



## **Solutions**

**Automatic Doors,  
Access Controls and Carparks**

# Doors & Access controls

## Solutions for



**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 four product lines: Sensors, Switches, Controls and Fieldbuses.

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 airconditioning 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.

A further solution that Carlo Gavazzi can provide is the Parking Guidance System, by means of which more convenience for drivers is assured, along with considerable cost savings to the car park owner.

# Doors & Access controls

## Roller, Shutter, Folding and Speed doors



### Photoelectric sensors

**PB10/PE12  
PB18/PA12**

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

### Photoelectric sensors

**PD70**

shutter, folding, speed and sectional doors.

We offer the compact, powerful, polarized, retro-reflective PM.. series and the newly developed PD86 series photoelectric sensors.

These sensors are equipped with a test input that allows the user to test the

### Photoelectric sensors

**MOFT  
S142**

### Photoelectric sensors

**PM**

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.

### Photoelectric sensors

**PD86HNP  
PD86**

For trouble-free opening of all types of industrial automatic doors, Carlo Gavazzi offers the digital, unidirectional, long range motion radar sensor, IRS series, operating in the K-band (24.125GHz).

The IRS sensor can be adapted to any application and can also be set up and controlled by infrared remote control.





**Photoelectric sensors**

**Industrial radar sensors**

**Monitoring relays**

**Wireless safety system**

**Loop detectors**

**Variable speed drives**

**PD98**

**IRS**

**DIB02/DPA51  
DPC01/MI/MP/  
DPB02**

**WSM  
WSS  
PB11**

**LDP**

**RVLF**

It can be mounted at a height of up to 7 m (23') for detection of vehicles or people, entering or exiting.

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.

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.

Our energy saving photoelectric sensors are mounted inside the rubber profile.

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.



# Doors & Access controls

## Sectional doors and Up-and-Over doors



**Photoelectric sensors**

**PE12  
PB18  
MPF**

**Photoelectric sensors**

**PC50**

**Photoelectric sensors**

**PM**

**Photoelectric sensors**

**PD98**

**Photoelectric sensors**

**PD86  
PD86HNP**

**Wireless safety system**

**WSM  
WSS  
PB11**

**Variable speed drives**

**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.



# Gates and barriers



Photoelectric sensors	Photoelectric sensors	Monitoring relays	Photoelectric sensors	Wireless safety system	Inductive sensors	Loop detectors	Variable speed drives
<b>PB10 MOFT/R + S142</b>	<b>PD98</b>	<b>DIB02/DPA51 DPC01/MI/ MP/DPB02</b>	<b>PD140 PD180</b>	<b>WSM WSS PB11</b>	<b>ICB</b>	<b>LDP</b>	<b>RVLF</b>

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.

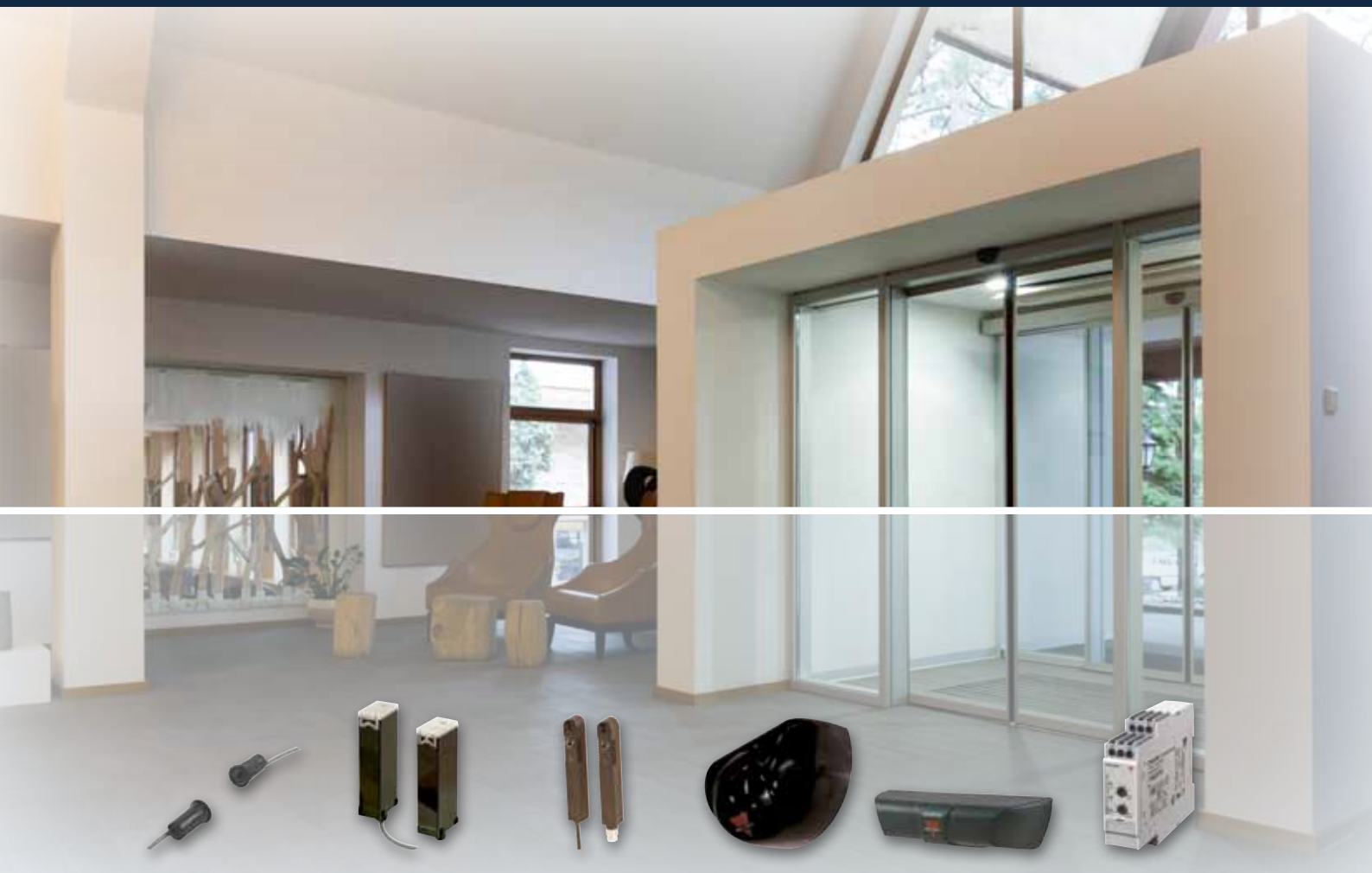


The WSM/WSS Wireless system for safety edges is also available for gates with a communication distance of 15 m. The main module can control up to 6 sub modules i.e. 12 safety edges.

Separated outputs for opening and closing edges, as well as one alarm output for low battery indication.

# Doors & Access controls

## Pedestrian doors



**Photoelectric sensors**

**PE12**

**Photoelectric sensors**

**PD112**

**Photoelectric sensors**

**PD70**

**Motion radar sensors**

**RAD**

**Combined motion and presence detectors**

**Guardian**

**Monitoring relays**

**DIB02/DPA51  
DPC01/MI/MP/  
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 and form a complete detecting package for doors in combination with our radar sensors, bi-directional RAD01 or uni-directional RAD02. 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**

**PB10**

**Photoelectric sensors**

**PE12**

**Photoelectric sensors**

**PD30**

**Photoelectric sensors**

**PC50**

**Inductive sensors**

**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.

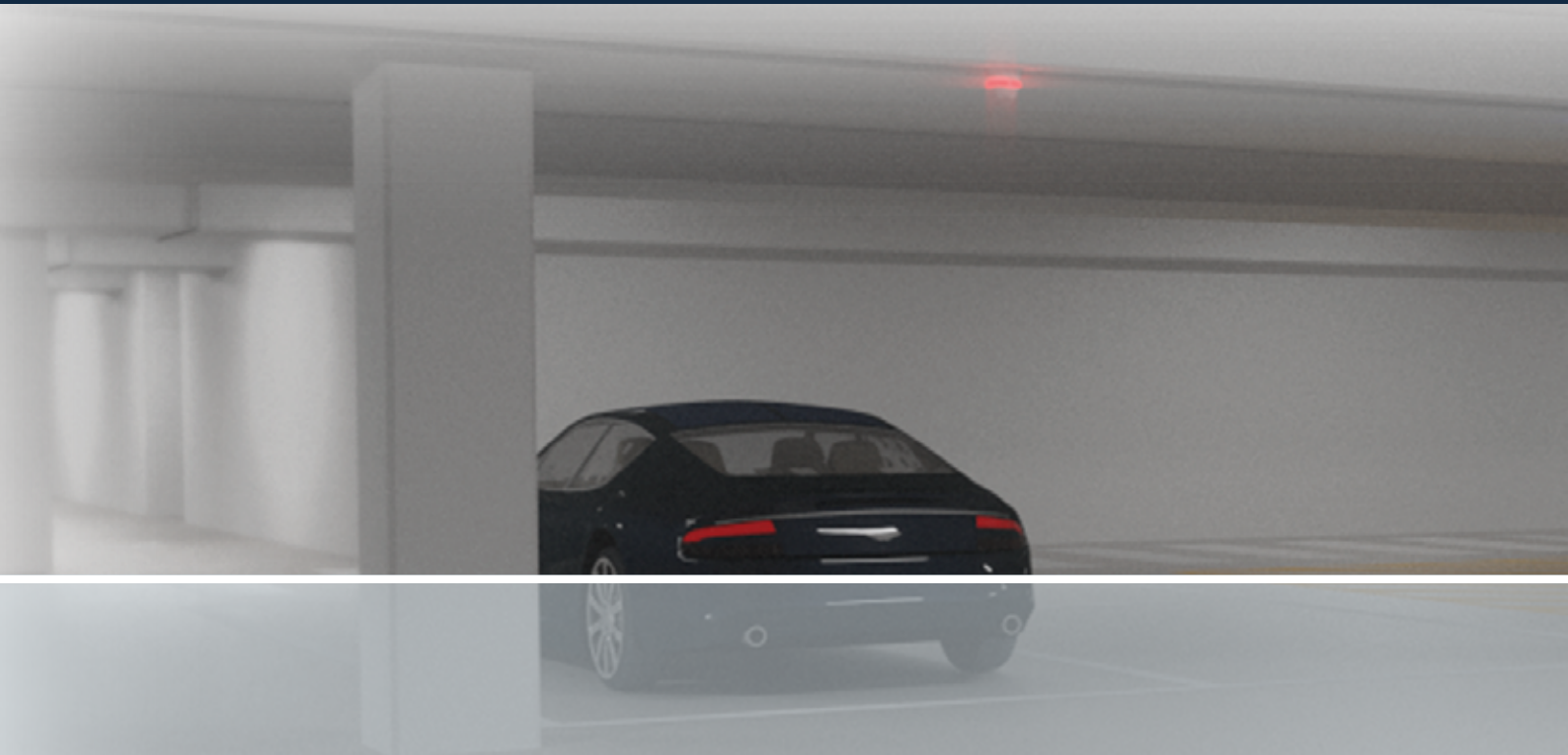
They are available in two main versions: the PE12 series (Ø12mm) with an innovative snap-in four-spring head for quick installation, and the PB10 series (Ø10mm) with a high environmental rating and a smooth cylindrical housing.

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



# Doors & Access controls

## Our expertise in Parking Guidance System



**45° ultrasonic sensors**

**SBPSUSL45**



**360° LED indicators**

**SBPILED**



**Carpark displays**

**SBPDISxxxx**



**Carpark controller**

**SBPWEB24**

The Carpark system is based on Carlo Gavazzi's expertise in sensing and communications technology within the industrial automation market.

Our patented Dupline® 3-wire bus forms part of a tried and tested network, with more than 150,000 installations worldwide.

The system is completely scalable and can be used in any type and size of indoor carpark. In spite of its advanced functions, the system is easy to install and configure, allowing detection, counting and indication of vacant spaces.

By means of signs with directional arrows and LED indicators, drivers are guided to the closest vacant parking

bay, resulting in considerable time saving, especially if only few spaces are vacant.

Our Parking Guidance System not only provides drivers with more convenience and less stress, but by monitoring the whole situation of the parking area it increases efficiency

in car flow, reducing energy costs. Cars can be directed to pre-selected areas of the carpark, while the system ensures that lighting and ventilation systems are disabled in unoccupied zones.

Carlo Gavazzi's product range for carpark systems, in addition to the





**Carpark  
master generator**

**SBP2MCG324**



**Carpark  
server**

**SBP2CPY24**



**Carpark  
display interface**

**SBP2DI48524**

controller, sensors, LED indicators and displays, also includes products for smart building functions.

A unique feature of the system is the possibility to integrate control of lighting and ventilation into the same structure.

Lighting and ventilation are the

two biggest energy consumers in a carpark, and often they are simply left ON continuously.

By using demand-based control functions, where lighting and ventilation are switched on when needed, significant savings can be achieved.

By means of its built-in BACnet communication capability, the controller can be seamlessly integrated into any Building Management System.

Loop detectors are also part of Carlo Gavazzi's product range for Carparks. Based on an inductive measurement principle, a coil of wire is buried in the ground, detecting cars driving over it. Typically it is installed in the ground in front of a security entry gate or to detect the occupancy of outdoor parking bays.



# Doors & Access controls

## Our product range

### 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

### Photoelectric sensors



#### 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

### Photoelectric sensors



#### 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, PLC
- UL325, UL508, EN12445, EN12453, EN12978
- Coded sensors available for less crosstalk

### Photoelectric sensors



#### 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, PLC
- UL325, UL508, EN12445, EN12453, EN12978, EN13849-1
- Coded sensors available for less crosstalk

### 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

### Photoelectric sensors



#### 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 Infra red versions
- Used for Entrance systems

### Photoelectric sensors



#### 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 Infra red versions

### Photoelectric sensors



#### PM

- Dimensions: 17 x 50 x 50 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
 <p><b>PD86 / PD86HNP</b></p> <ul style="list-style-type: none"> <li>• Dimensions: 39 x 46 x 86 mm</li> <li>• Power supply: 12 to 24 VAC/DC</li> <li>• Relay output SPST</li> <li>• Emitter with Mute Input for testing the sensor</li> <li>• Polarized Retro-reflective sensors</li> <li>• ZAMAK5 metal housing cover (PD86HNP)</li> </ul> <p><b>MAIN FEATURES</b></p> <ul style="list-style-type: none"> <li>• Light beam approved to Safety Category 2</li> <li>• UL325, UL508, EN12445, EN12453, EN12978</li> <li>• Visible polarized light, 3 detection directions</li> </ul>	 <p><b>PD98</b></p> <ul style="list-style-type: none"> <li>• Dimensions: 37 x 56 x 98 mm</li> <li>• Power supply: 12 to 24 VAC/DC</li> <li>• Relay output SPDT</li> <li>• Emitter with Mute Input for testing the sensor</li> <li>• 30 m Sensing Distance</li> </ul> <p><b>MAIN FEATURES</b></p> <ul style="list-style-type: none"> <li>• Light beam approved to Safety Category 2</li> <li>• UL325, UL508, EN12445, EN12453, EN12978</li> <li>• Visible polarized light or Infrared versions</li> </ul>	 <p><b>MPF Series</b></p> <ul style="list-style-type: none"> <li>• Sensor Ø12 x 20 mm</li> <li>• System 57 x 70 x 86 mm</li> <li>• Power supply: 12 to 24 VAC/DC</li> <li>• Relay output SPST</li> <li>• Emitter with Mute Input for testing the sensor</li> <li>• 15 m Sensing Distance</li> </ul> <p><b>MAIN FEATURES</b></p> <ul style="list-style-type: none"> <li>• Light beam approved to Safety Category 2</li> <li>• UL325, UL508, EN12445, EN12453, EN12978</li> <li>• Up to 3 multiplexed channels</li> </ul>	 <p><b>S142 A,B or C...+ MOFT/R</b></p> <ul style="list-style-type: none"> <li>• Sensor Ø10 x 42 mm</li> <li>• System 35 x 79 x 80 mm</li> <li>• Power supply: 24 VAC/DC, 115 VAC or 230 VAC</li> <li>• Relay output SPDT</li> <li>• Emitter with Mute Input for testing the sensor</li> <li>• Up to 50 m Sensing Distance</li> </ul> <p><b>MAIN FEATURES</b></p> <ul style="list-style-type: none"> <li>• Light beam approved to Safety Category 2</li> <li>• UL508, EN12445, EN12453, EN12978</li> <li>• Up to 3 multiplexed channels</li> </ul>
 <p><b>PD112</b></p> <ul style="list-style-type: none"> <li>• Dimensions: 25 x 45 x 112 mm</li> <li>• Power supply receiver: 10 to 30 VDC</li> <li>• NPN and PNP NO or NC output</li> <li>• Emitter with Mute Input for testing sensor function</li> <li>• 2,5 m sensing distance</li> </ul> <p><b>MAIN FEATURES</b></p> <ul style="list-style-type: none"> <li>• Light beam approved to Safety Category 2</li> <li>• UL325, UL508, EN12445, EN12453, EN12978</li> <li>• Long detection range on black objects</li> </ul>	 <p><b>PD140</b></p> <ul style="list-style-type: none"> <li>• Dimensions: 140 x 51 x 46 mm</li> <li>• Power supply: 12 to 24 V AC/DC</li> <li>• Relay output: SPDT</li> <li>• Mute input for sensor testing</li> <li>• 60 m sensing distance</li> </ul> <p><b>MAIN FEATURES</b></p> <ul style="list-style-type: none"> <li>• Alignment help: Flashing LEDs, Voltage output and Laser Alignment tool</li> <li>• ESPE category 2, Performance level d</li> <li>• UL325, UL508, EN12453, EN12978</li> </ul>	 <p><b>PD180</b></p> <ul style="list-style-type: none"> <li>• Dimensions: 49 x 51 x 180 mm</li> <li>• Power supply receiver: 12 to 24 VAC/DC Emitter Battery supply</li> <li>• Relay output SPST</li> <li>• Emitter with Mute Input for testing sensor function</li> <li>• 30 m sensing distance</li> </ul> <p><b>MAIN FEATURES</b></p> <ul style="list-style-type: none"> <li>• Light beam approved to Safety Category 2</li> <li>• UL325, UL508, EN12445, EN12453, EN12978</li> <li>• Input for prolonging battery lifetime</li> </ul>	 <p><b>WSM.. WSS.. PB11</b></p> <ul style="list-style-type: none"> <li>• Main: 75 x 125 x 35 mm - Sub: 45 x 214 x 22 mm</li> <li>• Main: 12 to 24 VAC/DC Sub: Battery supply</li> <li>• SPST output for safety edge and low battery</li> <li>• Emitter with Mute Input for testing the sensor</li> <li>• 10 m wireless distance, 15 m for the gate version</li> </ul> <p><b>MAIN FEATURES</b></p> <ul style="list-style-type: none"> <li>• Light beam approved to Safety Category 2</li> <li>• UL508, EN12445, EN12453, EN12978, FCC, IC</li> <li>• Replacing wired safety solutions for doors and gates</li> </ul>

# Doors & Access controls

## Our product range

### Industrial radar sensors



#### IRS Series

- Dimensions: 92 x 188 x 188 mm
- Power supply: 12 to 24 VAC/DC
- 2 x Relay output SPST 1 A @30 VAC/DC
- Control, pushbuttons or remote control
- 2,5 to 7 m mounting height

#### MAIN FEATURES

- Uni or Bi-direction detection
- Person or vehicle differentiation
- Approvals: FCC, R&TTE, cURus
- IP65

### Motion radar sensors



#### RAD01 / RAD02

- Dimensions: 80 x 35 x 118 mm
- Power supply: 12 to 24 VAC/DC
- Relay output SPST 1 A @30 VAC/DC
- Control, pushbuttons or remote control
- 4 m mounting height

#### MAIN FEATURES

- Uni "01" or Bi-direction "02" detection versions
- Approvals: FCC, R&TTE, cURus
- IP54

### Motion and presence 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

### Inductive proximity sensors



#### ICB12 / ICB18 / ICB30

- M12, M18 and M30 Nickel-brass housing in short or long barrel lengths
- Standard, double and triple distance sensing ranges
- Output functions: NO or NC, NPN or PNP
- Two meter oil resistant PVC cable or M12 plug version
- Protection: reverse polarity, short circuit, transients

#### MAIN FEATURES

- High precision and programmable outputs thanks to the microprocessor technology
- Eco-friendly potting material made from recycled corn by-product
- Laser engraved information on the front cap, permanently legible

### Loop detectors



#### LDP1 / LDP2

- Dimensions: 35 x 80 x 63 mm, 11 pin circular plug
- Power Supply: 24 VAC/VDC, 115 VAC, 230 VAC
- Two relay outputs: car presence and pulse output for car leaving/entering
- Single Loop or Dual Loop
- Direction logic – only LDP2

#### MAIN FEATURES

- Automatic calibration with quick and easy setup of sensitivity
- Manual sensitivity for compensations of variations
- Selectable frequency to prevent cross-talk

### Magnetic sensors



#### 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

### 1-phase DIN-rail power supplies



#### SPD

- Output power from 5 W to 480 W
- Input 110/240 VAC single phase and DC
- Short circuit, overload and overvoltage protection
- PFC >100 W
- UL 1310 Class 2 output up to 90 W
- cULus, TUV and CCC approved

#### MAIN FEATURES

- Power supply OK output
- Parallel connection feature
- Spring, screw terminals or detachable connectors

### Metal enclosed power supplies



#### SPPC

- Output power from 15 W to 800 W
- Input 110/240 VAC single phase
- Short circuit, overload and overvoltage protection
- PFC function available >75 W
- UL and CE approved

#### MAIN FEATURES

- Adjustable output +/- 10%
- Compact dimensions
- Wide operating temperature range up to 70°C

# Our product range

## Low profile DIN-rail power supplies



### SPM

- Output power from 7.5 W to 100 W
- Input 110 / 240 V single phase and DC 120 to 370 V
- Short circuit, overload protection
- From -25 to +60°C operation w/out derating
- cULus, TUV and CCC approved

#### MAIN FEATURES

- UL 1310 Class 2 output < 91 W
- Adjustable output +/- 10%
- Low voltage LED indication

## UPS controllers



### SPUC

- Up to 30 A UPS controller
- 12 V and 24 V versions
- Outputs for Device OK, Battery OK and battery Low.
- DIN rail battery accessory available up to 7.2 A/h
- CE and UL approved

#### MAIN FEATURES

- To be used in addition with 12 or 24 V power supply
- Front 30 A replaceable fuse
- Plug and play: no settings needed

## Smart UPS



### SPUBC

- Power supply, UPS and battery charger "All in one"
- 24 VDC 5 A output
- Power boost up to 2 times rated output, permanent.
- Built-in battery diagnosis
- CE and UL approved

#### MAIN FEATURES

- Power supply independent from charger.
- Remote indication for battery operation and battery low
- "Start from battery" and "Empty battery charging" features

## Battery rack



### SPUBAT

- Capacity from 1,2 Ah to 12 Ah
- 24 V AGM VRLA batteries
- Stainless steel construction
- Easy battery replacement
- No mounting position restriction

#### MAIN FEATURES

- Screw connection terminals for fast connection
- Built In replaceable fuse
- DIN Rail or Panel mounting facility

## Compact DIN rail power supplies



### SPDM 120W

- 120 W Output Power
- 45 mm width, compactness
- 88% maximum efficiency
- Operating temp from -20 to +70°C
- Universal input 90 VAC ~ 264 VAC / 127 VDC ~ 370 VDC

#### MAIN FEATURES

- Metal enclosure
- DC OK LED indication
- 3 screw terminals each output pole

## Compact DIN rail power supplies



### SPDC 120W

- 12 or 24 VDC, 120 W Output
- 32 mm width, high compactness
- 91% maximum efficiency
- Operating temp from -25 to +70°C
- Universal input 90 VAC ~ 264 VAC / 127 VDC ~ 370 VDC

#### MAIN FEATURES

- DC OK relay output and LED indication
- PFC
- Parallel connection selection switch

## Compact DIN rail power supplies



### SPDC 240W

- 24 VDC, 240 W Output
- 45 mm width, high compactness
- 94% maximum efficiency
- Operating temp from -25 to +70°C
- Universal input 90 VAC ~ 264 VAC / 127 VDC ~ 370 VDC

#### MAIN FEATURES

- DC OK relay output and LED indication
- PFC > 0.95
- Parallel connection selection switch

## Low profile DIN battery charger



### SPM5BC

- 12 V or 24 V output
- Universal 90 VAC to 264 VAC
- Short circuit and battery polarity protection
- -25°C to +60°C operation w/out derating
- cURus and CE approved

#### MAIN FEATURES

- 30 W or 60 W (Max Battery: 45 Ah@12V or 25 Ah @ 24V)
- DC OK relay output
- Battery OK/ Fail LED

# Doors & Access controls

## Our product range

### 45° ultrasonic sensors



#### SBPSUSL45

- Ultrasonic sensor with 45° detection angle
- Built-in bright RGB LEDs with 360° indication
- Base holders for cable tray, ceiling and pipe mounting
- Dupline® 3-wire bus-powered
- Dimensions: Ø 116 x 76 mm

#### MAIN FEATURES

- Sensor and indicator in one unit
- Mounting at space entry to achieve optimum visibility
- Highbright multi-colour RGB LED's

### Vertical ultrasonic sensors



#### SBPSUSL

- Vertical sensor to be mounted directly above the car
- Built-in bright RGB LEDs with 360° indication
- Base holders for cable tray, ceiling and pipe mounting
- Dupline® 3-wire bus-powered
- Dimensions: Ø 116 x 76 mm

#### MAIN FEATURES

- Wide tolerance for mounting position
- Mounting on cable tray, ceiling or pipe
- Operates with external RGB LED indicator

### Vertical ultrasonic counting sensors



#### SBPSUSCNT

- Vertical sensor to be mounted in the driving lane for counting
- Fast reaction time to detect moving cars up to 20 km/h
- Base holders for cable tray, ceiling and pipe mounting
- Dupline® 3-wire bus-powered
- Dimensions: Ø 116 x 76 mm

#### MAIN FEATURES

- Detection of moving cars up to 20 km/h speed
- Mounting on cable tray, ceiling or pipe
- Easy installation and commissioning

### 360° LED indicators



#### SBPILED

- LED indicator to be mounted outside the parking space
- Multi-colour bright RGB LEDs with 360° indication
- Base holders for cable tray, ceiling and pipe mounting
- Dupline® 3-wire bus-powered
- Dimensions: Ø 116 x 76 mm

#### MAIN FEATURES

- High visibility of bright multi-colour RGB LED's
- 360° visibility
- Mounting on cable tray, ceiling or pipe

### Sensors base holders



#### SBPBASEA / SBPBASEB

- Base holders for Carpark sensors and LED indicators
- To be mounted on rail, ceiling or pipe/tube/conduit
- Dimensions: Ø 116 x 24 mm (type A) / Ø 116 x 44 mm (type B)
- Wire terminals built into base holder for easy change of sensor
- On-board address chip with SIN code

#### MAIN FEATURES

- Flexible mounting options for rail, ceiling or pipe/tube/conduit
- Spring terminals and chip with SIN-address integrated
- Rugged and robust housing

### Carpark master generator



#### SBP2MCG324

- Generator of power and Dupline® bus communication on 3 wire
- Connected as a slave to the Carpark controller SBP2WEB24
- Connects up to 90 Carpark sensors via Dupline® 3-wire bus
- Powered from 28 VDC
- Dimensions: 2-DIN module

#### MAIN FEATURES

- Provides sensors and indicators with power and communication
- Provides power and communication for up to 90 ultrasonic sensors
- Compact DIN-rail housing

### Carpark controller



#### SBP2WEB24

- Parking guidance, carpark management and smart building controls in one unit
- Seamless integration with BMS through BACnet/IP
- Built-in webserver with user interface for carpark management software
- Powered from 24 VDC
- Dimension: 2-DIN module

#### MAIN FEATURES

- Integrated parking guidance, carpark management and energy savings
- Easy and fast commissioning through central PC-based tool

### Carpark server



#### SBP2CPY24

- Carpark server with capability of linking up to 10 SBP2WEB24 together
- Built-in webserver with user interface for carpark management software
- Data export in excel format
- Powered from 24 VDC
- Dimension: 2-DIN module

#### MAIN FEATURES

- Enables parking guidance solutions for very large carparks
- Built-in webserver with user interface for carpark management software
- Easy and fast commissioning through central PC-based tool

# Our product range

Carpark display interface	Carpark displays with symbols+digits	Carpark displays with digits	Carpark displays with digits
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**SBP2DI48524**

- Interface between the Dupline® bus and display
- Modbus RS485 serial connection to the display
- LEDs for indication of communication status
- Powered from 24 VDC
- Dimension: 2-DIN module

**MAIN FEATURES**

- Provides link between the Dupline® bus and display
- Compact 2-DIN housing suitable for decentral installation
- Easy and fast commissioning through central PC-based tool



**SBPDISxxxx**

- Displays with green arrow/red cross for guiding the drivers
- Available with 0-3 digits for vacant space number indication
- Optional blue sign for disabled parking
- Automatic brightness control for high visibility
- Powered from 24 VDC

**MAIN FEATURES**

- High visibility from more than 50m of distance
- Automatic adjustment of brightness according to surroundings lux level
- Indoor and outdoor use



**SBPDISx**

- Displays with 2 to 4 digits to show number of vacant spaces for an area
- Bright white LED digits
- Same display for indoor/outdoor
- Automatic brightness control for high visibility
- Powered from 24 VDC

**MAIN FEATURES**

- High visibility from more than 50 m of distance
- Automatic adjustment of brightness according to surroundings lux level
- Indoor and outdoor use



**SBPDIS9**

- Display with 9 character matrix with clear white LEDs
- Automatic brightness control for high visibility
- Dimensions: 215 x 950 x 45 mm
- Powered from 24 VDC

**MAIN FEATURES**

- Combines text and digits
- High visibility from more than 50 m of distance
- Automatic adjustment of brightness according to surroundings lux level
- Indoor and outdoor use

Limit switches	3-phase monitoring relays	3-phase over/under monitoring relays	3-phase over/under monitoring relays
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**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)



**DPA51**

- Dimensions: 81 x 17,5 x 67,2 mm DIN-rail housing
- Phase sequence and loss relay
- 3 phase AC (own power supply); regenerated voltage
- Power supply from 208 to 480 VAC (+/- 15%)
- UL, CSA and CCC approved

**MAIN FEATURES**

- Compressors protection from reverse running and phase loss
- 17.5 mm width: the smallest in the market
- Plug and play: no settings needed



**DPB02 / PPB02**

- 22,5 DIN (DPB02) or 35 mm Plug in (PPB02)
- Phase sequence and loss relay
- 3 phase asymmetry control
- Adjustable delay
- UL, CSA and CCC approved

**MAIN FEATURES**

- Motors protection from reverse running and wrong voltage symmetry
- Enhances motor lifetime
- No power supply needed, measure is made on supply voltage



**DPD**

- 22,5 mm DIN rail mounting Enclosure
- 120 VAC to 480 VAC Delta & Star mains
- Voltage and frequency monitoring
- 2 SPDT 8 A relay outputs
- NFC programming
- UL, CSA and CCC approved

**MAIN FEATURES**

- Up to 10 configurable setpoints
- Apps for Android and Windows PC programming

# Doors & Access controls

## Our product range

### Current monitoring relays



#### DIB02 / PIB02

- Dimensions: 22,5 mm for DIN (DIB) or 35,5 for Plug in (PIB)
- Overcurrent or undercurrent detection
- DC current measurement by means of external Shunt
- Power supply: 115/230 VAC, 24/48 VAC, 24 VDC, 48 VDC
- Adjustable time delay

#### MAIN FEATURES

- Motors protection from Overload
- DC or AC current measurement
- three phase overcurrent measurement with MP3 CT

### Motor thermistor relays



#### DTA71 / DTA72

- 35 mm Mini-DIN housing
- Motor thermistor relay
- PTC Open and PTC Short detection
- Universal power supply from 24 V to 240 VAC/DC
- UL and CE approved

#### MAIN FEATURES

- Multicolour LED with alarm discrimination
- Auto or manual, local or remote reset, test function (DTA72)
- Ready for reset function (DTA72)

### Timers



#### DMB51

- Dimensions: 81x17,5x67,2 mm DIN-rail housing
- Delay on operate function (DAA), multifunction (DMB)
- Combined AC and DC power supply
- Repeatability : <0.2%
- UL, CSA, RINA approved

#### MAIN FEATURES

- Delay on operate/release-, interval (manual/automatic start);
- Double interval; symmetrical recycler (ON or OFF first)
- Timing range from 0.1s to 100h

### AC Surge arresters



#### DSF

- Dimensions depending to modules according to DIN standard
- Suitable for all 1- and 3-phase utilities
- Available for MCOV 300 V, 385 V, 460 V and 550 V
- 20 kA Inom, 40 kA Imax per pole
- CE, UL and CSA approved
- Category IEC / EN Class II / Type 2

#### MAIN FEATURES

- Optional remote monitoring contact
- Patented topology, no backup fuse required
- Socket with replaceable cartridge

### AC Surge arresters



#### DSB

- Dimensions depending to modules according to DIN standard
- Suitable for all 1- and 3-phase utilities
- Available for 275 V, 385 V e 440 V
- 20 kA Inom, 40 kA Imax per pole
- CE approved
- Category IEC / EN Class II / Type 2

#### MAIN FEATURES

- Optional remote monitoring contact
- 4 MOVs or 3 MOVs + 1 GDT topology
- Socket with replaceable cartridge

### Variable speed drives



#### 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; eg. stall prevention, PTC input

### Industrial relays



#### RMI ...

- 2 or 4 poles
- Max load: 5 A (4 poles) 10 A (2 poles) / 250 VAC
- DC coils: 6 ÷ 110 VDC
- AC coils: 6 ÷ 230 VAC
- Degree of protection IP40

#### MAIN FEATURES

- High switching power
- Long life (minimum 100.000 electrical ops.)
- Standard with LED, push with arm and flag

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