can control 2/4 outputs, 2/4 scenes or 2/4 x 16 scenes (via the sequence function).

The two/four low-current LEDs that can be connected to INP02/04 show the status of the mode that has been selected (push-button, normal open, normal close, switch).

The INP02/04 is connected on the bus, and gets its power from the BUS.

Digital Input modules	INP02[1]	INP04	INP08	INP16	INP08/230
Power supply	BUS powered		230Vac/50..60Hz		
BUS load	10mA at 13.8V				20mA at 13.8V
Standard consumption	-		2.65VA		9.2VA
Insulation voltage	-		3kV		
Fitting	Typically inside conventional switch box in the wall or surface mount with double side stick tape.		DIN-rail		
Number of inputs	2 potential-free	4 potential-free	8 potential-free	16 potential-free	8 potential-free (optically separated 12Vac/dc or 230Vac selectable by connection)
Input function (configurable through system software manager)	Push-button = button that is open when inactive (e.g. doorbell). Normal open = contact that is open when inactive. Normal closed = contact that is closed when inactive. Switch = single-pole conventional switch.				
LED indication	Green LED: power supply External LEDS can be connected to indicate status of each Input if needed.		Green LED: power supply		
			Red LED : Start-up 2s. and during programming		
			Orange LEDS 1 - 8: when the contact is connected (closed)	Orange LEDS 1 - 16: when the contact is connected (closed)	Orange LEDS 1 - 8: when the contact is active
Dimensions	HxWxD = 12x40x41mm		6 modules		9 modules

(1) on request

Communication Interfaces

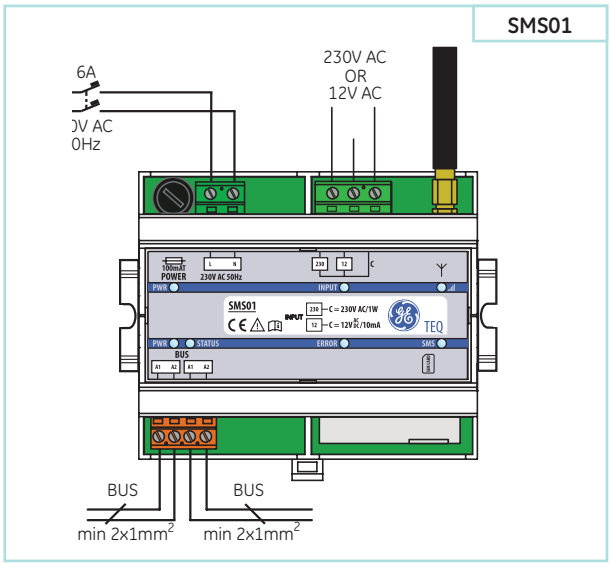
Communication can be established through the PC via an ethernet connection or through a serial USB interface. Further control of HabiTEQ system can also be achieved through a mobile phone using basic pre-configured SMS messages.

Ethernet/WEB interface

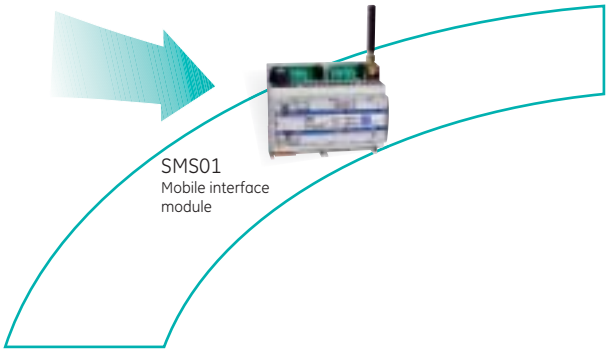
Incorporated into the controller. (see p. 24)

Serial interface - USB

The serial interface allows the HabiTEQ system to communicate with a PC or a modem. The "HabiTEQ System Manager" software (supplied free of charge) allows programming and operation of the installation.



Note: Pincodes can not be enabled or disabled when the SIM card is in the module. Pincode authentication of the SIM card can only be achieved with a mobile phone before placing it back in the module.



Mobile Interface Module

The SMS01 is a DIN mounted module that can be installed within the HabiTEQ system. The power supply is 230Vac. If the module must work when power drops, a UPS or internal rechargeable battery (Li-Ion) will be required. An additional connection (230V or 12V) is available to send a SMS message when the power drops.
The SIM card must be inserted into the SIM card reader located at the bottom of the module. If the module is mounted in a metal distribution box or on a place with bad network coverage (cellar, concrete....) it is recommended to add an optional antenna.

Features:

- Maximum 8 phone numbers can get access to the system
- View and control outputs: max 96 channels (sequences included) can be activated
  - Confirmation to selectable numbers
  - Compares SMS texts with predefined texts e.g. "KITCHEN ON" or "KTC ON"
  - Different value definitions (e.g. ON - OFF - 0 - 1 - 50%...)
- Alarm messages:
  - Maximum 16 different alarm messages (e.g. burglar alarm, fire, power down etc.) can be sent to up to 8 phone numbers with intervals selectable from 1min up to 255min. and repeat rate 1-31 for each SMS can be set.
  - Stop sending alarm texts when "SMS - STOP" message is received.
  - "Power Loss" warning to all numbers

Mobile Interface	SMS01
	SMS MODULE
Power supply	230Vac, 50..60Hz - maximum
Power guard connection	Power guard inputs: Connection I1 – C : 230Vac – max 1VA Connection I2 – C : 12Vac – max 1VA
BUS load	15mA at 13.8Vdc
Characteristic consumption	5VA
Internal fuse	100mA
Insulation voltage	3kV
Control	Up to 96 outputs (including sequences) can be activated or viewed
Access	Max. 8 phone numbers can get access to the system
Control possibilities	SMS texts can have different defined texts for different users and different status definition
Alarm messages	Max. 16 alarm messages can be sent to all numbers Warning power down to all numbers if battery is connected
SIM card	Not included
Antenna	Built-in antenna on top and optional external antenna
Band width	Tri-band
Dimensions	6 modules

System controllers

CTD01 - mini controller USB

	Description	Ref. No.
	One BUS connection Supply 200mA at 13.8V Built-in thermal protection (When connecting the modules, polarity is not important) On average about 12-15 modules can be connected to the bus. USB port through which the controller can be connected to a computer 2GB SD Card (that stores system configuration and can log system events)	**678989**

CTD01E - mini controller USB & ethernet

	Same specifications as CTD01 controller Additional ethernet port with webserver	**678990**

CTD02 - full controller

	One BUS connection Supply 500mA at 13.8V Built-in thermal protection (When connecting the modules, polarity is not important) On average about 35 modules can be connected to the bus. USB port through which the controller can be connected to a computer 2GB SD Card (that stores system configuration and can log system events)	**678991**

CTD02E - full controller USB & ethernet

	Same specifications as CTD02 controller Additional ethernet port with webserver	**678992**

WARNING
Read the complete manuals before carrying out any installation or activating the system.

Universal load actuators

REL04 - relay module

Description	Ref. No.
DIN-rail module suitable for switching four devices. 4 potential-free NO contacts, each can handle a max of 16A at 230V (cosφ=1) Each can be allocated an individual function by means of the software The module can handle all switching functions[1]: mono-stable (bell), bi-stable (on/off), timer, interval, thermostat output, etc.	**679008**

ROL02 - shutter module

DIN-rail module, suitable for switching[1] 2 shutters / blinds / curtains. 2X2 potential-free NO contacts, each can connect 16A at 230V (cosφ=1) The second contact can only give power output when the first output is not activated. Thus avoiding mutual signals on UP1 (/UP2) and DN1 (/DN2) when activating the 2 outputs at the same time.	**679009**

REL08 - relay module

DIN-rail module, suitable for switching[1] eight devices. 8 potential-free CO contacts, each can handle a max of 16A at 230V (cosφ=1) Each can be allocated an individual function by means of the software The module can handle all switching functions: mono-stable (bell), bi-stable (on/off), timer, interval, thermostat output, etc.	**679010**

(1) For heavy inductive loads (multiple fluorescent lights) with a high capacity or bipolar applications, modular contactors need to be added. The relay module contact will then activate the coil of the contactor.

Modular contactors - Contax: see the full range of contactors in Residential components catalogue

Input modules

INP08 - 8-channel input module

Description	Ref. No.
DIN-rail mount module for connecting external contacts such as solar/wind detector, motion detector, door switches and push buttons. Eight potential free isolated inputs are provided The input contacts can be selected and set using the System Manager software: - Push button = button is open when inactive (e.g. doorbell). - Normal open = contact is open when inactive. - Normal closed = contact is closed when inactive. - Switch = single-pole conventional switch. The maximum length of each input is 200 meters. The cable type or its section is irrelevant.	679014

INP16 - 16-channel input module

DIN-rail mount module for connecting external contacts such as solar/wind detector, motion detector, door switches and push buttons. Eight potential free isolated inputs are provided The input contacts can be selected and set using the System Manager software: - Push button = button is open when inactive (e.g. doorbell). - Normal open = contact is open when inactive. - Normal closed = contact is closed when inactive. - Switch = single-pole conventional switch. The maximum length of each input is 200 meters. The cable type or its section is irrelevant.	679015

INP08/230 - 8-channel input module with potential (Vac/Vdc)

DIN-rail module for connecting external contacts such as solar/wind detector, motion detector, door switches and push buttons. There are 8 optically insulated inputs. Each input needs a voltage to be active. This can be: • 12Vac/dc if connected between B and C (consumption approximately 10mA). • 230Vac if connected between A and C (consumption approximately 1W). If there are inputs with potential-free contacts they can be connected to the module via 12Vac. The required voltage is provided on the top and bottom sides of the input module. The input contacts can be selected and set using the System Manager software: - Push button = button that is open when inactive (e.g. doorbell). - Normal open = contact that is open when inactive. - Normal closed = contact that is closed when inactive. - Switch = single pole conventional switch. The maximum length for each input is 200 meters. The cable type or its section is irrelevant.	679016

Input modules for any switch interface

The INP02/04 is a miniature yet versatile input module that offers the flexibility to interface any push-button switches to the HabiTEQ automation system. The size of the modules enables the mounting of the module in most of the current switch boxes.

INP02/04 - input modules

Description	Ref. No.
2-channel input module[1]	**678996**
4-channel input module	**679013**
Module for connecting regular switch. Or external contacts such as detectors, door switches, magnetic contacts for doors or windows, etc. The input contacts can be selected and set using the PC software: - Push button = button is open when inactive (e.g. doorbell). - Normal open = contact is open when inactive. - Normal closed = contact is closed when inactive. - Switch = single pole conventional switch. 4-LED connections, which can be used to indicate the status of each input.	

(1) on request

Lighting control

DIM500 - dimmer module + line filter

DIN-rail module, suitable for dimming 4 loads of 40-500VA **(refer de-rating curve for higher temp).** The dimmers operate digitally with 8-bit precision. An optical separation between the inputs and outputs guarantees safe operation. Each dimmer output is fused internally with a 4AF fuse. Ensure adequate ventilation in the fuse box. A 2P MCB of maximum 16A must be placed on the mains power.	**679012**

ANA04 - analogue dimmer module

DIN-rail module, suitable for controlling four analog dimmers operating with input voltages of 0-10V or 1-10V (can be selected via HabiTEQ System Manager software). The control contains four digital-analogue converters with 8-bit precision. An optical separation between the inputs and outputs guarantees safe operation. This module can be used for dimming very large capacities.	**679017**

ANR04 - analogue dimmer module

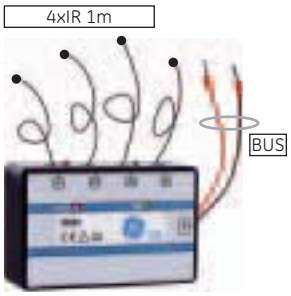
DIN-rail module, suitable for controlling four analog dimmers operating with input voltages of 0-10V or 1-10V (can be selected via HabiTEQ System Manager software). The control contains four digital-analogue converters with 8-bit precision. An optical separation between the inputs and outputs guarantees safe operation. This module can be used for dimming very large capacities. Each analogue output controls a relay contact, which releases when the output is on 0. This contact can disrupt the mains voltage so that the fluorescent lamps go out completely	**679018**

Communication interfaces

SMS01 - SMS module

Description	Ref. No.
Mobile phone interface module DIN-rail mounted 230Vac module. Enables control and monitoring of the system via simple text messages. Any SIM card from local GSM service provider, with the PIN REQUEST DEACTIVATED can be inserted into the SIM card holder Features: • Max. 8 phone numbers can access system • Max. 96 channels can be activated • Confirmation messages to selected phone numbers • Messages and values can be defined (e.g. ON- OFF - 0 - 1 - 50%...) • Maximum 16 different alarm messages *(Antenna & cable included)*	**678988**

IRG04 - infrared generator



The IRG04 module is able to generate any IR code and transmit it to any device. This module makes it possible to control infrared operated devices such as a DVD player, music system, and shutters, aircon fan coil, TV. Each module has 4 different outputs, which can all send 16 different IR-codes. The required infrared codes need to be entered in the. HabiTEQ™.SDB database by sampling them through an infrared switch with 4 buttons (SWC04I/MI) or a thermostat infrared display (THI01). The codes are stored in a nonvolatile memory. The IRG04 has 4 low power IR LED outputs. The IR LED attached to the included cables (2m) must be mounted immediately in front of the controlled device. All infrared codes can be sent using a SWC04I/MI, THI01, infrared remote control, TSC5.8". Includes 4-IR LED emitters with 1m cable for each.	**679101**

Sensors - Motion and Light

MDI01 - Motion & lights sensor - indoor

Description	Ref. No.
Wall or ceiling mount module that can detect motion & light. The detector is integrated in a built-in frame with claw attachment and is connected to the HabiTEQ bus (no polarity). The motion detector has a range of approximately 7m at an angle of 110 degrees. The System Manager software allows you determine whether the output is a combination of motion AND light or only motion or only light[1].	
White	**679084**
Black	**679092**
Metallic	**679100**

(1) Light dependent: Control of lighting in shop windows, offices, car parking areas, sunblinds, shutters, or even lighting in a home.
Features: User presettable switch light intensity, intensity range and hysteresis (to avoid on/off instable behaviour). Reaction time is also user presettable. 1 channel, 2 channels and 1 channel with incorporated digital time switch with week-cycle, all with separate photocell are available besides a 1 channel all-in-one device.
Function: Electronic switch controlled by the intensity of the ambient light, detected by a separate or integrated photocell (depending on the model). When the light intensity drops below the threshold setting, the switch changes its state to the on position. An increasing ambient light intensity eventually will switch off the device again.

Light Sensitive Switches - GALAX LSS: see the full range of contactors in Residential components catalogue

System visualization

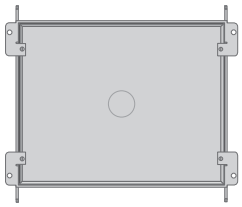
THI01 - 2-line control panel

Description	Ref. No.
Wall mount system control panel with a 2 line 16-character LCD display. Menu driven display controlled by 4 push buttons on the front. The module has the following functions in addition to control of upto 96 output channels. - Thermostat with built-in temperature sensor - Infrared receiver to control upto 99 outputs/scenes with any universal infrared remote control.	
Metallic frame	679039
White frame	679021
Black frame	679022

TSC5.8 - monochrome touch screen

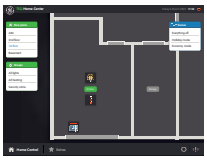
Display module with an illuminated LCD touch screen for mounting inside the wall. - User-friendly menu allows operating 96 outputs and viewing their status. - Choice between 6 main menus and a random number of outputs can be programmed under each main menu. - Up to 8 outputs can be operated per screen (=submenu). - Built-in temperature sensor for thermostats function.	679102

TSCBOX



Box for monochrome touch screen. For mounting the TSC5.8 into the wall.	679103

TEQHC - Home Center



HMI software The GE home center software runs on any Windows XP, XP Embedded or Vista PC and allows control and visualizes a HabiTEQ installation in an intuitive and user-friendly manner. The customer can easily add floor plans or groups and allocate outputs to certain rooms. Standard IP-cameras that support the mjpeg format can easily be connected to the GE Home Center	678995

TCPC / NAV10.1 - Third party panel PC

On Request the GE Home Center can be provided pre-installed on a touch panel PC hosting Win-XP . The PC comes with power supply and installation box to be mounted inside a wall.	678997

Smart switch - Niko® design
Comfort simplified

Lights on
One switch not only allows you to control 8 lights individually. It also allows you to do so much more like dimming lights, delayed disconnect, controlling light atmospheres, running lights, shutters, ...

Universal infrared receiver
All infrared commands are immediately forwarded to the central unit via the switch.

Visual feedback
Get status feedback of different events on the BUS through LED's. Colour and brightness of LED programmable through software.

Light measurement
Fully adjustable, the switch measures the ambient light.

Design
The smart switch is available in Niko® design.

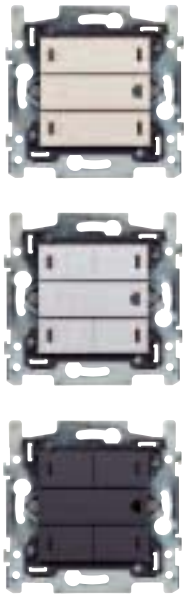
Digital temperature measurement
The switch senses the temperature and issues the right commands to the central unit to e.g. activate the airconditioning or the heating.

Smart switch

SWC04 - 4-button smart switch

Description	Ref. No.
• Available in 4 standard colours[1] • Further options upon request • **Cover plate to be ordered separately**[2] A 4 push-button electronic smart switch with 4 RGB LED integrated into a Niko® built-in frame with claw attachment. A BUS connection with connector (no polarity) is provided and supplies the power and control of the module. One push-button can operate 1 output, 2 scenes (short or long push) and up to 16 scenes. Simultaneous press on any of two keys enables entry into second page, where 4 more outputs are available. So in total upto 8 outputs can be controlled through this module. Each of the 4-LED gives feedback according to the status of the corresponding output. The colour and the brightness can be set via the software.	
White colour	**679023**
Cream colour	**679077**
Sterling colour	**679085**
Anthracite colour	**679093**

SWC04T - 4-button smart switch with thermostat

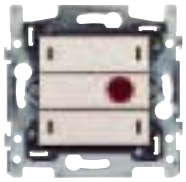


Description	Ref. No.
• Available in 4 standard colours[1] • Further options upon request • **Cover plate to be ordered separately**[2] In addition to functionality of a standard 4-button switch this version of the smart switch also host thermostat functionality, including built-in temperature sensor. **Five different programs**: - Manual - Freeze - Economy - Comfort - Night Can be activated through the keys. Each program has its own temperature setting that can be set in the HabiTEQ System Manager. The LED and the appropriate colour are used to indicate the present program running, which is also settable in the HabiTEQ System Manager.	
White colour	**679027**
Cream colour	**679079**
Sterling colour	**679087**
Anthracite colour	**679095**

(1) Other colour options on request. Lead times apply.
(2) Cover plates are not part of the switch, see page 41.

Smart switch (continued)

SWC04I - 4-button smart switch with Infrared receiver



Description	Ref. No.
• Available in 4 standard colours[1] • Further options upon request • **Cover plate to be ordered separately**[2] In addition to functionality of a standard 4-button switch this version of the smart switch also host s an Infrared receiver. It can control upto 12 outputs/scenes with a universal infrared remote control. The first 4 infrared codes are always used for the function of the 4 push-buttons. The other 8 channels can be assigned to any other output. The infrared codes can be sampled taught with this switch or they can be downloaded from the database.	
White colour	**679026**
Cream colour	**679078**
Sterling colour	**679086**
Anthracite colour	**679094**

SWC04M - 4-button smart switch with motion sensor



Description	Ref. No.
• Available in 4 standard colours[1] • Further options upon request • **Cover plate to be ordered separately**[2] In addition to functionality of a standard 4-button smart switch SWC04, this module contains a motion detector with an integrated light cell. The range is approximately 7m at an angle of 110 degrees. The light cell is assembled next to the detector. The motion detector is automatically linked to the function of push-button 1. The HabiTEQ System Manager allows you to determine the priority between push button 1 and the detector. At the same time you can indicate the level of movement at which the detector needs to detect together with the light level.	
White colour	**679028**
Cream colour	**679080**
Sterling colour	**679088**
Anthracite colour	**679096**

(1) Other colour options on request. Lead times apply.
(2) Cover plates are not part of the switch, see page 41.

Smart switch (continued)

SWC04MI - 4-button smart switch with motion sensor & infrared receiver

Description	Ref. No.
• Available in 4 standard colours[1] • Further options upon request • **Cover plate to be ordered separately**[2] In addition to functionality of a standard 4-button smart switch SWC04, this module contains a motion detector with an integrated light cell and an infrared receiver.	
White colour	**679035**
Cream colour	**679081**
Sterling colour	**679089**
Anthracite colour	**679097**

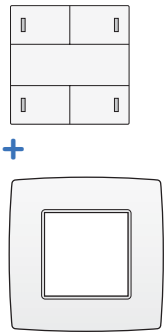
SWC04MT - 4-button smart switch with motion sensor & thermostat

Description	Ref. No.
• Available in 4 standard colours[1] • Further options upon request • **Cover plate to be ordered separately**[2] In addition to functionality of a standard 4-button smart switch SWC04, this module contains a motion detector with an integrated light cell and a thermostat with built-in temperature sensor.	
White colour	**679030**
Cream colour	**679082**
Sterling colour	**679090**
Anthracite colour	**679098**

(1) Other colour options on request. Lead times apply.
(2) Cover plates are not part of the switch, see page 41.

Smart switch - frame types

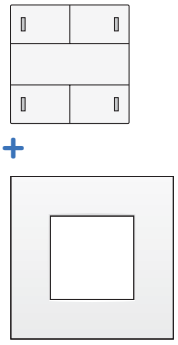
Niko® ORIGINAL - Simple flush surround plate (83x83mm)



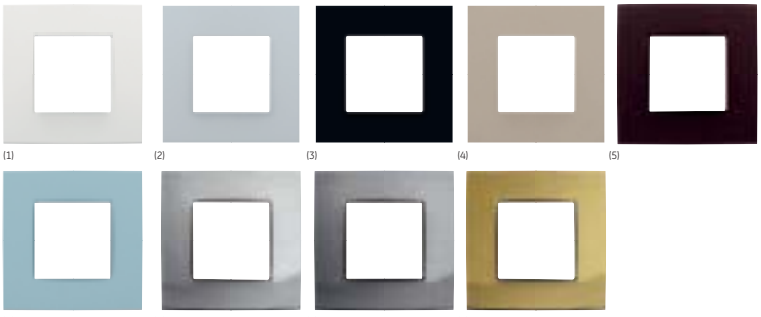
Colour	Pack	Ref. No.	Niko code
Cream[1]	50	(1)	100-76100
White[2]	50	(1)	101-76100
Light grey[3]	50	(1)	102-76100
Silver[4]	10	(1)	103-76100
Greige[5]	10	(1)	104-76100

(1) (2) (3) (4) (5)

Niko® INTENSE - Simple flush surround plate (85x85mm)



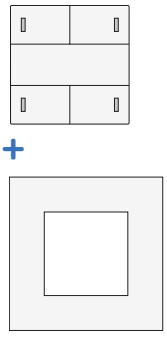
White[1]	10	(1)	120-76100
Sterling[2]	10	(1)	121-76100
Anthracite[3]	10	(1)	122-76100
Bronze[4]	10	(1)	123-76100
Dark brown[5]	10	(1)	124-76100
Azure[6]	10	(1)	125-76100
Silver[7]	10	(1)	127-76100
Dark silver[8]	10	(1)	128-76100
Gold[9]	10	(1)	129-76100



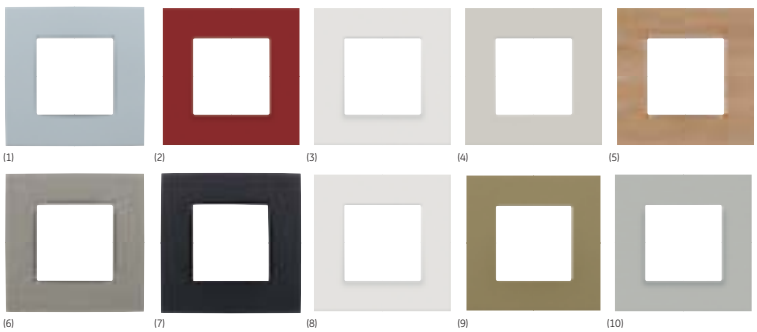
(1) (2) (3) (4) (5)

(6) (7) (8) (9)

Niko® PURE - Simple flush surround plate (83x83mm)



Stainless steel for anthracite[1]	10	(1)	150-76100
Natural red[2]	10	(1)	152-76100
Natural white[3]	10	(1)	151-76100
White steel[4]	10	(1)	154-76100
Bamboo[5]	10	(1)	156-76100
Natural ochre[6]	10	(1)	153-76100
Alu black[7]	10	(1)	158-76100
Alu grey[8]	10	(1)	155-76100
Champagne steel[9]	10	(1)	157-76100
Stainless steel for white[10]	10	(1)	250-76100



(1) (2) (3) (4) (5)

(6) (7) (8) (9) (10)

(1) On request

Passive infrared sensors

Compatible sensor range from GE Security (now UTC Fire & Security)

	Description	Ref. No.
	General purpose passive infrared sensors that can operate stand-alone or be linked to the system via an input module. The sensors need a separate power supply (9-24V).	
	**EV100** Sensor with settable range of 5 or 10m • Angle of view 86° with 5 curtains • Adjustable field of view with mounting bracket SB01 • NC contact	**679943**
	EV100-PI Pet immune version (the sensor is immune to movement of a pet up to 20kg)	**679944**
	**EV1012**(1) Volumetric sensor with range 12m • Angle of view 86° with 9 curtains • NC contact when energized	**679946**
	EV1012PI(1) Pet immune version (the sensor is immune to movement of a pet up to 15kg)	**679947**
	**EV525P** Sensor with settable range of 25 or 16m • Angle of view 89° (volumetric) with 9 curtains • Adjustable field of view with mounting bracket SB01 • NC contact when energized	**679948**
	EV669 Ceiling mounted sensor - 10m range • Angle of view settable to 180 or 360° with 18 curtains • NC contact, voltage free relay	**679949**

(1) Please consult us.

Dual detector based sensors

	Description	Ref. No.
	Sensors with dual detection technology, combining Infrared and microwave detection to provide high quality precise detection. The sensors need a separate power supply (9-24V). **• To be linked on input module**	
	**DD100** • 10m range • Angle of view 86° with 5 curtains • NC contact • Adjustable field of view with mounting bracket SB01	**679952**
	DD100PI Pet immune version (the sensor is immune to movement of a pet up to 20kg)	**679953**
	**DD105** Volumetric sensor with settable range 7 or 12m • Angle of view 86° with 7 curtains • The sensors is immune to movement of a pet up to 20kg • NC contact when energized.	**679954**
	**DD669**[1] Ceiling mounted sensor • Angle of view 360° with 18curtains • Adjustable range 12 or 20m • NC contact, voltage free relay	**679955**
	**SB01** Wall or ceiling mount bracket for EV and DD Series	**679998**
	**360FM** Ceiling mount bracket for EV669 and DD669 sensors	**679999**

Outdoor passive infrared detector

	Description	Ref. No.
	The sensors need a separate power supply (9-24V). **• To be linked on input module**	
	**DI502** Stand-alone external sensor - 35m range • Voltage free signal contacts for day/night applications • Selectable NO or NC configuration • Adjustable 2 lux to daylight	**679951**

(1) Please consult us.

Door and window contacts

	Description	Ref. No.
	The contacts have to be linked on input modules	
	**DC101** Surface mount window-door contact, wired • 15mm standard operating gap • White colour • NC contact	**679968**
	**DC101B** Surface mount window-door contact, wired • 15mm standard operating gap • Black colour • NC contact	**679969**
	**DC102** Surface mount window-door contact with screw terminals • 18mm standard operating gap • White colour • NC contact	**679970**
	**DC102B** Surface mount window-door contact with screw terminals • 18mm standard operating gap • Black colour • NC contact	**679971**
	**DC123** Surface mount window-door contact with screw terminals • 18mm standard operating gap • CO contact	**679972**
	**DC137** Surface mount window-door contact with screw terminals • 37mm wide operating gap • NC contact	**679973**
	**DC141** Surface mount window-door miniature contact, self-adhesive, wired • 25mm standard operating gap • NC contact	**679974**
	**DC108S1** Surface mount overhead floor mount contact, wired - armored cable • 75mm standard operating gap • NC contact	**679975**
	**DC106** Recessed mount contact wired, flanged housing • 12mm standard operating gap • NC contact	**679976**
	**DC127** Recessed mount contact, wired, press-fit • 31mm wide operating gap • NC contact	**679977**

Door and window contacts (continued)

	Description	Ref. No.
	**DC120** Recessed mount contact wired, stubby press-fit • 18mm wide operating gap • NC contact	679978
	**DC105** Recessed mount contact, wired, bare magnet • 12mm standard operating gap • The DC105-contact with its small diameter (64mm) is ideal for NC contact	679979
	**MM108** Surface overhead - angle mount contact	679982
	**MM115** Surface mount contact - wired	679984
	**DC193** L-bracket for DC102, DC104, DC123, DC137	679985

Safety sensors

	Description	Ref. No.
	Sensors linked through input modules. Separate power supply needed (9-24V).	
	Smoke sensors	
	**DP721R**[1] Photoelectric smoke detector with field exchangeable optical chamber as well as a built-in relay for local switching applications • CO relay output	679956
	**DP721RT**[1] Photoelectric heat and smoke detector • With field exchangeable optical chamber and local relay output facilities	679957
	**DP721RTA**[1] Photoelectric smoke and heat detector with relay output, auto reset	679958
	**DB702** Conventional fire detector base used for all 700 series conventional fire detectors. • Includes a normally closed continuity switch to allow easy cable testing during installation	679997
	**211** Replacement optical chamber for 700 series detectors	679966

(1) Please consult us.

Safety sensors (continued)

	Description	Ref. No.
	**Stand alone battery powered smoke detector**	
	562NSE • With on board sounder • Local silence and test function • Full EN14604 approval • Self-diagnostics monitor sensitivity and operational status • Replaceable optical chamber for easy maintenance	**679950**
	**Hazardous gas sensors**	
	FGT312CO Alarm • 50 ppm (parts per million) 75 minutes • 100 ppm 25 minutes • > 300 ppm immediate	**679963**
	**Flammable gas sensors**	
	FGE312LP LPG detector for domestic applications • Alarm relay 12-24Vdc • Prealarm 5% LEL • Alarm 10% LEL	**679959**
	**FGE330LP** LPG detector for domestic applications • Alarm relay, 230Vac • Prealarm 5% LEL • Alarm 10% LEL	**679960**
	**FGE312ME** Methane detector for domestic applications • Alarm relay, 12-24Vdc	**679961**
	FGE330ME Methane detector for domestic applications • Alarm relay, 230Vac	**679962**
	**Glass break sensor**	
	GS930 Acoustic glass break detector - 3x3 technology • Semiconductor relay opens on alarm	**679964**
	**GS905** Handheld acoustic glass break tester with real glass break sounds • Different settings depending on kind of glass to be protected	**679965**

Safety accessories

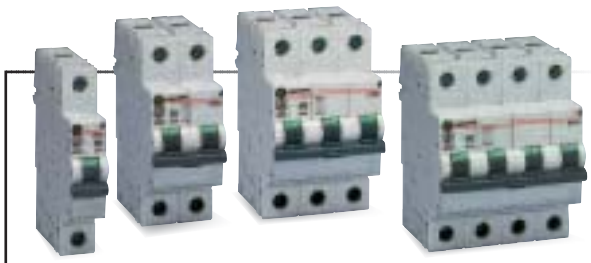
	Description	Ref. No.
	**Sirens**	
	AS270 Indoor siren, 1 tone - without flash	**679994**
	**AS271** Indoor siren, 1 tone - with flash	**679995**
	**Panic buttons**	
	HB191[1] Personal attack switch - single button • NC contact	**679986**
	**HB194**[1] The HB194 personal attack switch incorporates a mechanical double button • Supplied with a key reset	**679987**
	**Residential cameras**	
	BL-C20CE WiFi residential IP camera • 10x digital zoom function • Motion detection function • Colour night view mode (4 lux)	**679992**
	**BL-C30CE** WiFi residential IP camera with pan-tilt option	**679993**

Third party accessories

	**CO_2 sensor - BUS connected**	
	Measures the CO_2 concentration in the living space. The CO_2 content is determined by such aspects as the number of people in the space (and cooking using gas). The value measured can be used by the controller to activate a valve of a ventilation system, open or close a window via a motor,etc. in order to optimally aerate the space.	**678999**

(1) Please consult us.

To complete your distribution board GE presents a wide range of modular devices



MCB's

Miniature circuit breakers
From 0.5 to 125A - 1 to 4P configuration.
From 3kA to 50kA breaking capacities.
According to EN/IEC 60898-1 and EN/IEC 60947-2

RCCB's

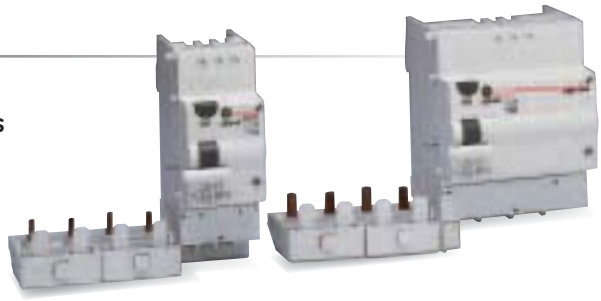
Residual current operated circuit breakers without integral overcurrent protection
From 16 to 100A and 10mA to 1000mA.
According to EN/IEC 61008-1 and BS EN 61008-1

RCBO's

Residual current operated circuit breakers with integral overcurrent protection.
From 4 to 40A and 10mA to 300mA,
1P+N. According to EN/IEC 61009-1

Add-on RCD's

Add-on residual current devices for MCB's
For 2 to 4 poles MCB's, 30 up to 1000mA.
According to EN/IEC 61009-1



Energy control and comfort functions

Modular switches and push-buttons, impulse switches, contactors, time switches, time relays, transformers, measurement devices, surge arresters, ...

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