CARLO GAVAZZI
Automation Components

CARLO GAVAZZI

Solutions

Automatic Doors and Access Controls

Solutions for Doors & Access controls

Roller, Shutter, Folding and Speed doors	Sectional doors, Up-and-Over doors	Gates and barriers	Pedestrian doors	Access controls

ABOUT CARLO GAVAZZI

Carlo Gavazzi Automation is a multinational electronics group active in the design, manufacture and marketing of electronic equipment targeted at the global markets of industrial and building automation.

Our history is full of firsts and our products are installed in a huge number of applications all over the world. With more than 80 years of successful operation, our experience is unparalleled.

We have our headquarters in Europe and numerous offices around the world.

Our R&D competence centres and production sites are located in Denmark, Italy, Lithuania, Malta and the People's Republic of China.

We operate worldwide through 22 of our own sales companies and also selected representatives in more than 65 countries, from the United States in the West to the Pacific Rim in the East.

Our core competence in automation spans three product lines: Sensors, Switches and Controls.

Our wide array of products includes sensors, monitoring relays, timers, energy management system, solid state relays, safety devices and fieldbus systems.

We focus our expertise on offering state-of-the-art product solutions in selected market segments.

Our customers include original equipment manufacturers of packaging machines, plastic-injection moulding machines, food and beverage production machines, conveying and material handling equipment, door and entrance control systems, lifts and escalators, as well as heating, ventilation and air-conditioning devices.

DESIGNED TO MEET MARKET REQUIREMENTS

The market for automated doors is growing and becoming more specialised. The type of product that fits best with a particular application is determined by frequency of operation, speed of operation required, new versus existing construction, traffic flow and cost.

Automatic doors are a normal feature in many commercial buildings and infrastructures such as shopping centres and airports, as well as in industrial environments such as factories and also in residential buildings.

Although they come in a variety of types, including sliding, swing, folding, up-and-over etc.; they all need to conform to the highest standards of safety.

In an industrial environment, which is the largest part of our business, automatic doors enable the set temperature in cold storage rooms to be maintained by fast opening and closing, leading to considerable energy efficiency and reduction of costs. Automated doors in commercial facilities are the preferred means of access for all users, not only people with disabilities, and are a significant aid to accessibility. Moreover, their use minimizes heat or air conditioning loss, maintaining a constant temperature and consequently saving money.

This brochure highlights the following market applications: industrial doors, garage doors, pedestrian doors, access controls, gates and barriers, intended for installation in areas where the main purpose is to give safe access for goods and accompanied vehicles, in industrial and commercial premises and in residential garages.
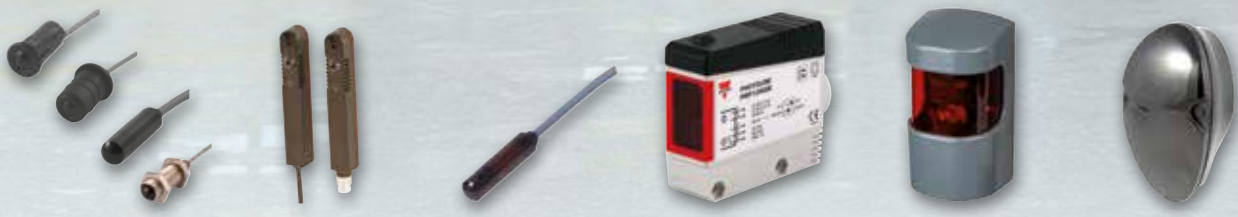
Carlo Gavazzi has developed its expertise in the Industrial Door segment of the market and our products are designed and manufactured in full compliance with both North American and European standards.

Our product families are certified to meet EN 13241-1, EN 12978, EN 12445, EN 12453 and UL 325 regulations for safety in the use of power operated doors such as industrial and garage doors and gates.

CARLO GAVAZZI Automation Components. Specifications are subject to change without notice. Illustrations are for example only.

3

Roller, Shutter, Folding and Speed doors

Photoelectric sensors	Photoelectric sensors	Photoelectric sensors	Photoelectric sensors	Photoelectric sensors	Photoelectric sensors
PB10/PE12 PB18/PA12	PD70	MOFT S142	PM	PD86HNP PD86 PD86xAP12	PD98

Automatic doors in an industrial environment need to conform to the highest standards of safety.
Carlo Gavazzi products are designed to meet the latest safety regulations for object and human presence detection.
Our sensors are typically installed in shutter, folding, speed and sectional Automatic doors in an industrial environment need to conform to the highest standards of safety.
Carlo Gavazzi products are designed to meet the latest safety regulations for object and human presence detection.
Our sensors are typically installed in shutter, folding, speed and sectional doors.
We offer the compact, powerful, polarized, retro-reflective PM.. series and the PD86 series photoelectric sensors.

These sensors are equipped with a test input that allows the user to test the sensing functions in each door cycle.
As well as the retro-reflective sensors, Carlo Gavazzi provides the long range background suppression PD112 series and the new battery-powered emitter of the PD180 series.
In door applications, where speed is important and door movements are frequent, the spiral cable between the moving door and the controller is susceptible to wear and tear.

Wireless safety system	Loop detectors	Loop detectors	Monitoring relays	Variable speed drives	Switching power supplies
WSM WSS PB11	LDP1 LDP2	LDD1 LDD2	DPA52/DPA51 DPB52/DPC01/ DPB02	RVLF	SPD

Our Wireless Safety System reduces difficult and costly repairs and avoids expensive downtime.
Moreover, this system uses 16 different channels in order to prevent cross-talk between adjacent doors.

The Wireless Safety System is very flexible and handles different safety edges such as: "Normally Closed" safety edges, "Normally Open" and 8,2 KoHm.

Precise control for the speed and positioning of the doors is ensured by using the RVLF series of Variable speed drives.

Energy savings are attained by reducing the start-up current and maintenance costs are lowered by reducing vibration during start-up.

The new LD series of loop detectors, thanks to the Automatic Sensitivity Boost (ASB) ensures a reliable detection of high bed vehicles, mainly in factories and warehouses.

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5

Sectional doors and Up-and-Over doors

Photoelectric sensors	Photoelectric sensors	Photoelectric sensors	Photoelectric sensors	Photoelectric sensors	Wireless safety system	Variable speed drives
PE12 PB18 MPF	PC50	PM	PD98	PD86 PD86HNP PD86xAP12	WSM WSS PB11	RVLF

The Carlo Gavazzi Wireless Safety System is designed to eliminate the need for traditional spiral cables between the door controller and the door. This device utilizes a bidirectional radio communication with an operating frequency of 2.4 GHz, making it less susceptible to common radio interference.

This system is compatible with a large variety of safety edges and can also be used with the Carlo Gavazzi low consumption photoelectric safety edge sensors. In door-in-door applications, the larger door has to remain shut when the pedestrian door is open. This safety function is monitored by the sub controller's door-in-door limit switch input by means of our Wireless Safety System.

To prevent a door from closing when an object is present in the doorway, we offer a variety of sensors based on through-beam detection or polarized retro-reflective types. The PD98.., PE12.. or PM.., PD86.. sensors are typical examples of sensors designed specifically for automatic doors, taking into account the viewing angles and testing requirements of Europe and North America.

Our polarized retro-reflective sensors integrate the emitter and receiver in the same unit. The emitter generates a modulated light beam, which is retro reflected - rotated 90° - and sensed by the receiver. The output changes status if an object interrupts the light reflected. To increase immunity from objects with highly reflective surfaces, the retro-reflective sensor can be equipped with polarization filters. The receiver cannot be activated by light waves reflected by a shiny surface.

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Gates and barriers

Photo-electric sensors	Photo-electric sensors	Monitoring relays	Photo-electric sensors	Wireless safety system	IO-Link inductive sensors	Loop detectors	Variable speed drives	Switching power supplies
PB10 MOFT/R + S142	PD98	DPA52/51 DPB52 DPC01 DPB02	PD140 PD180	WSM WSS PB11	ICB	LDP1/LDP2 LDD1/LDD2	RVLF	SPD

When mounting photoelectric sensors on a large gate, it is necessary to bury the cable from the control panel to the sensor. With the Carlo Gavazzi PD180 through beam sensors, this operation can be avoided, as built-in batteries in the emitter are part of the sensor set.

The compact and stylish PD98 series sensors provide a means for easy wall mounting without building the sensor into the wall. The sensing angle reduces light interference and malfunctions or disconnections are revealed.

Our new series of sensors, PD140, has been developed with regard to the latest regulations in Europe and North America. These sensors offer state-of-the-art sensing distances of up to 60 m in outdoor

applications and, with the unique green laser alignment tool, they can be installed quickly and easily.

One of the most used photoelectric sensors in large and heavy gates is the MOF+S142 system. Specifically designed for these applications this system offers compact size, durability and high detection range.

The WSM/WSS Wireless system for safety edges is also available for gates with a communication distance of 15 m. The main module can control up to 6 sub modules i.e. 12 safety edges. Separated outputs for opening and closing edges, as well as one alarm output for low battery indication.

The new LD series loop detectors offer many features designed to simplify the installation process and are also equipped with diagnostic capability to ease troubleshooting while providing a reliable and efficient vehicle detection.

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7

Pedestrian doors

Photoelectric sensors	Photoelectric sensors	Photoelectric sensors	Combined motion and presence detectors	Monitoring relays
PE12	PD112	PD70	Guardian	DPA51/DPA52 DPB52/DPC01/ DPB02

It is mandatory to protect people standing in the doorway of a pedestrian door. For this purpose, Carlo Gavazzi offers the Guardian series, a motion and presence visual sensor which monitors people approaching the entrance, giving a signal to the door controller to open/close the door. These overhead sensors combine automation and safety in both curved and straight sliding door installations. Equipped with the latest digital video camera technology, this is the only device with uni- and bi-directional modes available in one single sensor. These sensors operate either with motion zone – detecting moving objects only – and a presence

zone, detecting both movement and presence.

The Guardian series has been designed to ensure perfect door control and, at the same time, to watch over entrance and exit areas, safeguarding the people who use them. By means of the smart technology used, the Guardian series is able to ignore cross traffic and to self-adjust, according to changes in weather conditions and environment.

The Guardian series is TÜV-certified according to DIN 18650-1 (prEN 16005), EN13241-1, EN12978, EN61508, ENISO13849-1:2008. It is also cURus approved according to UL325, CSA-C22.2 no.247.

The PD70 sensor is a traditional through-beam sensor set with test input, designed to fit into the narrow aluminium profiles of pedestrian doors.

Additionally, Carlo Gavazzi offers the PD112 series, which is a 'background suppression' sensor, which is typically positioned above the door, turning its detection field down to the floor. Black object detection is assured as far as 2m, while grey and white objects are detected up to 2.5m, a record distance that places the PD112 series among the longest range background suppression sensors designed for pedestrian doors in the world.

Access controls

Photoelectric sensors	Photoelectric sensors	Photoelectric sensors	Photoelectric sensors	Inductive sensors
PB10	PE12	PD30	PC50	ICB

Access control systems are increasingly used to restrict and record unauthorized access. In optical turnstiles, photoelectric sensors detect people passing through.
In subways, security buildings and fairgrounds, access controls such as turnstiles are used in order to ensure that only people with a valid ticket can pass through the entrance.

The access control systems include up to 15 sets of photoelectric sensors for the monitoring operation.
The sensors used are retro-reflective or through-beam with invisible infrared light, in order to avoid any damage caused by vandals.

Carlo Gavazzi's PB10 and PE12 series sensors represent state-of-the-art technology in this field.
They are available in two main versions: the PE12 series (Ø12mm) with an innovative snap-in four-spring head for quick installation, and the PB10 series (Ø10mm) with a high environmental rating and a smooth cylindrical housing.

The long detecting range of the PD30 sensor also allows it to operate through dark glass, where its position can be hidden.

CARLO GAVAZZI Automation Components. Specifications are subject to change without notice. Illustrations are for example only.

9

Our product range

| Photoelectric sensors | Photoelectric sensors | Photoelectric sensors | Photoelectric sensors |

PA12

- Dimensions: M12 x 42 mm PC and stainless steel
- Power supply: 10 to 30 VDC
- Output NPN or PNP, Normally Open or Normally Closed
- Emitter with Mute Input for testing the sensor
- 20 m sensing distance

MAIN FEATURES
- Light beam approved to Safety Category 2
- UL325, UL508, EN12445, EN12453, EN12978
- Coded sensors available for less crosstalk

PB10

- Dimensions: Ø10 x 42 mm
- Power supply: 10 to 30 VDC
- Output NPN or PNP, Normally Open or Normally Closed
- Emitter with Mute Input for testing the sensor
- 20 m sensing distance

MAIN FEATURES
- Light beam approved to Safety Category 2
- UL325, UL508, EN12445, EN12453, EN12978
- Coded sensors available for less crosstalk

PB18

- Dimensions: Ø18 x 42 mm
- Power supply: 10 to 30 VDC
- Output NPN or PNP, Normally Open or Normally Closed
- Emitter with Mute Input for testing the sensor
- 15 m sensing distance

MAIN FEATURES
- Light beam approved to ESPE 2, PSPE 2, PL C
- UL325, UL508, EN12445, EN12453, EN12978
- Coded sensors available for less crosstalk

PE12

- Dimensions: Ø12 x 29 mm
- Power supply: 10 to 30 VDC
- Output NPN or PNP, Normally Open or Normally Closed
- Emitter with Mute Input for testing the sensor
- 15 m sensing distance

MAIN FEATURES
- Light beam approved to ESPE 2, PL C
- UL325, UL508, EN12445, EN12453, EN12978, EN13849-1
- Coded sensors available for less crosstalk

| Photoelectric sensors | Photoelectric sensors | Photoelectric sensors | Photoelectric sensors |

PD70

- Dimensions: 10 x 10.6 x 70 mm
- Power supply: 10 to 30 VDC
- Output NPN or PNP, Normally Open or Normally Closed
- Emitter with Mute Input for testing the sensor
- 12 m sensing distance

MAIN FEATURES
- Light beam approved to Safety Category 2
- UL325, UL508, EN12445, EN12453, EN12978
- Main application pedestrian sliding doors

PD30

- Dimensions: 10.8 x 20 x 30 mm
- Power supply: 10 to 30 VDC
- Output NPN or PNP, Normally Open or Normally Closed
- Emitter with Mute Input for testing the sensor
- Through beam and Retro-reflective sensors

MAIN FEATURES
- Light beam approved to Safety Category 2
- UL325, UL508, EN12445, EN12453, EN12978
- Visible polarized light or Infrared versions
- Used for Entrance systems

PC50

- Dimensions: 17 x 50 x 50 mm
- Power supply: 10 to 30 VDC
- Output NPN or PNP, Normally Open or Normally Closed
- Emitter with Mute Input for testing the sensor
- Through beam and Retro-reflective sensors

MAIN FEATURES
- Light beam approved to Safety Category 2
- UL325, UL508, EN12445, EN12453, EN12978
- Visible polarized light or Infrared versions

PM

- Dimensions: 25 x 65 x 81 mm
- Power supply: 24 VAC/DC
- Relay output SPST
- Emitter with Mute Input for testing the sensor
- Through beam and Polarized Retro-reflective sensors

MAIN FEATURES
- Light beam approved to Safety Category 2
- UL325, UL508, EN12445, EN12453, EN12978
- Visible polarized light or Infrared versions

Our product range

Photoelectric sensors	Photoelectric sensors	Photoelectric sensors	Photoelectric sensors

PD86 / PD86HNP / PD86xAP12

- Dimensions: 39 x 44 x 86 mm
- Power supply: 12 to 24 VAC/DC
- Relay output SPST
- Emitter with Mute Input for testing the sensor
- Polarized Retro-reflective sensors
- ZAMAK5 [PD86HNP] or Polycarbonate housing cover

MAIN FEATURES
- Light beam approved to Safety Cat. 2
- UL325, UL508, EN12445, EN12453, EN12978
- Visible polarized light, 3 detection directions
- Adjustable lenses +/- 4.5 degree horizontal and vertical [PD86xAP12]

PD98

- Dimensions: 37 x 56 x 98 mm
- Power supply: 12 to 24 VAC/DC
- Relay output SPDT
- Emitter with Mute Input for testing the sensor
- 30 m Sensing Distance

MAIN FEATURES
- Light beam approved to Safety Category 2
- UL325, UL508, EN12445, EN12453, EN12978
- Visible polarized light or Infrared versions

MPF Series

- Sensor Ø12 x 20 mm System 57 x 70 x 86 mm
- Power supply: 12 to 24 VAC/DC
- Relay output SPST
- Emitter with Mute Input for testing the sensor
- 15 m Sensing Distance

MAIN FEATURES
- Light beam approved to Safety Category 2
- UL325, UL508, EN12445, EN12453, EN12978
- Up to 3 multiplexed channels

S142 A,B or C..+ MOFT/R

- Sensor Ø10 x 42 mm System 35 x 79 x 80 mm
- Power supply: 24 VAC/DC, 115 VAC or 230 VAC
- Relay output SPDT
- Emitter with Mute Input for testing the sensor
- Up to 50 m Sensing Distance

MAIN FEATURES
- Light beam approved to Safety Category 2
- UL508, EN12445, EN12453, EN12978
- Up to 3 multiplexed channels

Photoelectric sensors	Photoelectric sensors	Photoelectric sensors	Wireless safety system

PD112

- Dimensions: 25 x 45 x 112 mm
- Power supply receiver: 10 to 30 VDC
- NPN and PNP NO or NC output
- Emitter with Mute Input for testing sensor function
- 2,5 m sensing distance

MAIN FEATURES
- Light beam approved to Safety Category 2
- UL325, UL508, EN12445, EN12453, EN12978
- Long detection range on black objects

PD140

- Dimensions: 140 x 51 x 46 mm
- Power supply: 12 to 24 V AC/DC
- Relay output: SPDT
- Mute input for sensor testing
- 60 m sensing distance

MAIN FEATURES
- Alignment help: Flashing LEDs, Voltage output and Laser Alignment tool
- ESPE category 2, Performance level d
- UL325, UL508, EN12453, EN12978

PD180

- Dimensions: 49 x 51 x 180 mm
- Power supply receiver: 12 to 24 VAC/DC Emitter Battery supply
- Relay output SPST
- Emitter with Mute Input for testing sensor function
- 30 m sensing distance

MAIN FEATURES
- Light beam approved to Safety Category 2
- UL325, UL508, EN12445, EN12453, EN12978
- Input for prolonging battery lifetime

WSM.. WSS.. PB11

- Main: 75 x 125 x 35 mm - Sub: 45 x 214 x 22 mm
- Main: 12 to 24 VAC/DC Sub: Battery supply
- SPST output for safety edge and low battery
- Emitter with Mute Input for testing the sensor
- 10 m wireless distance, 15 m for the gate version

MAIN FEATURES
- Light beam approved to Safety Category 2
- UL508, EN12445, EN12453, EN12978, FCC, IC
- Replacing wired safety solutions for doors and gates

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11

Our product range

Motion and presence sensors	Loop detectors	Loop detectors	Inductive proximity sensors

GUARDIAN1 / GUARDIAN2

- Dimensions: 58 x 77 x 210 mm
- Power supply: 12 to 24 VAC/DC
- 2 x Relay output SPST 1 A @30 VAC/DC (motion or presence)
- Easy modifying the motion zone
- 1.8 to 3 m mounting height

MAIN FEATURES
- Motion and presence sensor in one unit
- Guardian 2 can be adapted to curved sliding doors
- Vision based detection
- CE, UL325 and TÜV approved

LDP1 / LDP2

- Dimensions: 81 x 35,5 x 76,2 mm, 11 pin circular plug-in
- Wide range power supply: 24 - 240 VAC / VDC
- 2 x SPDT outputs independently selectable in pulse or presence mode
- Single loop or dual loop
- UL and CSA approved

MAIN FEATURES
- Automatic Sensitivity Boost (ASB)
- Automatic frequency channel tuning
- Multicolour LED for easy setup and intuitive diagnostics
- Selectable fail safe and fail secure mode

LDD1 / LDD2

- Dimensions: 84 x 22 x 99 mm DIN rail mounting
- Wide range power supply: 24 - 240 VAC / VDC
- 2 x SPDT outputs independently selectable in pulse or presence mode
- Single loop or dual loop
- cULus approved

MAIN FEATURES
- Automatic Sensitivity Boost (ASB)
- Automatic frequency channel tuning
- Multicolour LED for easy setup and intuitive diagnostics
- Selectable fail safe and fail secure mode

ICB12 / ICB18 / ICB30

- M12, M18 and M30 NPB housing in short or long barrel lengths
- Sensing distance from 2 up to 22 mm
- Output functions: NO or/and NC, NPN or PNP
- Two meter oil resistant PVC cable or M12 plug version
- CE, cULus, cCSAus approved

MAIN FEATURES
- High precision and reliability thanks to the microprocessor technology
- Eco-friendly potting material
- Short-circuit and overload LED indication
- Laser engraved on front cap, permanently legible

Inductive proximity sensors with IO-Link	Smart configurator for IO-Link sensors	Magnetic sensors	Limit switches

ICB12..IO / ICB18..IO / ICB30..IO

- Nickel-plated brass M12, M18 or M30 cylindrical threaded barrel housings
- Sensing distance from 4 mm to 22 mm
- Output functions: programmable NO or NC, NPN, PNP or push-pull
- Two meter oil resistant PVC cable or M12 plug version
- CE, cULus approved

MAIN FEATURES
- Operating temperature: -25°C to +70°C (-13° to +158°F), and -40°C to +70°C (-40° to +158°F) for M12-plug version
- Adjustable sensing distance and hysteresis and configurable output
- Up to 2 kHz operating frequency

SCTL55

- Handheld device for IO-Link sensors
- 5.5" HD touch screen display
- Automatic IODD file download via Wi-Fi
- High capacity rechargeable battery
- M8 3-wire, M8 4-wire and M12 connectors
- CE, FCC, IC
- IO-Link v1.1

MAIN FEATURES
- Intuitive GUI with dedicated App for a simplified user experience.
- Access to an advanced diagnostic of the sensor connected.
- Easy management of parameters such as switchpoint mode, logic and timing functions, sensing distance, output configuration (PNP/NPN/push-pull, NO/NC)

SPA1 Series

- Type: rectangular plastic housing
- Power supply: 24 VDC
- Nominal operating point: 12 mm
- One low power NC contact as a signal contact
- One high power NC contact to drive hard loads

MAIN FEATURES
- PVC cable with connector for easy and fast installation
- Relay output
- Long life contacts

PS42L

- Pollution degree 3
- Operating temperature: -25°C to +70°C (-13°F to +158°F)
- 2 output relay contacts - Normally open and Normally closed
- Degree of protection IP65
- UL, CSA approved

MAIN FEATURES
- Precise operation and consistency
- Various head types available - flexible installation
- High resistance to vibrations (25g)

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Our product range

Switching power supplies	Switching power supplies	Switching power supplies	Switching power supplies

SPD

- Output power from 5 W to 480 W
- Universal input range of 110-240 VAC, or up to 370 VDC
- Short circuit, overload and overvoltage protection
- PFC > 100 W
- CE, cULus, cURus, UL1310 Class 2 (up to 90W), ISA 12.12.1 Class I Div2, TÜV, CCC

MAIN FEATURES
- DC OK signal
- Parallel connection
- Screw, spring or detachable teminal connectors

SPDM

- Output power from 30 W to 240 W
- Universal input range of 110-240 VAC, or up to 370 VDC
- Short circuit, overload, overvoltage and over temperature protection
- Plastic and metal enclosures
- CE (all), cULus (all except 240 W) and cURus (only 120 W), UL1310 Class 2 (up to 72 W, for 72 W only for 24 VDC models)

MAIN FEATURES
- Save up to 20% panel space
- High efficiency and wide operating temperature
- Screw, spring teminal connectors

SPM

- Output power from 7.5 W to 100 W
- Universal input range of 110-240 VAC, or up to 370 VDC
- Short circuit and overload protection
- Derating starts from +60°C
- CE, cULus, cURus, UL1310 Class 2(up to 91.2 W), ISA 12.12.1 Class I Div2, TÜV

MAIN FEATURES
- UL1310 Class 2 (up to < 91W)
- Adjustable output +/- 10%
- Low voltage LED indication

SPUBC

- All-in-One: Power supply, UPS and battery charger
- 24 VDC 5 A output
- Power boost up to 2 times rated output, permanent
- Built-in battery diagnosis
- CE, cURus

MAIN FEATURES
- Independent power supply and battery charger functions
- Remote indication for battery operation and status
- "Start from battery" and "Empty battery charging" features

Switching power supplies	Switching power supplies	Variable speed drives	Timers

SPUC

- Up to 30 A UPS controller
- 12 V and 24 V versions
- Output for "Device OK", "Battery OK" and "Battery Low"
- DIN rail battery accessory up to 7.2 AH
- CE, cULus, cURus, TÜV

MAIN FEATURES
- To be used in addition with 12 V or 24 V power supply
- Replaceable 30 A fuse
- Plug and play; no settings required

SPUBAT

- Capacity from 1.2 Ah to 12 Ah
- 24 V AGM VRLA batteries
- Stainless steel construction
- Easy battery replacement
- No mounting orientation restriction

MAIN FEATURES
- Screw terminals for fast connection
- Built-in replacement fuse
- DIN rail or panel mounting

RVLF

- Compact dimensions 72 x 141 x 139 mm
- VF control and sensorless vector control
- Built-in EMI filter
- Single-phase or three-phase supply
- CE, UL, ROHS approved

MAIN FEATURES
- Ease of use, minimal settings
- PID control & torque boost capability
- Onboard protection features; e.g. stall prevention, PTC input

DAA51 / DBA52 / DMB51

- 81 x 17,5 x 67,2 mm; DIN-rail housing
- Delay on operate function [DAA], delay on release function [DBA], multifunction [DMB]
- Combined AC and DC power supply
- Repeatability: < 0.2%
- CE, UL, CSA, RINA approved [DMB51]

MAIN FEATURES
- Delay on operate/release-, interval (manual/automatic start);
- Double interval; symmetrical recycler (ON or OFF first)
- Timing range from 0.1 s to 100 h
- 5 A SPDT relay [DBA52]

Doors & Access controls

Our product range

3-phase monitoring relays	3-phase voltage asymmetry relays	Industrial relays and sockets	Industrial relays and sockets

DPA51 / DPA52

- 81 x 17.5 x 67.2 mm; DIN-rail housing
- Phase sequence and phase loss, regenerated voltage detection
- 3 phase AC (own power supply)
- Power supply 208 - 480 VAC
- CE, UL, CSA and CCC

DPB02 /PPB02

- 80 x 22.5 x 99.5 mm; DIN-rail housing [DPB02] or 80 x 36 x 94 mm; Plug-in housing [PPB02]
- Phase sequence and phase loss, regenerated voltage detection
- Monitoring 3-phase voltage asymmetry
- Power supply 208 to 480 VAC
- CE, UL, cULus and CCC

RMIA

- 2 or 4 poles
- 2CO (10 A) or 4CO (5 A) contacts
- DC Coil from 12 VDC to 110 VDC
- AC Coil from 12 VAC to 230 VAC
- IP40 Ingress protection

RSLM

- SPST or SPDT option
- Contract rating for 6 A, 250 VAC/30 VDC
- Coil voltage from 12 VDC to 60 VDC
- Built-in battery diagnosis
- VDE, CQC, cURus, CSA approved

MAIN FEATURES
- Motors protection from reverse running and phase loss
- 1 DIN module width. Suitable for NORM panels
- No setup needed (plug&play)

MAIN FEATURES
- Asymmetry setpoint with Alarm ON delay
- Protects from motor overheat and loss of torque
- Flexible mounting for DIN-rail or Plug-in

MAIN FEATURES
- High switching power
- Long life span
- Comes with LED and Test button

MAIN FEATURES
- 5 mm ultra slim width
- DIN rail mount [ZRLS socket] or PCB mount [ZRLP]
- Surge voltage of up to 6 kV

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