

Product Overview



Sense



Switch



Control



Safety



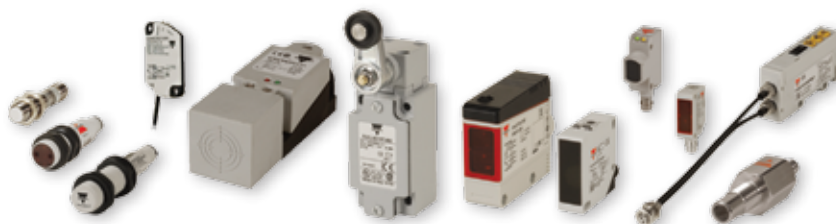
Fieldbus

A lifetime of commitment to automation

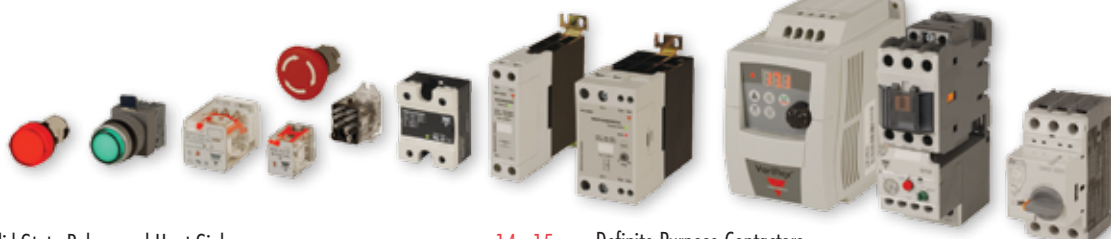
CARLO GAVAZZI – Offering the Complete Product Package

CARLO GAVAZZI offers a vast array of high quality products, which provide you the optimum solutions to your various automation tasks and applications. These products are RoHS compliant, CE marked and are UL/CSA approved. Wherever you find a CARLO GAVAZZI product, you will find a product manufactured with care, attention to detail and precision.

This brochure is designed to give you an overview of our product offering. After determining the Series Number you're looking for, you can find more specific details from the product's data sheet or our Product Selection Guide, which can be found at www.GavazziOnline.com. Our products are segmented into five core product ranges, and the specific product groups can be found on the following pages of this brochure:



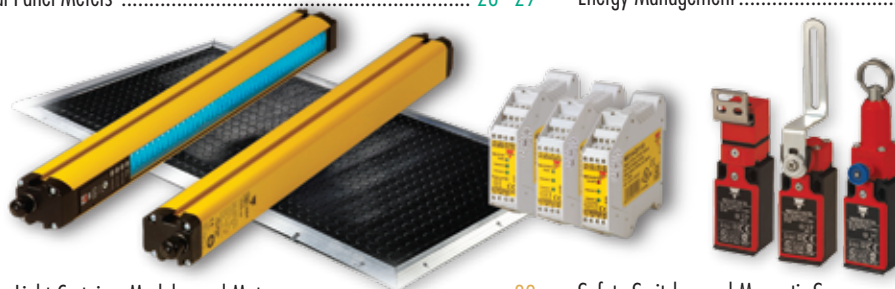
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Application and Market Knowledge

CARLO GAVAZZI products are the result of years of extensive research and development. Our Engineering, Marketing and Sales Departments assure you that all of our products are designed with the key features to meet or exceed the demanding application requirements and provide

the necessary benefits. Below are several of the markets where CARLO GAVAZZI has a presence worldwide. We are members of their trade organizations, participate in their trade shows and write technical articles and white papers for their trade journals.

Lifts & Escalators

Doors & Entrances

Energy

Food & Beverage

Renewable Energy

Intelligent Building Solutions

Packaging

Plastics

HVAC



Inductive Proximity Sensors

		Housing Diameter,				
Sensing Distance		M5	Ø 6.5 mm	M8	M12	M18
NAMUR	1 mm		EI0601NA	EI0801NA		
	2 mm			EI0802NA	IA12xxF02U	
	3.5 mm					
	4 mm				IA12xxN04U	
	5 mm					IA18xxF05U
	6 mm					
	8 mm					IA18xxN08U
	10 mm					
	15 mm					
	40 mm					
2 Wire DC Extended Range	2 mm			IA08BSF02Dx		
	4 mm			IA08BSN04Dx	IA12DSF04Dx IA12ASF04DxM1	
	8 mm				IA12DSN08Dx IA12ASN08DxM1	IA18DSF08Dx IA18ASF08DxM1
	14 mm					IA18DSN14Dx IA18ASN14DxM1
	15 mm					
	22 mm					
3 Wire DC	1 mm	IA05BSF10xx IA05BSF10xxM5	IA06BSF10xx IA06BSF10xxM5			
	1.5 mm			IA08BxF15xx IA08BxF15xxMx		
	2 mm		IA06BSN20xx IA06BSN20xxM5		EI1202xP IA12DSF02x0 IA12ASF02xOM1	
	2.5 mm			IA08BxN25xx IA08BxN25xxM5		
	4 mm				EI1204xP IA12DSN04x0 IA12ASN04xOM1	
	5 mm					EI1805xP IA18DSF05x0 IA18ASF05xOM1
	6 mm					
	8 mm					EI1808xP IA18DSN08x0 IA18ASN08xOM1
	10 mm					
	15 mm					
3 Wire DC Extended Range	2 mm			IA08BSF20xx IA08BSF20xxM5		
	4 mm			IA08BSN40xx IA08BSN40xxM5	IA12DSF04xx IA12ASF04xxM1	
	8 mm				IA12DSN08x0 IA12ASN08xOM1	IA18DSF08x0 IA18ASF08xOM1
	15 mm					
	22 mm					

Non flush mount

Flush mount

Flush and non flush

Dimension or Type				
M30	Rectangular	Fork Type	Special	Amplifiers
		DU3.5		SD110 SD210 SD270
		DU5		
		DU6		
		DU10		
IA30xxF10U				
IA30xxN15U				
			EI8040	
			IG12FSF04Dx	
IA30DSF15Dx IA30SASF15DxM1				
IA30DSN22Dx IA30ASN22DxM1				
	IC08ANC15xx IC08ANC15xxM5			
	IC17CNC04xx			
	ID25ANC05xx			
		DU6E		
EI3010xP IA30DSF10x0 IA30ASF10x0M1			DU10E	
EI3015xP IA30DSN15x0 IA30ASN15x0M1				
IA30DSF15x0 IA30ASF15x0M1				
IA30DSN22x0 IA30ASN22x0M1				

**All Inductive Sensors
come with a
10 year Warranty**

NAMUR, transistor, SCR, MOSFET and analog output types. Standard and extended sensing distances from 1 to 40mm. Housing diameters from 5 to 80mm. Choice of cylindrical, limit switch style, rectangular, slotted (U-shaped) and "pancake" style housings. Offered in stainless steel, nickel plated brass or thermoplastic construction. Available with PVC connection cable, nano or micro plug for connection to quick disconnect cables. **All versions come with a standard 10 year warranty!**

**CONTINUED ON
NEXT PAGE**



Inductive Proximity Sensors (continued)

		Housing Diameter, Dimension or Type					
		M8	M12	M18	M30	40x40 mm	Flat Pack
4 Wire DC	10 mm						EI5510xP
	15 mm						EI5515xP
	30 mm					IC40CNN30x	
2 Wire AC	2 mm		EI1202TB				
	4 mm		EI1204TB				
	5 mm			EI1805TB			
	8 mm			EI1808TB			
	10 mm				EI3010TB		
	15 mm				EI3015TB		
	30 mm					IC40CNN30T IC40CNN30C	
AC/DC	30 mm						
Analog Current Output	0.1 - 1.5 mm	IA08ALC15AG					
	0.1 - 3.0 mm		IA12ALC03AG				
	0.1 - 6.0 mm						ID40CNC06AF
	0.1 - 6.0 mm			IA18ALC06AG			
	0.5 - 10.0 mm				IA30ALC10AG		
	2 - 5 mm			EI1805I020			
Analog Voltage	3 - 8 mm				EI3008I020		
	0.3 - 3.0 mm		IA12ALC03AK				
	0.3 - 5.0 mm			IA18ALC05AH			
	0.3 - 5.0 mm		IA12ASC05AK				
	3.5 - 11 mm				IA30ASC11AK		

□ Non flush mount

■ Flush mount

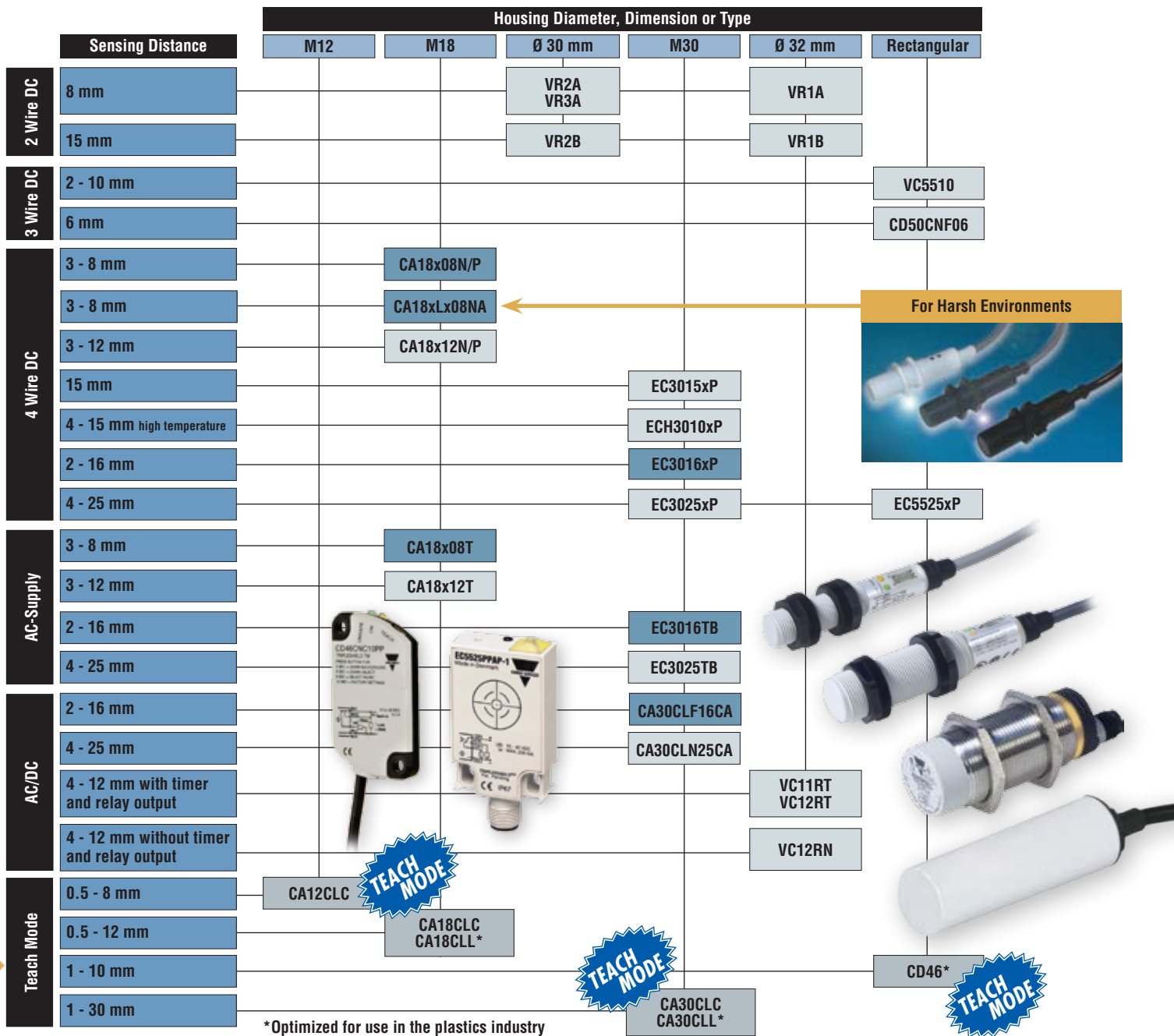


Capacitive Proximity Sensors



The third generation of the patented, industry leading TRIPLESIELD™ capacitive sensor series are now microprocessor based and laden with exciting new features. Programming the sensor is also easier than ever. With the new Teach Mode capabilities and push button interface, these sensors can be easily set up and installed. They will automatically detect and adjust themselves for NPN or PNP loads, and flush or non-flush mounting. Add in the ability to program for normally open or normally closed output, and it's like having six sensors in one! Various protection types are built-in right into the sensors, for: dirt, moisture, humidity, short circuit, and reverse polarity. Naturally the sensors include all of the industry leading features that make the TRIPLESIELD™ family the safest capacitive sensor available, including protection against ESD, RF, transients, and line-conducted noise. See why the TRIPLESIELD™ continues to be the most innovative capacitive sensor in the market today!

Capacitive Proximity Sensors (continued)





- Non flush mount
- Flush mount
- Flush and non flush

NAMUR, transistor, SCR and relay output types. Sensing distances from 1 to 30mm. Housing diameters from 12 to 32mm. Choice of cylindrical and rectangular style housings. Offered in nickel-plated brass, thermoplastic, polypropylene, PVC or Teflon construction. Available with PVC connection cable or micro plug for connection to M12 disconnect cables.

Additionally, sensors for harsh operating temperatures (-321 to 356°F), as well as versions featuring patented TRIPLESIELD™ protection for the highest immunity from electrostatic discharge, communication interference and fast transients.



Photoelectric Sensors

		Housing Diameter,							
Sensing Distance		Ø 10 mm	M12	30 x 12 x 20 mm	13.5 x 40 x 29 mm	M14	Ø15 x 26.2 mm	10 x 13.5 x 40 mm	Ø17.2 x 30 mm
Diffuse Reflective	100 mm				CGPS-UR-10				
	200 mm								
	250 mm							PD40CND25	
	300 mm				CGPS-UR-30				
	100-400 mm								
	150-600 mm								
	200-800 mm optional timer (T)								
	1 m		TEACH MODE	PD30CND					
Background Suppression	2 m								
	15-80 mm							PD40CNB08	
	50-150 mm		TEACH MODE						
	150 mm			PD30CNB					
Retro-Reflective	500 mm								
	3 m								
	6 m		TEACH MODE	PD30CNR	CGPS-UG-6M				
Polarized Retro-Reflective	10 m								
	1.5 m							PD40CNP15	
	2 m								
	3 m				CGPS-UG-3M				
Through-Beam	6 m		TEACH MODE	PD30CNP					
	4 m							PD40CNT40	
	5 m		MHx05						
	5 m with separate amplifier	MOFx5/5-5/5-8	MOFx5-M12-2			MOFx20-M14-2/12-5/12-8			
	6 m				CGPS-UT-6M				
	10 m								
	12 m								
	15 m	PB10	TEACH MODE	PD30CNT			PE12		PB18
	20 m				CGPS-UT-20M				
	20 m optional timer (T)								
	20 m with separate amplifier	MOFx20/20-5/20-8	MOFx20-M12-2/12-5/12-8			MOFx20-M14-2/12-5/12-8			
	30 m								
	50 m with separate amplifier	MOFx50	MOFx50-M12-2			MOFx50-M14-2			

Dimension or Type

Transistor, SCR and relay output types. Sensing distances from 15mm to 50m. Housing diameters from 10 to 40mm. Choice of cylindrical, rectangular and combination style housings. Available in nickel-plated brass, polycarbonate or Luran construction. Offered with PVC connection cable or micro plug for connection to quick disconnect cables. Diffuse reflective, retro-reflective, polarized retro-reflective, background suppression and through beam sensing principles. Find out today why CARLO GAVAZZI is the world leader in supplying photoelectric sensors to the car wash industry - *perhaps the harshest of sensing environments.*



Photoelectric Sensors - Specialized

		Housing Dimensions			
Description		30 x 12 x 20 mm	32 x 12 x 20 mm	13 x 30 x 60 mm	125 x 61 x 26 mm
Special Function	Miniature with Teach-In	PD30Cnx			
	Clear Object Detection	PD30CNG		PD60CNG	
	Contrast Sensing			PD60CNK	
	Color Sensing				PD12
	Laser		LD32		

TEACH MODE

For applications that require specialized sensors, Carlo Gavazzi now offers photoelectric and fiber optic sensors that go beyond the capabilities of standard sensors. Whether it be detecting transparent objects and changes in contrast, to detecting specific colors and even sorting by multiple colors, Carlo Gavazzi now offers you the solution. A complete family of miniature sensors with full-size features is also available, including laser. The sensors are microprocessor based and can be programmed, or 'taught', by the user through a simple push button interface.

Fiber Optic Sensors

For Fiber Type		20 X 30 X 10 mm	M18	13 x 30 x 60 mm
Fiber	For plastic fibers	PD40CNX12x	EF1801xP EF1801TB	PD60CNX20x
	For glass fibers			PD60CNV20x

TEACH MODE

Magnetic Sensors

		Housing Material			
Housing Size		Plastic	Brass	Nickel-Plated Brass	Stainless Steel
Cylindrical	Ø6 mm	FMMP			
	Ø16 mm	FSLP			
	M8				
	M10		FS.A.2/S3 FS.S.2/S1		FMM
	M12	FM.A, FM.C, FMP, and FM.S	FS.A.2/S4 FS.S.2/S4 FM	FSM.A FSM.S.2	FSQ.A.
	M16	FS.B.2/2MT	FSM.S.2/S2		
Slot	M18	FS			
	28 x 18.5 x 7 mm	IM			
	45 x 37 x 10 mm	ISY			
Rectangular	75 x 50.7 x 40 mm	I.A, I.C, and I.S2			
	7 x 27 x 11 mm	MM			
	8.3 x 37 x 16 mm	M.A, S.B, M.S.1, and MS.A.2			
	21.2 x 11.5 x 79 mm	S.A, S.B, S.C, and S.S.2			
	24 x 25.5 x 85 mm	SP.B.2			

Magnetic sensors in a variety of sizes, shapes, and materials, to solve the widest variety of applications. Sensors consist of a reed switch, and a magnet (ordered separately). Sensing distances depend upon the size and strength of the magnet.

Ultrasonic Sensors

		Thru-Scan		Diffuse			
Sensing Distance		M18	M30	M12	M18	M30	Pancake
Discrete	25 - 200 mm			UA12CLD02.PM1TR			
	60 - 500 mm				UA18CLDS.P..TR		
	100 - 600 mm	UA18CLS06POM1			UA18CLD06.O..		
	100 - 800 mm				UA18CLD08.P..TR		
	200 - 1,500 mm	UA18CLS15POM1			UA18CLD15.O..		
	200 - 2,000 mm				UA18CLD20.P..TR		
	250 - 2,000 mm					UA30CLDPOM1TI	
	300 - 2,500 mm		UA30CLS25POM1			UA30CLD25.O..	
	300 - 3,500 mm					UA30CLD35.P..TR	
	600 - 6,000 mm						UC80CND60.PM1TR
0-10VDC	60 - 500 mm			UA18CLD05AK..TR			
	100 - 600 mm			UA18CLD06AK..			
	100 - 800 mm			UA18CLD08AK..TR			
	150 - 1,500 mm					UA30CLD15FKM7 UA30CLD15AKM1TI	
	200 - 1,500 mm			UA18CLD15AK..			
	200 - 2,000 mm			UA18CLD20AK..TR			
	250 - 2,000 mm					UA30CLD20FKM7 UA30CLD20AKM1TI	
	300 - 2,500 mm					UA30CLD25AK..	
	300 - 3,500 mm					UA30CLD35AK..TR	
	350 - 3,500 mm					UA30CLD25FKM7 UA30CLD35AKM1TI	
4-20mA	600 - 6,000 mm						UC80CND60AKM1TR
	60 - 500 mm			UA18CLD05ag..TR			
	100 - 600 mm			UA18CLD06AG..			
	100 - 800 mm			UA18CLD08AG..TR			
	150 - 1,500 mm					UA30CLD15FGM7	
	200 - 1,500 mm			UA18CLD15AG..			
	200 - 2,000 mm			UA18CLD20AG..TR			
	250 - 2,000 mm					UA30CLD20FGM7 UA30CLD20AGM1TI	
	300 - 2,500 mm					UA30CLD25AG..	
	300 - 3,500 mm					UA30CLD35AG..TR	
	350 - 3,500 mm					UA30CLD35FGM7	
	600 - 6,000 mm						UC80CND60AGM1TR

Ultrasonic sensors in popular M12, M18, M30 and "Pancake" housings. Diffuse sensing mode for detecting presence or measuring levels. Thru-scan mode for detecting presence of object anywhere in a broad range. 4-20 mA and 0-10 VDC analog outputs, along with NPN/PNP discrete outputs. Remote teach push button programmable, and software programmable versions for easier setup and greater control of sensor functions.



Teach Mode Version

Optical Level Sensors

Housing Type		3/8"	Amplifiers
DC	Media Contact Plastic Housing	VP0xEx VP0xEPx	SV190*
	Media Contact Metal Housing	VP0xMxA VPBxMxA	SV190*
AC	Media Contact Plastic Housing	VP0xxTB	

*For NPN-types only




Optical level sensors in polysulfone, stainless steel, and nickel-plated brass housings, with polysulfone, glass, or polyamide tips. Cable or quick disconnect plug versions available. Used for point level detection of non-coating liquids.



Conductive Level Sensors

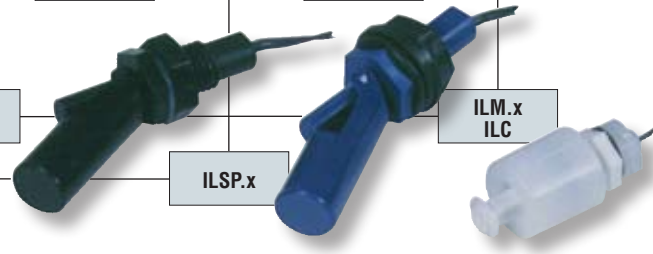
		Housing Diameter, Dimension or Type						Amplifier
Sensing Distance		1/2"	Ø 18 mm	Ø 22 mm	1"	Ø 32 mm	1 1/2"	
Supply and Output Through Amplifier	2 Electrodes, Hanging Probe			A94-10				S194156
	1 Electrode, Hanging Probe		VH1			VH2		SV11x SV12x SV21x SV22x CLDx CLPx
	2 Electrodes 0.4 m				VS2			
	1 Electrode 0.5 m	VPx105			VPx110			
	2 Electrodes 0.5 m	VPx205			VPx210			
	3 Electrodes 0.5 m				VPx310			
	1 Electrode 1 m						CLH3 VNxx1, VTx1	
	2 Electrodes 1 m						CLH3 VNxx2, VTx2	
	3 Electrodes 1 m						CLH3 VNxx3, VTx3	
	4 Electrodes 1 m						CLH5 VNxx4, VTx4	
	5 Electrodes 1 m						CLH5	



Conductive level sensing systems consist of a controller/relay and a probe with multiple electrodes. Used for maximum/minimum control, in filling or emptying applications. Can be used with virtually any type of conductive liquid. Various housing materials are available, including nylon, PVC, Teflon, and stainless steel, to cover many applications.

Float Level Sensors

		Float Diameter					
Housing Material		17.5 mm	25 mm	28 mm	31 mm	44 mm	45 mm
Horizontal Mount	Polypropylene	ILMPU.5 FSH-x1			ILMU.5		ILUx
	Nylon	FSH-x4					
	Polysulfone	FSH-x5					
Vertical Mount	Stainless Steel			ILMM.5x			ILM.x ILC
	Polypropylene		ILSP.x, ILMP.x		ILSP.x		
	Nylon		FSV-34				
	Polysulfone		FSV-35				

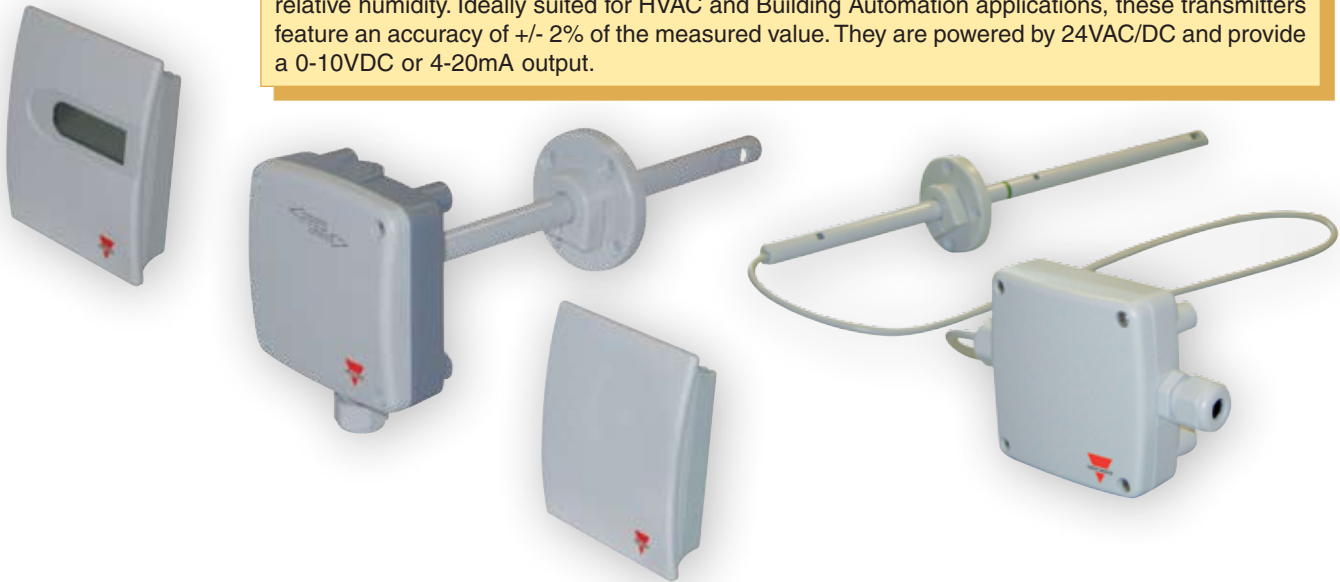


Mechanical float switches consisting of reed switch and enclosed magnet. Choice of housing materials include polypropylene, nylon, polysulfone and stainless steel, to work with almost any liquid type. Vertical or horizontal mount types, to allow access to any application. All of the float switches are pre-wired, to allow for quick and easy installation.

Environmental Sensors

Transmitter Description	Housing Description		
	80 x 80mm with a Remote Probe	80 x 80mm with an Extended Probe	80 x 80mm with or without a Display
Air Velocity Transmitter	CGESAIRVEL		
Carbon Dioxide Sensor		CGESC02D	CGESC02W
Carbon Dioxide and Temperature Sensor			CGESC02TW
Carbon Dioxide, Relative Humidity and Temperature Sensor			CGESC02TWH
Humidity and Temperature Sensor		CGESHTD	CGESHTW
Humidity and Passive Temperature Sensor			CGESHTPW

A full range of environmental sensors for detection of air velocity, carbon dioxide, temperature and relative humidity. Ideally suited for HVAC and Building Automation applications, these transmitters feature an accuracy of +/- 2% of the measured value. They are powered by 24VAC/DC and provide a 0-10VDC or 4-20mA output.





Solid State Relays

Switching Type	Current Ratings											
	5 A	8 A	10 A	25 A	30 A	40 A	50 A	63 A	75 A	90 A	110 A	125 A
Zero Switching												
1-phase PCB	RAP											
1-phase PCB	RP1A											
1-phase Industrial Housing			RS1A									
1-phase Industrial Housing				RM1A								
1-phase Industrial Housing VDE						RAM						
1-phase Industrial Housing					RA							
1-phase Industrial Housing				RX1A								
2-phase Industrial Housing			RA2A									
3-phase Industrial Housing				RZ3A								
1-phase / 1-pole DIN-rail				RJ1A								
1-phase / 1-pole DIN-rail				RN1A								
2-phase / 2-pole DIN-rail			RJ2A Mini									
2-phase / 2-pole DIN-rail				RN2A								
3-phase / 2-pole DIN-rail				RN3A								
3-phase / 2-pole DIN-rail				RJ2A								
3-phase / 3-pole DIN-rail				RJ3A								
Instant-On Switching												
1-phase PCB	RP1B											
1-phase Industrial Housing				RM1B								
1-phase / 1-pole DIN-rail				RJ1B								
1-phase / 1-pole DIN-rail				RN1B								
System Monitoring												
1-phase Industrial Housing				RA..S								
1-phase / 1-pole DIN-rail				RJCS								
1-phase / 1-pole DIN-rail				RJ1P23M (Modbus)								
Analog Switching												
1-phase Industrial Housing				RM1E								
1-phase / 1-pole DIN-rail				RJ1P								
1-phase / 1-pole DIN-rail				RJ1P23M (Modbus)								
3-phase / 3-pole Industrial Housing				RSC AA with RSO								
Peak Switching												
1-phase Industrial Housing				RM1C								
Low-Noise												
1-phase Industrial Housing				RA..L								
DC Switching												
1-phase PCB	RP1D											
1-phase Industrial Housing	RD											

Two Pole SSR with Independent Control Signals

Solid State Relays for switching AC or DC loads are available in PCB, chassis and DIN-rail mount housings. Single pole PCB relays can switch up to 10A. Chassis mount SSRs are available in one, two and three pole configurations and allow switching up to 125A. A full line of heat sinks complements the SSR offering.



PCB SSRs



Chassis Mount SSR for up to 125 Amps



System Monitoring SSR with Alarm Output



3 Phase SSR with Optional Alarm Output



Solid State Relays (continued)

Carlo Gavazzi's line of SOLITRON Solid State Relays with integrated heat sink are capable of switching one, two and three poles in applica-

tions up to 90A. These ready-to-mount SSRs are available in a variety of types including simple on /off and three types of proportion-

al switching, system monitoring types and a sophisticated Modbus controlled SOLITRON with voltage and current measuring capabilities.



Heat Sinks for Industrial Housed Solid State Relays

Dimensions	Thermal Resistance R_{th} (K/W)											
	0.25	0.4	0.45	0.8	1.1	1.2	1.25	1.35	2.0	2.7	3.0	3.6
1-Phase DIN-rail Mounting												
75 x 41.5 x 47.5 mm												
80 x 45 x 55 mm												
80 x 45 x 80 mm												
80 x 90 x 80 mm												
102 x 45 x 55 mm												
102 x 45 x 80 mm												
103 x 22.5 x 37 mm												
103 x 22.5 x 83 mm												
126 x 90 x 80 mm												
1- & 3-Phase DIN-rail Mounting												
80 x 112.5 x 80 mm												
75 x 118 x 94 mm												
126 x 112.5 x 80 mm												
145 x 122 x 122 mm												
100 x 240 x 93 mm												

One of the most comprehensive families of chassis or DIN rail mount heat sinks provided by any solid state relay manufacturer, some even provided with cooling fans. Most single and three phase solid state relays sold on the market will work with these heat sink kits, which are delivered with all the necessary mounting hardware.



Limit Switches

		Housing Size H X W X D (mm)					
Housing Type		49 x 30 x 16mm	49 x 35 x 16mm	55 x 30.3 x 32.5mm	54.5 x 52 x 36mm	65.5 x 66 x 43mm	70 x 40 x 43 mm
Standard Switches	Metal			PS21L..M	PS42L..M	PS43L..M	PS31L..M
	Plastic			PS21L..T	PS42L..T		PS31L..T
Pre-Wired Switches	Metal	PS21M..M	PS31M..M				
	Plastic	PS21M..T	PS31M..T				



Direct Movement

	Metal plain PLUNGER for all body types		Plastic roller lever on metal PLUNGER (left side)
	Metal plain PLUNGER with fixing nuts		Plastic roller lever on metal PLUNGER with dust protection cup (left side)
	Metal plain PLUNGER with fixing nuts		Plastic roller lever on metal PLUNGER (right side)
	Metal roller PLUNGER with fixing nuts		Plastic roller lever on metal PLUNGER with dust protection cup (right side)
	Roller PLUNGER for all body types		Adjustable plastic roller lever on metal PLUNGER (left side)
	Metal cross roller PLUNGER with fixing nuts		

Angular Movement

	Roller LEVER for all body types
	Roller internal or external bent LEVER
	LEVER with rubber roller Ø50
	Adjustable LEVER with nylon roller
	Adjustable LEVER with rubber roller Ø50
	Adjustable rod LEVER (170mm)

Multi-directional Movement

	Stainless steel spring multidirectional actuator (117mm)
	Multidirectional nylon actuator with stainless steel spring (115mm)
	Stainless steel spring multidirectional actuator (cat whisker - 135mm)

High quality limit switches are provided in the most popular industrial sizes, shapes, contact configurations, as well as an innovative series of encapsulated limit switches, available with an integrated cable.

Their rugged metal housings and economical plastic housings offer one to three 1/2" NPT conduit entryways. Output contacts are offered in snap action, slow action, or overlapping configurations. Various types

of push button/roller actuators, roller levers, and multi-directional levers are available. These switches are ideal for manufacturers of material handling, packaging, conveying, and machine tool equipment.

Pushbuttons, Switches and Pilot Devices

Push Buttons & Selector Switches	Through-Hole Diameter					
	22mm Standard Style		22mm Bezel Style		30mm Flush Style	
	Non-Illuminated	Illuminated	Non-Illuminated	Illuminated	Non-Illuminated	Illuminated
Flush Push Button	PB22SF	PB22SIF	PB22BF	PB22BIF	PB30FF	PB30FIF
Extended Push Button	PB22SE	PB22SIE	PB22BE	PB22BIE	PB30FE	PB30FIE
Emergency Stop Push Button - 40mm	PB22SEM4		PB22BEM4		PB30FEM4	
Emergency Stop Push Button - 60mm	PB22SEM6		PB22BEM6		PB30FEM6	
Emergency Stop Key-reset Push Button - 40mm	PB22SKM4		PB22BKM4		PB30FKM4	
Mushroom Push Button 40mm	PB22SM4	PB22SIM4	PB22BM4	PB22BIM4	PB30FM4	PB30FIM4
Mushroom Push Button 60mm	PB22SM6	PB22SIM6	PB22BM6	PB22BIM6	PB30FM6	PB30FIM6
Short Handle Selector	PB22SSRS	PB22SISRS	PB22BSRS	PB22BISRS	PB30FSRS	PB30FISRS
Long Handle Selector	PB22SLRS		PB22BLRS		PB30FLRS	
Key Selector	PB22SKRS				PB30FKRS	
I/O Push Button	PB22SIO	PB22SIOL				

LED Pilot Devices	Through-Hole Diameter	
	22mm	
	Standard	Compact
High Lens Light	PL22SHL	PL22CHL
Concentric Lens Light	PL22SRL	PL22CRL
Low Lens Light	PL22SLL	PL22CLL
Teeth Lens Light	PL22STL	PL22CTL
Flashing Light	PL22SFL	
Dual Color - Red/Green Light	PL22STCRG	
Buzzer (without Light)	PL22SBZK	
Flashing Buzzer (with Light)	PL22SFBZR	



Illuminated and Non-Illuminated Flush and Extended Push Buttons



Selector Switches Mushroom Head E-Stops I/O Push Buttons



High Lens LED Pilot Light Concentric Lens LED Pilot Light Low Lens LED Pilot Light Teeth Lens LED Pilot Light Flashing LED Pilot Light



Contact Blocks Lamp Elements Holders

Pushbuttons, Selector Switches, and Pilot Lights are available in 22 and 30mm diameter mounting sizes. The modular design concept allows the user to select the operator, holder, contact block(s), and colored lamps, for a truly customized product. The dual contact blocks can be stacked up to 3 deep on each button (for a total of 6 contacts). Illuminated versions utilize high-efficiency and high-brightness, pure color LEDs, guaranteeing longer life and reliability versus incandescent bulbs. Pilot lights available in standard and compact sizes, and feature a unique and space-saving dual color (red & green) model! E-Stop, mushroom buttons, and a full range of accessory items are available.



Electromechanical PCB Relays

Number of Poles	Current Ratings				
	5 A	8 A	10 A	12 A	16 A
1-Pole	MZ 1 NO - 1 CO 12.5x29.4x25.2	M15 1 NO, 1 CO, 1 NC	MZ 1 NO - 1 CO 12.5x29.4x25.2	M25 1 CO 12.7x29x15.7	M25 1 CO 12.7x29x15.7
	MZ R1 1 NO - 1 CO 12.5x29.4x25.2	M15 R1 1 NO - 1 CO 29x10x15	MZ R1 1 NO - 1 CO 12.5x29.4x25.2	LC 1 NO - 1 CO 12.7x20x29	MZ 1NO-1NC-1CO 12.5x29.4x25.2
	VM 1 CO 10.5x20.5x20.5	M15 R2 1 NO - 1 CO 29x10x15	LC 1 NO - 2 CO 12.3x20x29		MZ R1 1 NO - 1 CO 12.5x29.4x25.2
	JF 1 NO - 1 CO 10.5x20.5x15.3				
	VK 1 NO-1CO 7.4x14.9x12.5		VTH 1 CO 15.4x19.2x14.8		
	MZ 2NO-2NC-2CO 12.5x29.4x25.2	M25 2 CO 12.7x29x15.7	MZ 2NO-2NC-2CO 12.5x29.4x25.2		
	MZ R2 2 NO - 2 CO 12.5x29.4x25.2		MZ R2 2 NO - 2 CO 12.5x29.4x25.2		
2-Poles	LC 2 NO-2 CO 12.7x20x29				



This relay family consists of two main relay groups:

- **Signal Relays** – One or two conduits, from 2A up to 5A, DC coil only.
- **General Purpose** – from 1 contact up to 2 contacts, from 5 A up to 16 A, AC/DC coils and bistable, 4 KV/8 mm between coils/contacts.

Electromechanical Power Relays

Number of Poles	Current Ratings		
	20 A	25 A	30 A
1-Pole	CGQ 1 CO 27x32.2x20.1		CGQ 1 NO 27x32.2x20.1
			NA 1 NO 12.5x29.4x25.2
			NF 1 NO 10.5x20.5x20.5
			NP 1 NO 10.5x20.5x15.3
2-Poles		NA 2 NO 33.5x50.5x42	CS 2 NO - 2 CO 34.5x52.3x30.4
		NF 2 NO 33.5x68x36	CF 2 NO - 2 CO 34.5x52.3x26.4
		NP 2 NO 33.5x50.5x36	

Relays with 1 or 2 poles, from 20 A up to 30 A, AC and DC coils, standard and high insulation between coil/contacts, PCB and fast-on terminals.



Industrial Electromechanical Relays

Number of Poles	Current Ratings		
	5 A	10 A	16 A
1PDT			RPY001 1PDT 21.5 x 36 x 28
2PDT		RMI 2 10 2PDT 21.5 x 36 x 28	
		RPY002 2PDT 21.5 x 36 x 28	
		RCP8 2PDT 35.5 x 56 x 35.5	
3PDT		RPY003 3PDT 31.5 x 36 x 28	
		RCP11 3PDT 35.5 x 56 x 35.5	
4PDT	RMI 4 5 4PDT 21.5 x 36 x 28	RPY004 4PDT 41.5 x 36 x 28	



The industrial relays are available with four 5 amp changeover contacts, two, three or four 10 amp changeover contacts and one 16 amp changeover contact. They are manufactured with various external connections: soldering and PCB terminals, multi pin socketed type. Available with LEDs and push to test buttons and the most common AC or DC coil voltages. DIN rail sockets are available for all industrial relays.

Definite Purpose Contactors


Description	Current Ratings			
Inductive Rating	20A	25A	30A	40A
Resistive Rating	30A	35A	40A	50A
One Pole	CGDP1020	CGDP1025	CGDP1030	CGDP1040
One Pole with Shunt	CGDP1520	CGDP1525	CGDP1530	CGDP1540
Two Pole	CGDP2020	CGDP2025	CGDP2030	CGDP2040
Three Pole	CGDP3030	CGDP3025	CGDP3030	CGDP3040
Three Pole (Reversing)	CGDPR3030	CGDPR3025	CGDPR3030	CGDPR3040

Definite purpose contactors offer an economical switching solution for resistive loads, up to 50A, and inductive loads, up to 40A. They are available in one, two and three pole configurations with a full range of AC coils.





IEC Contactors, Overloads and Manual Motor Starters

				HP Ratings										
				HP @ 480VAC										
				5	7.5	10	15	20	25	30	40	50	60	
				HP @ 575VAC										
				7.5	10	15	20	25	30	40	50	60	75	
Width Size	Terminal Overload	Motor Starter	NEMA Size	00	GC9									
				0	GC12									
45mm	GT12	GMS-32	1	GC18										
			–	GC25										
			1P	GC32										
63mm	GT32	GMS-32	–	GC35										
			2	GC40										
			–	GC50										
79mm	GT63	GMS-63	–	GC63										
			–	GC65										
			–	GC75										
94mm	GT95	GMS-100	3	GC85										
			–	GC95										
			–	CGC100 (CGC100 60HP @ 575VAC)										
100mm	CGT-125	NONE	–	CGC125										
			–	CGC150										
120mm	CGT-150		4	CGC180										
138mm	CGT-220		–	CGC220										
			–	CGC300										
163mm	CGT-400		5	CGC400										
			–	CGC600										
285mm	CGT-800		6	CGC800										
			–											
Auxiliary Contacts				1 NO or 1 NC		1 NO and 1 NC								

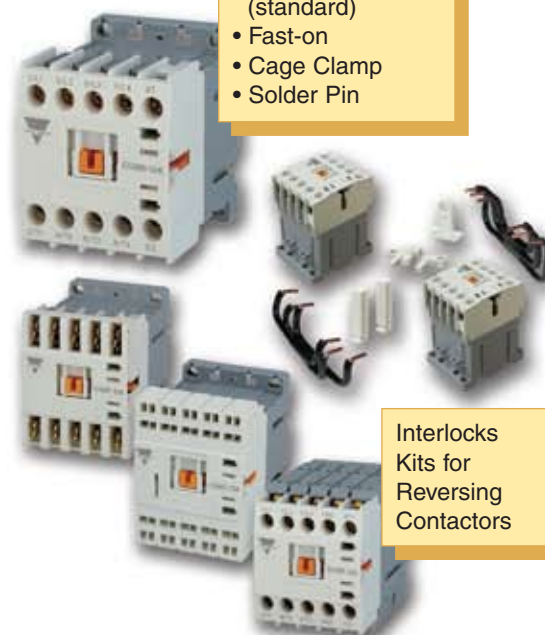


Mini Contactors

Width Size	Terminal Overload	Terminal Type	HP Ratings		
			HP @ 480 and 575V		
			5 HP	7.5 HP	10 HP
45mm	CGT-12M	SCREW	CGMS-6		
			CGMS-9		
			CGMS-12		
		FAST-ON	CGMF-6		
			CGMF-9		
			CGMF-12		
		CAGE CLAMP	CGMC-6		
			CGMC-96		
			CGMC-12		
		SOLDER PIN	CGMP-6		
			CGMP-9		
			CGMP-12		
	Auxiliary Contacts	1NO or 1NC			

Termination Types

- Screw type (standard)
- Fast-on
- Cage Clamp
- Solder Pin



Interlocks Kits for Reversing Contactors

75	100	125	150	200	300	400	600
75	100	125	150	200	300	400	600

19 RATING CLASSES IN ONLY 9 DIFFERENT SIZES



Full line of mini contactors (up to 12A) with optional terminal styles including screw, fast-on, cage clamp and solder pin. Standard contactors (up to 800A) in only 9 different frame sizes. GC series contactors have CSA elevator ratings. Easy slide out cassette for coil changes (100A and higher). Thermal overloads and interlock kits available to build starters and reversing units. Enclosed starters also available with and without push buttons. Unique electronic and digital motor protection relays for detecting overload conditions as well as phase loss, reversal protection, current imbalance, stalled motor and locked motor detection with alarm and trip output contacts and optional ground fault protection (100mA through 2.5A).

2 NO and 2 NC

Enclosed Starters

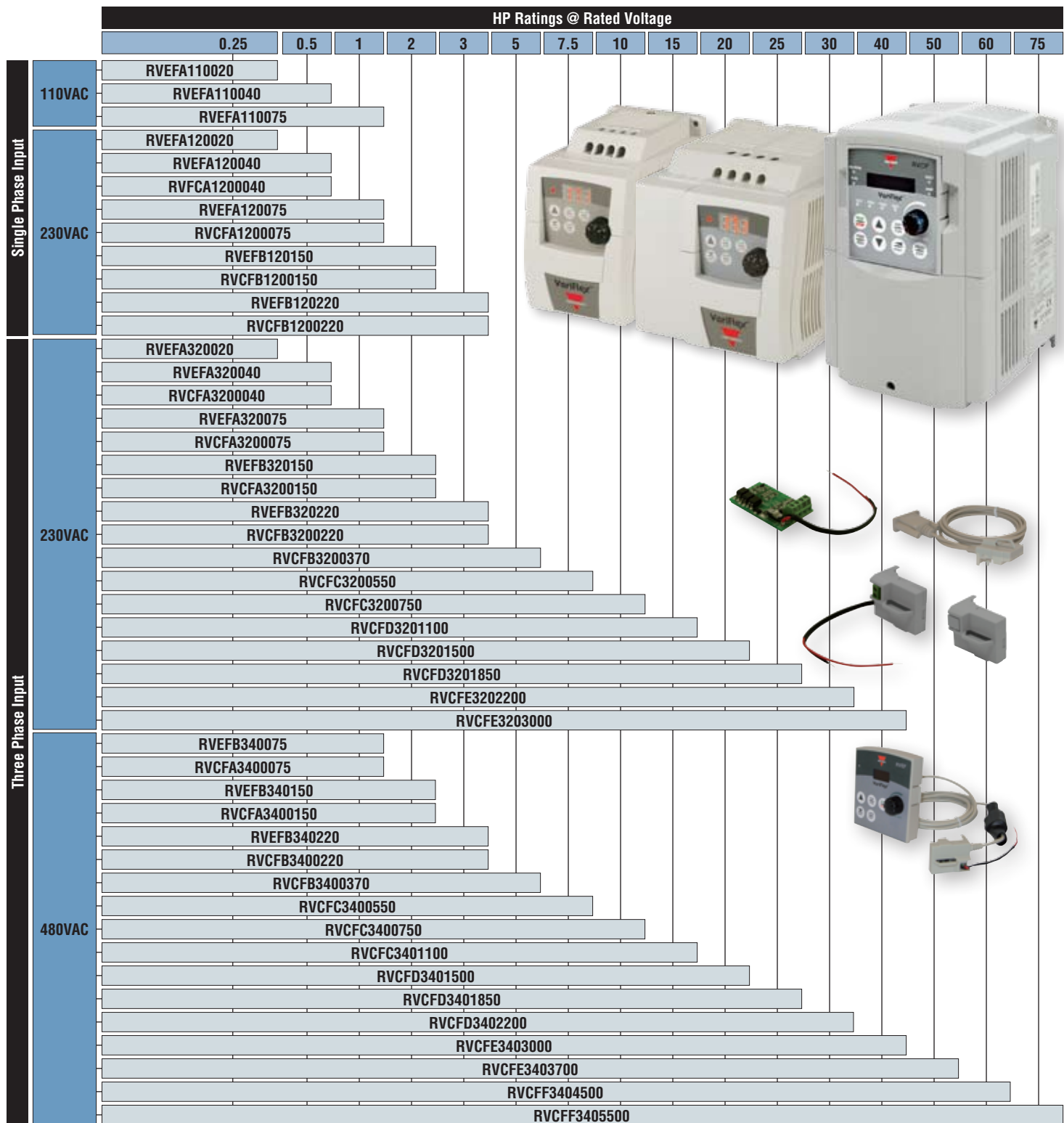
Carlo Gavazzi GMS Series Manual Motor Starters for up to 100 Amps

Full Complement of Thermal Overloads for up to 800 Amps

Electronic Motor Protection Relays



Variable Frequency Drives



Variflex2 RVFL series are modern, sensor less variable frequency drives featuring rotary speed selector, multifunction analog inputs, digital inputs and outputs, expendable I/O, external break units, built-in PLC (RVFC only) and optional RS232/RS482 communication. They can be easily setup

with detachable front keypad or available PC software. Drive parameters can be easily cloned with use of optional setup copy unit. RVFE drives are among smallest in their class and can be installed side by side to save panel space.

Solid State Motor Controllers

HP Ratings @ 480 VAC					
	2	7.5	15	30	40
1-Phase Motor Soft Start/Stop					
Industrial Housing	RSE..BS				
3-Phase Motor Direct Start					
Industrial Housing	RZ 3A				
3-Phase Motor Soft					
DIN-rail Housing	RSE..B, RSHR				
Industrial Housing	RSC with RSO				
3-Phase Motor Reversing					
Industrial Housing	RR2A				
3-Phase Motor Breaking					
Industrial Housing	RTC with RTO *				

*RTC braking modules are not specified to motor current or HP rating but to motor winding resistance.

Motor controller for soft starting/stopping (up to 40Hp), adjustable starting torque and ramping times via knobs on the front face. Newer programmable soft starter that allows for customization of the ramp curve to benefit the loads of pumps, fans, conveyors with kick-start and high torque adjustments. Diagnostics onboard for phase loss, wrong sequence, overheating detection and PTC input for motor protection. Forward/reversing relays with built in interlock (up to 7.5Hp). Dynamic braking units (injects up to 60ADC).

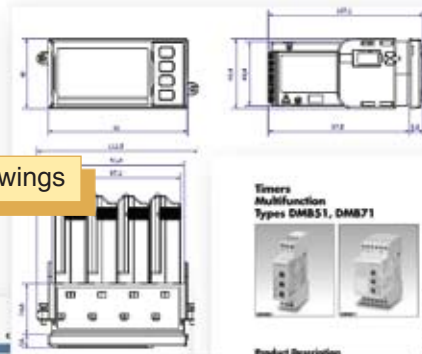


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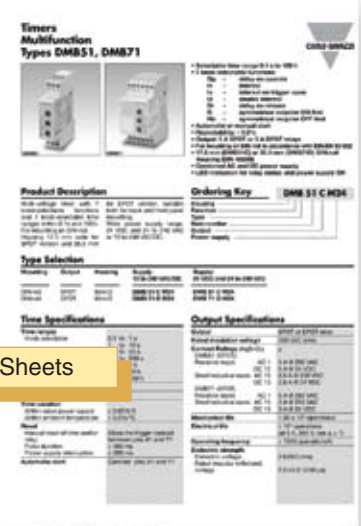
www.GavazziOnline.com is an information laden website which offers you the ability to download data sheets, specify products, check pricing and availability, track shipping and so much more:



CAD Drawings



Data Sheets



Easy-to-use Product Selection Guides

Power Supplies (Single Phase)

		Output Voltage					
		5 VDC	12 VDC	15 VDC	24 VDC	48 VDC	
Screw Terminals	Output Power						
	5 Watts	SPD05051	SPD12051	SPD15051	SPD24051		
	10 Watts	SPD05101	SPD12101	SPD15101	SPD24101		
	18 Watts	SPD05181	SPD12181	SPD15181	SPD24181		
	30 Watts		SPD12301		SPD24301	SPD48301	
	60 Watts	SPD05601	SPD12601		SPD24601	SPD48601	
	90 Watts				SPD24901		
	120 Watts		SPD121201N		SPD241201N	SPD481201N	
	240 Watts				SPD242401	SPD482401	
	480 Watts				SPD244801	SPD484801	
Spring Terminals	5 Watts	SPD05051B	SPD12051B	SPD15051B	SPD24051B		
	10 Watts	SPD05101B	SPD12101B	SPD15101B	SPD24101B		
	18 Watts	SPD05181B	SPD12181B	SPD15181B	SPD24181B		
	30 Watts		SPD12301B		SPD24301B	SPD48301B	
	60 Watts	SPD05601B	SPD12601B		SPD24601B	SPD48601B	
Detachable Terminals	90 Watts				SPD24901B		
	120 Watts		SPD121201BN		SPD241201BN	SPD481201BN	
	240 Watts				SPD242401B	SPD482401B	
	480 Watts				SPD244801B	SPD484801B	

UL1310 Class 2 Power Supplies



The SPD Series single phase high efficiency power supplies are DIN-rail mounted, and feature diagnostic LEDs, output voltage adjustment and short circuit protection. Double output terminals are standard on models rated 30W and above. Metal housings are standard on models rated 90W and above. Overvoltage/overload protection and output ready relay terminals are featured on many models. Single/parallel switch is standard on models rated 120W and above. Operating temperature is -10 to 60°C without derating.

Optional Terminals

Spring Type are available for all models up to 60W

Detachable Types offered on models from 90W to 480W



Power Supplies (Three Phase)

Screw Terminals	Output Power	Output Voltage	
		24 VDC	48 VDC
	120 Watts	SPD241203	SPD481203
	240 Watts	SPD242403	SPD482403
	480 Watts	SPD244803	SPD484803
	960 Watts	SPD249603	SPD489603
	960 Watts	SPD249603L	

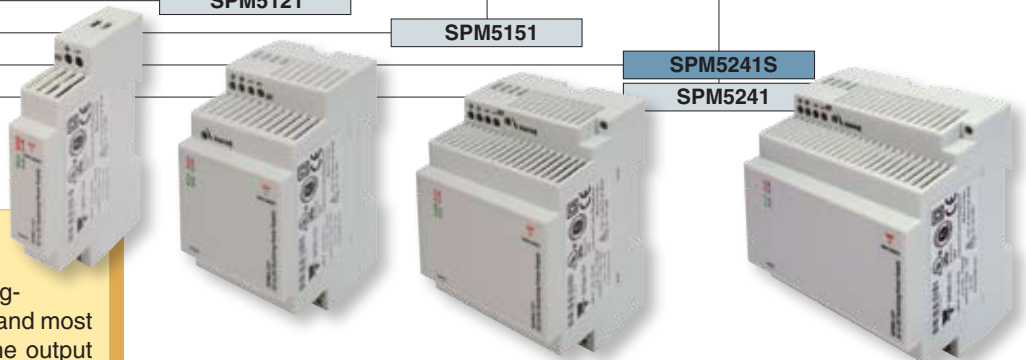


The SPD Series 3 phase power supplies are highly efficient, up to 93%, and DIN-rail mounted. PFC and parallel function are standard.

Power Supplies (Single Phase, Low Profile)

Screw Terminals	Output Power	Output Voltage			
		5 VDC	12 VDC	15 VDC	24 VDC
	7.5 Watts	SPM1051			
	10 Watts		SPM1121	SPM1151	SPM1241
	15 Watts	SPM3051			
	25 Watts		SPM3121		
	35 Watts	SPM4051		SPM3151	SPM3241
	54 Watts		SPM4121		
	60 Watts	SPM5051		SPM4151	SPM4241
	72 Watts		SPM5121		
	75 Watts			SPM5151	
	91 Watts				SPM5241S
	100 Watts				SPM5241

UL1310 Class 2 Power Supplies



The compact, high efficiency SPM Low Profile Series are merely 55.5mm deep. All units have diagnostic LEDs, are DIN-rail mounted and most are listed with UL1310 Class 2. The output voltage is adjustable on all models except the SPM1.

		Functions				
Description		Delay on Operate	Interval	Delay on Release	Recycler (Symmetrical)	Recycler (Asymmetrical)
Housing	D-Series DIN-rail	DAA01, DMB01	DMB01	DMB01, DBB01, DBB02	DMB01	DCB01
	Mini-D-Series DIN-rail	DAA51, DMB51	DMB51	DMB51, DBB51, DBA52	DMB51	DCB51
	P-Series Plug-in	PAA01, PMB01, PMC01	PMB01, PMC01	PMB01, PBB01, PBB02	PMB01	PCB01
	48x48 Series Panel or Plug-in	FAA01, FAA08	FMB01	FMB01	FMB01	
	Mini E-Series DIN-rail	EAS	EBS		ECS	

8 and 11 pin plug-in timing relays, as well as DIN rail mount types. Each multi-voltage timer offers various timing functions and ranges, which minimizes inventory and maximizes functionality. The PC programmable type offers great flexibility for creating special functions.



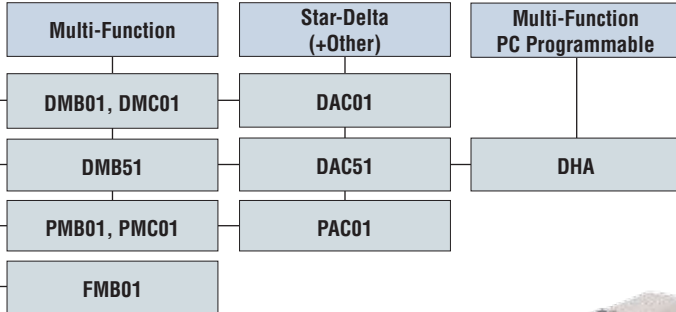
Monitoring Controls

		Functions				
Description		Current DC and 1-phase AC	Current 3-phase AC	Voltage DC and 1-phase AC	Voltage 3-phase AC	Phase Sequence/Loss
Housing	D-Series DIN-rail	DIA01, DIB01, DIB02, DIC01, DUA01	DIB02, DIC01, DUA01	DIC01, DUA01, DUB01, DUB02, DUC01	DPA01, DPA02, DPB01, DPC01	
	Mini-D-Series DIN-rail	DIA53, DIB71	DIB71	DUA52	DPA53, DPB51, DPB71, DPC71	DPA51, DPB71
	Mini-E-Series Current Transformers	EIS, E83				
	P-Series Plug-in	PIA01, PIB01, PIB02, PIC01, PUA01	PIB02, PIC01, PUA01	PIC01, PUA01, PUB01, PUB02, PUC01	PPA03, PPB01, PPC01, PPC71	PPA01, PPA02
	S-Series Plug-in					
Accessories	Current Transformers	A82, MI, CTD-1/2/3/4, TADK2, TAD 8/12, TACO 110/200	MP			
	Split Core Transformers	SCT				
	Shunts	DER				

Single phase monitoring relays for AC/DC current, AC/DC voltage, AC frequency and temperature. Three phase controls for monitoring phase loss, phase sequence, phase angle and phase asymmetry. Available in both 11 pin plug-in and DIN

rail mount housings. Most monitors feature adjustable set point(s), time delay(s), hysteresis and latch functions, as well as separate output for under or over set point conditions.

Current transformers are available with analog output (up to 500AAC), adjustable set point with transistor output (up to 100AAC), as well as 5AAC secondary output (up to thousands of amps). DC shunts and transducers are also offered.



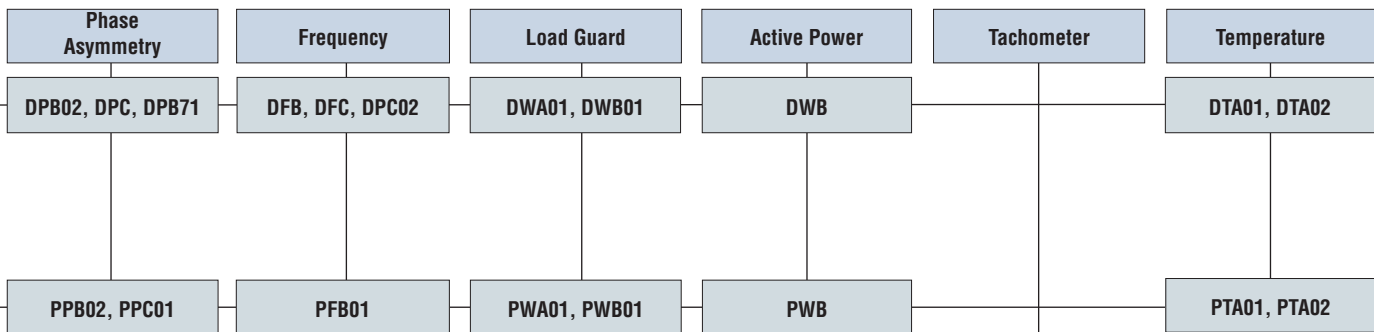
DMB51 Series Universal Timer

- DIN rail mounting
- Seven Functions with Up to 100 hour time setting
- 5A SPDT or 5A DPDT output
- 12 to 240 VAC/DC supply voltage



FMB01 Series Multifunction Timer

- Popular 48 x 48mm size
- 11 pin socket or panel mount
- Six functions with up to 300 hour time setting
- 5A DPDT output
- 100 to 240 VAC supply voltage




DIA53 Series self-powered transistor output current monitor, up to 100A




CTD Series current transformers from 50 to 1,600 A



DPA53 Series 3-Phase monitor for phase loss, sequence and under-voltage

		Measurements and Modules					
Size & Description		Low Measurements up to 20mA and 20v AC/DC	High Measurements up to 5A and 500V AC/DC	Temperature TC, JL, K, S, T, F + PT100, 200 500, 1000 RTDS	Resistance up to 20k Ohms	AC Tach/Freq Counter 50 kHz max	DC Tach Counter 50 kHz max
Modular	UDM35 Modular Panel Meter 48 x 96mm 3.5 Digit Up to 4 Discrete Outputs, Analog, RS232/485	Base Unit - BD35 Input Card - BQLSX	Base Unit - BD35 Input Card - BQHSX	Base Unit - BD35 Input Card - BQTRX	Base Unit - BD35 Input Card - BQTRX	Base Unit - BD35 Input Card - BQTF2	Base Unit - BD35 Input Card - BQTF1
	UDM 40 Modular Panel Meter 48 x 96mm 4.0 Digit Analog/ RS232/485 Output 0/1/2/4 Digital Outputs	Base Unit - BD40 Input Card - BQLSX	Base Unit - BD40 Input Card - BQHSX	Base Unit - BD40 Input Card - BQTRX	Base Unit - BD40 Input Card - BQTRX	Base Unit - BD40 Input Card - BQTF2	Base Unit - BD40 Input Card - BQTF1
	UDM60 Modular Panel Meter 48 x 96mm Dual 6 Digit and Analog Display Dual AC/DCTach/Freq Inputs Analog + 1/2/4 Digital Outputs					Base Unit - BD60 Input Card - BQTF2	Base Unit - BD60 Input Card - BQTF1
	USC Signal Conditioner DIN Mounted, No Display Analog/RS232/485 Output 0/1/2/4 Digital Outputs	Base Unit - BDXX Input Card - BQLSX	Base Unit - BDXX Input Card - BQHSX	Base Unit - BDXX Input Card - BQTRX	Base Unit - BDXX Input Card - BQTRX	Base Unit - BDXX Input Card - BQTF2	Base Unit - BDXX Input Card - BQTF1
Size & Description		1A DC 60MV/100VDC 500VDC	5A AC 500 VAC 1 A AC 100V AC	200 MV DC 20/200 V DC 2/20 MA DC			
Standard	DI3-DIN Indicator 48 x 96mm 3.0 Digit	DI3-DIN.AV6	DI3-DIN.AV1 DI3-DIN.AV5				
	DI3-72 Indicator 72 X 72mm 3.0 Digit	DI3-72.AV6	DI3-72.AV1 DI3-72.AV5				
	LDI3 Indicator 48 x 96mm 3.0 Digit	LDI3.AV6					
	LDI35 Indicator 48 x 96mm 3.5 Digit Up to 1 relay output			LDI35.AV0			
	LDM30 Indicator 48 x 96mm 3.0 Digit	LDM30.AV1	LDM30.AV5				
LDM35H AC/DC Indicator/Ctrl 48 x 96mm 3.5 Digit 0/1/2 Relay Outputs	LDM35H.LSE	LDM35H.HSX					
LDM40H AC/DC Indicator/Ctrl 48 x 96mm 4.0 Digit 0/1/2 Relay Outputs	LDM40H.LSE	LDM40H.HSX					

Digital indicator and controllers offered in 3, 3 1/2, 3 3/4, 4 and 6 digits. Measurement of all relevant electrical, physical and pulse signals. RS485 communications are available on some models. Our modular panel meters and signal conditioners are highlighted on the adjacent page.





Digital indicator and controllers offered in 3, 3 1/2, 3 3/4, 4 and 6 digits. Measurement of all relevant electrical, physical and pulse signals. RS485 communications are available on some models. Our modular panel meters and signal conditioners are highlighted on the adjacent page.

Counters & Hour Meters

	24 x 48mm	48 x 48mm
6 Digit preset counter two line LCD add/subtract		FKC01C924
8 Digit Up/Down Counter single line LCD	FKA.01, 02, 03	
8 Digit Hour Meter	FSA.01, 02	



Up/down high speed counter features a single preset, 3A SPDT relay, and 2 count inputs. Hour meters have an 8 year battery powered display, 10-260V AC or DC input.

Digital Panel Meters (continued)



The UDM35, UDM40 and UDM60 Digital Panel Meters and USC Universal Signal Conditioner feature a modular design. All modules "plug-in" to the rear of the base unit and are secured by captive hold down screws.

Selection

- Step 1: Select a Base Unit **BDxx**
- Step 2: Select a Power Supply **BPx**
- Step 3: Select an Input Module **BQxxx**

Optional Modules

- Input with excitation output **BQLSx**
- Discrete outputs 1, 2, 4 relays **BORx**
- Discrete outputs - 2 relays + 2 transistors **BORx**
- Analog outputs - Voltage/Current **BOAV**
- Serial outputs - RS232 **BRSX**
- Serial outputs - RS485 **BRSY**

UDM60: Two Variables Available at a Glance

The 6-digit format provides very accurate measurements while the analog indicators show where the variable is compared to its full scale.



UDM40 Color Display

- RED**
High priority, abnormal condition
- AMBER**
Low priority, abnormal condition
- GREEN**
Normal condition



Our 1/32 and 1/16 DIN temperature controllers feature full PID auto-tuning, dual outputs, alarms with 5 options, PID heat-cool + ramp and soak operation, IP66 front panel, optional RS232/485 and Modbus RTU protocol.



PID Controllers

		Features					
Size & Description		NEMA 4	Temp Sensor Input	Analog Input	Ramp and Soak	Analog Output	RS485 Communications
Housing / Display	1/32 DIN Single Display	T20321	T20321		T20321		T20321
	1/16 DIN Single Display	T20161	T20161		T20161		T20161
	1/16 DIN Dual Display	T20162 T2016P2	T20162	T2016P2 T2016P2	T20162 T2016P2	T2016P2	T20162 T2016P2

		Series Numbers				
Features	Description	EM 21 72D	EM 26	WM 12 96/DIN	WM 14 96/DIN	WM 3 96
	Energy Meter	X	X		X	X
	Utility Meter		X			
	Multi-Function Meter			X		
	Power Analyzer	X			X	
	Power Quality Analyzer		X			X
	Modular					X
	Graphic Display	X	X			X
	Transducer	X				
	Digital Inputs		X			X
	Pulse Outputs	X	X		X	X
	Analog Outputs					X
	Alarm Outputs		X		X	X
	Serial Communication	X	X	X	X	X
	Internet -Ethernet Communication					
	Optical Serial Port					
	Setup Software				X	X
	Works with Energy Link					X
	Works with PowerSoft		X	X	X	X
	DIN Rail Mounting	X		DIN version	DIN version	
	Panel Mounting	X	X	96 version	96 version	X

A New Concept of Modularity

- PLUG and PLAY modules common to most meters
- Maximum in-field flexibility
- Possibility to expand the number and the kind of outputs without replacement of the instruments in-field
- Reduced inventory



EM26
Energy Analyzer



WM14
Power Analyzer



WM3-96
Modular Power
Quality Analyzer

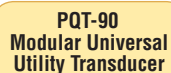


WM4-96
Modular Universal
Utility Meter



EM21:
- Three -
devices in one
housing

– Three –
DIN Rail Mount
Transducer
(without Display)



The screenshot displays the PowerSoft software interface. It features a 3D architectural rendering of a building complex. Overlaid on this is a network diagram with nodes (represented by computer icons) and connecting lines. The nodes are labeled: 'Offices', 'Showroom', 'Production C', 'Warehouse', 'Garden', 'Maintenance', 'Production B', and 'Utility 2'. A '400 V' power source is indicated near the 'Maintenance' node. The interface includes a top menu bar with 'PowerSoft' and a 'Help' button. A bottom status bar shows 'User: Admin', 'Location: Istanbul', and a scale bar.





Safety Light Curtains

Safety Category	Detection Resolution		
	Finger	Hand	Body
Type 2		SBA230	SBA290
		SBM230	SBM290
			SB251
			SB241
			SB231
Type 4	SB4E14	SB4E30	SB451
	SB4B14	SB4B30	SB441
	SB4M14	SB4M30	SB431
	SB4N14	SB4N30	SB4T51
			SB4T41
			SN4L51
			SB4L41
			SB4S51
			SB4S41

A full range of safety light curtains, designed to guard a point of operation or a perimeter area around a machine. Utilizing the through-beam principle of photoelectric sensors, safety light curtains use multiple infrared beams to protect operators from dangerous conditions. When any of the beams are broken, a stop signal is sent to the machine via the safety controller. Type 2 and type 4 rated models available, in finger, hand, and body resolutions. Additional features include EDM, blanking, muting, cascading, and automatic or manual start/reset.



Safety Modules

Housing	For use with:							
	Emergency Stop and Safety Gates	Two-Hand Control Anti-tie Down	Safety Light Curtain	Safety Mats	Safety Gates & Safety Magnetic Sensors w/ 2 NO Contacts	Safety Gates & Safety Magnetic Sensors w/ 1 NO + 1 NC Contacts	Standstill Monitor	Lift Door Unlock & Cabin Level
22.5 x 99 x 114.5	NES02x NES13x NA13Dx	ND12Dx	NLG02x NLG13x		NSO02x NSO13x	NSC02x NSC13x		NA12-D LIFT
45 x 75 x 105	MA1D							NE14Dx
22.5 x 84 x 100				NT12Dx				
45 x 84 x 100							MF1-C	

Safety modules for reliable control of various safety devices. Provides interface between safety device and machinery. Modules are tailored for the following applications: E-stop

and safety gates, two hand controls, safety light curtains, safety mats, safety gates, standstill monitors, and elevator cabin/lift level control. Extension modules are also

available to expand the number of safety contacts available, without compromising the safety rating.

Safety Mats

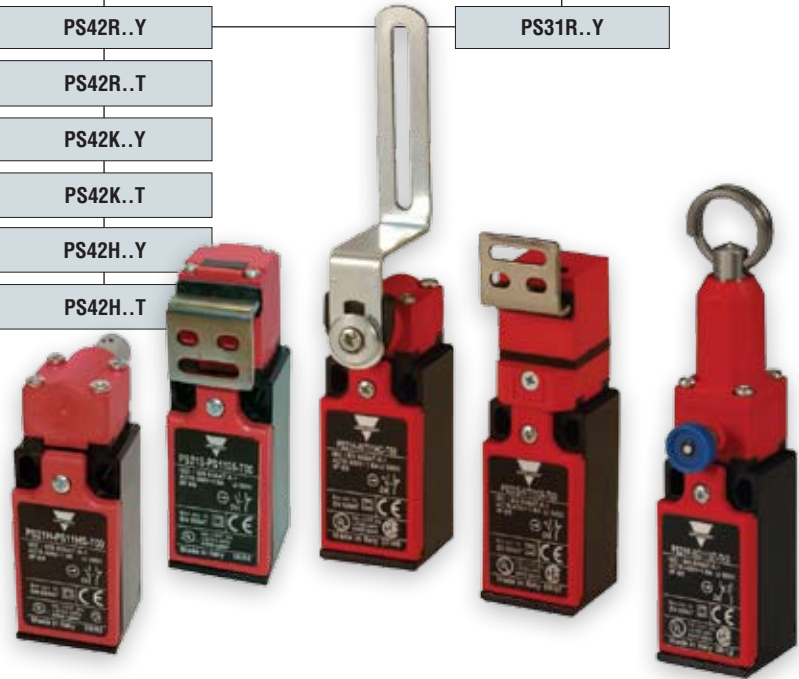
Safety mat system is used to provide operator protection in dangerous areas, without restricting operator movement. The pressure sensitive mats are custom fit to each application, to guarantee the best possible coverage. When used with the appropriate Carlo Gavazzi safety module, comprises a safety category 3 system.



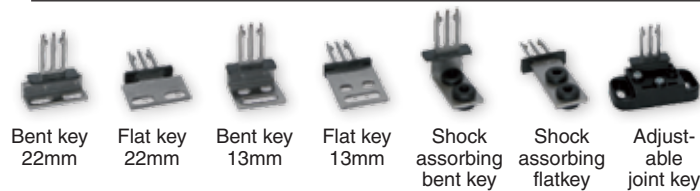
Safety Switches

		Housing Size H X W X D (mm)			
		55 x 30.3 x 32.5 mm	54.5 x 52 x 36 mm	65.5 x 66 x 43 mm	70 x 40 x 43 mm
Key Actuated	Metal	PS21S..Y	PS42S..Y	PS43S..Y	PS31S..Y
	Plastic	PS21S..T	PS42S..T		PS31S..T
Cable Pull	Metal	PS21R..Y	PS42R..Y		PS31R..Y
	Plastic	PS21R..T	PS42R..T		
Manual Reset	Metal	PS21K..Y	PS42K..Y		
	Plastic	PS21K..T	PS42K..T		
Hinge Actuated	Metal	PS21H..Y	PS42H..Y		
	Plastic	PS21H..T	PS42H..T		

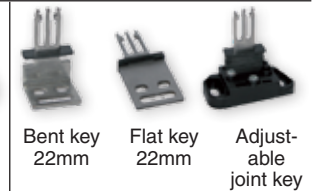
Safety switches are designed to protect both people and machinery from numerous dangerous conditions that exist not only in the industrial environment, but also in the commercial world. Some of the switches available include: manual reset switches used for elevators, cable pull switches used for mining applications, conveyors or assembly lines, key interlock switches used for safety doors and barriers, hinge-mount switches used for monitoring the position of doors or gates. The most popular sizes and shapes are offered. Their rugged metal housings and economical plastic housings provide one to three 1/2" NPT conduit entryways.



Operating Keys for Type 05 & 09



For Type PS21 & PS43



Safety Magnetic Sensors

		Outputs			
Housing Type		1 NO	2 NO	1 NO + 1 NC	2 NO + 1 NC
Cylindrical		SMS-A2P-10	SMS-A2P-30	SMS-A2P-02	
Rectangular			SMS-03	SMS-01 SMS-02	SMS-03/NC

SMS safety magnetic sensors are used to monitor the position status of hinged, sliding, or removable guards. Can be used in extremely harsh industrial environments where dirty and damp conditions are common, as well as applications where washdown occurs. The sensors are available in rectangular and cylindrical housings, with a variety of output options. Specially coded magnets are also available, to guarantee the safety of the system, by making the sensor impossible to trip with standard magnets. Conforms to safety category 3 or 4, depending upon type.





Dupline® Fieldbus

Description	Central Unit		Input			Output		
	DIN	PCB	DIN	PCB	Other	DIN	PCB	Other
128 I/O Signals	G34900000							
128 I/O Signals & Logic	G3800x0							
Contact Signal			G50101106 G34205501	G21104401 G21205501	G88104401 G89102116	G38305543 G34301149 G34302249 G34304443		G88301143 GH34404412
NPN Signal			G34205501	G21205501		G34305511	G21305511	
PNP Signal						G34305521	G21305521	
6-265 VAC/DC			G34205502		G34305545	G34305545		
Analog 0-20 mA Signal			G34296470		G34396470			
Analog 4-20 mA Signal			G32101161 G34296470		G34396470			
Analog 0-10 VDC Signal			G34296470		G34396470			
Analog Temperature Signal			G32101111 G32101112					
Inductive Proximity Switch								
Magnetic Proximity Switch								
Passive Infrared Detector				G40855562 G41855531				
Text/Touch Display								
I/O Indicator								
PLCs & Serial Interfaces	G349600	G219600						
ProfiBus-DP Gateway	G38910020/21							
DeviceNet Gateway	G38910050							
Lonworks Gateway	G38910051							
Ethernet TCP Slave Gateway	G38910052							
Modbus Gateway	G38910053							
Modem Interface	G38910040							
Fiber Optic Interface								
Accessories	RS232-9M/9F	G34850000	D32124000			D32124000	8047-BRACKET	8047-BRACKET
DuplineSafe	G3490, G3800, G3496, G3891				GS75102101 GS75102101-1	GS38300143		

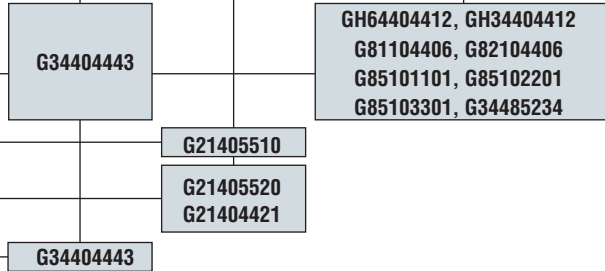


DuplineSafe

Dupline®

Fieldbus Installationbus

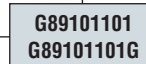
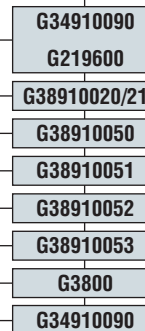
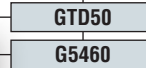
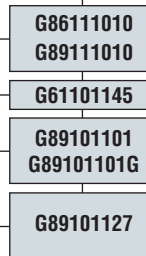
Input/Output			Sensors	Display	Interface
DIN	PCB	Other			



Dupline is a bi-directional transmission of analog and /or digital signals over a single twisted pair of wire. Extremely immune to electrical noise, up to 10 km (6 miles) distance in any number of topology system designs. Longer distances possible with the implementation of signal repeaters or modems. Communication interfaces include: DeviceNet, Profibus-Dp, LonWorks, Interbus-s, Modbus gateways, and directly mapped PLC gateways (for Mitsubishi, GE Fanuc, Siemens, Omron, LG, AB, Schneider, Koyo, Matsushita, Siemens, Toshiba, IDEC) modem interfaces (leased line, cellular, RF and microwave). Over 120,000 installations worldwide, quickly approaching one million I/O nodes.

System Accessories

GAP1605 programmer, ADAPT1605 adaptor, GTU8 tester, DT01 terminator and D3892000 repeater.



DuplineSafe is based upon Dupline fieldbus technology, a system that has been used in more than 120,000 installations worldwide in the harshest industrial environments. Up to 63 safety signals can transmit on a single 2-wire cable. Up to 5 km (3 miles) transmission distance without repeater. Approved by TUV according to EN/IEC61508-SIL3 and EN954-1 Cat. 4

The Complete Product Package



Sense

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Photoelectric Sensors
Inductive Loop Detectors
Ultrasonic Sensors
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Radar Sensors
Conductive Level Sensors
Limit Switches
Magnetic Switches



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Solid State Relays
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Solid State Contactors
Contactors and Overloads
Manual Motor Starters/Protectors
Motor Controllers
Variable Frequency Drives
Electromechanical Relays
Push Buttons and Pilot Devices



Control

Energy Management
Solar Energy Monitoring
Switching Power Supplies
Digital Panel Meters
Timers and Counters
Monitoring Controls
Temperature Controllers



Safety

Control Modules
Interlock Switches
Magnetic Sensors
Light Curtains
Mat Systems



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