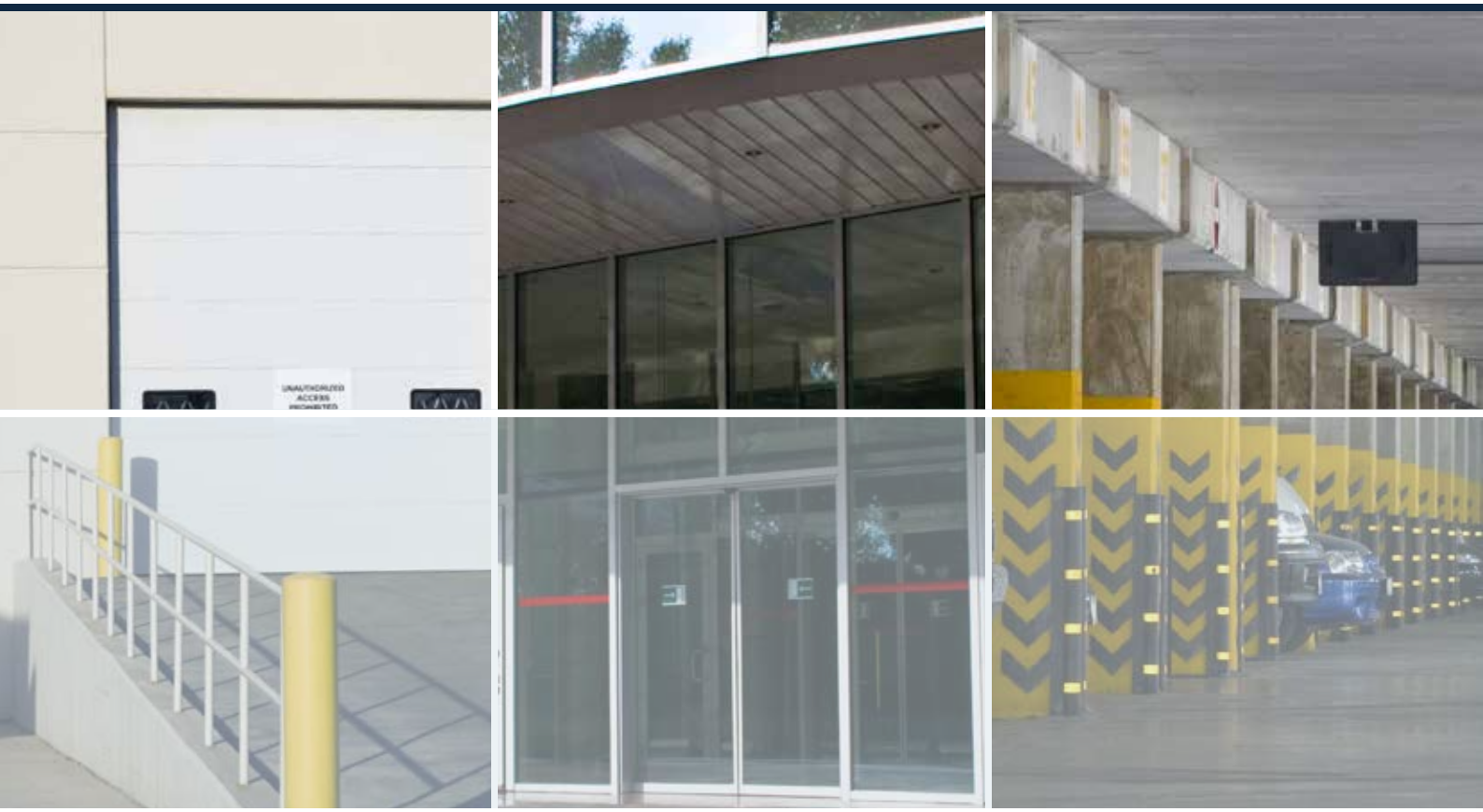
CARLO GAVAZZI
Automation Components

CARLO GAVAZZI



Solutions

Automatic Doors, Access Controls and Carparks

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.

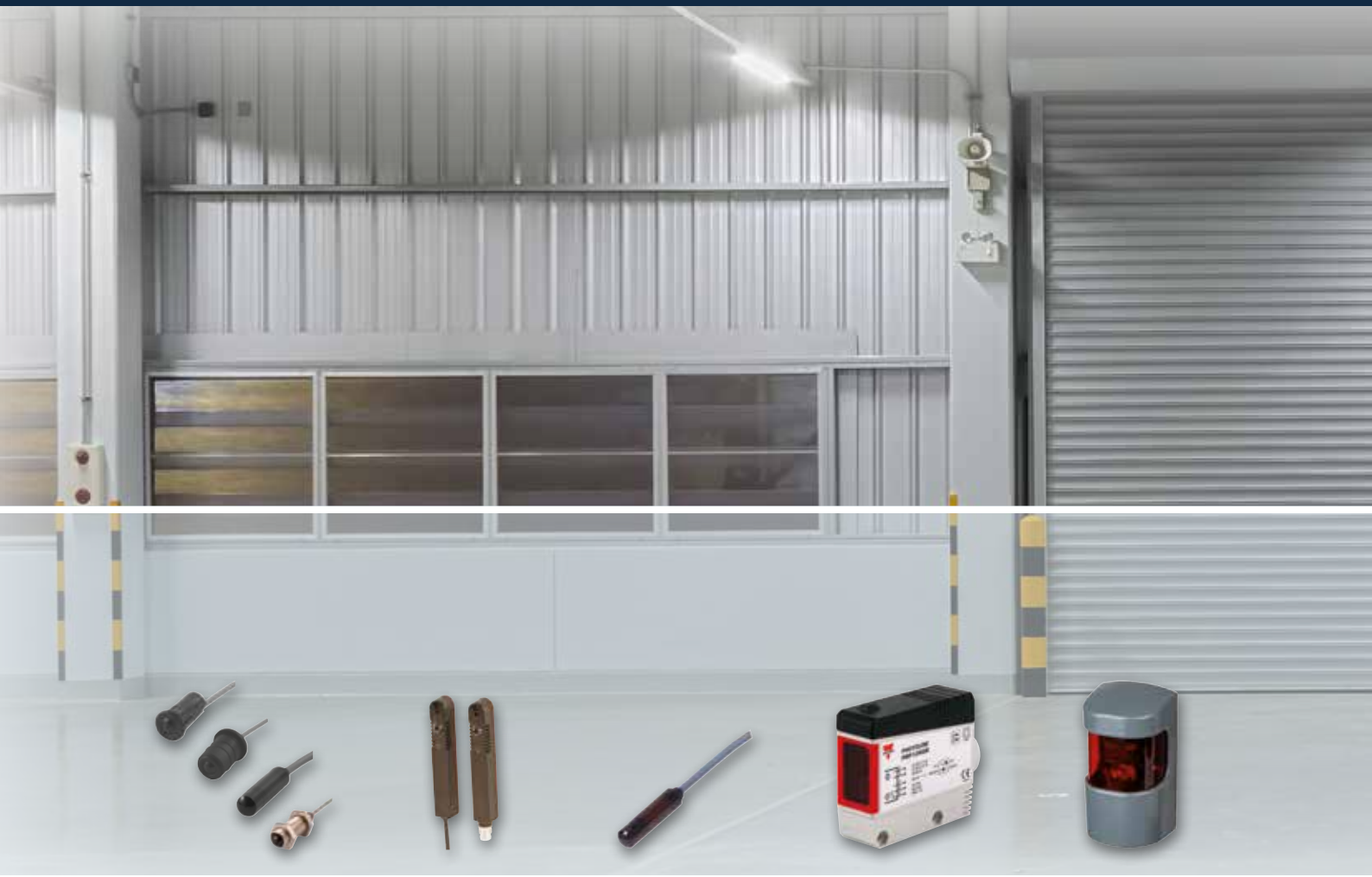
Our customers include original equipment manufacturers of packaging machines, plastic-injection moulding machines, food and beverage production machines, conveying and material handling equipment, door and entrance control systems, lifts and escalators, as well as heating, ventilation and air-conditioning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

Roller, Shutter, Folding and Speed doors



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

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.
Our Wireless Safety System reduces difficult and costly repairs and avoids

Photoelectric sensors	Earth leakage relays	Monitoring relays	Wireless safety system	Loop detectors	Variable speed drives
PD98	DEA71 DEB71 CTG	DIB02/DPA51 DPC01/MI/MP/ DPB02	WSM WSS PB11	LDP	RVLF

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 brand new DEA71 and DEB71 - modular residual current devices - protect electric installations against the risk of fire or electrocution of people, in case of insulation failure.
They are able to detect a leak of current to the Protective Earth by means of the external Core Balance Current Transformer (CTG), provide a warning signal at 60% and trip the MCB, through the relay output, when the leakage exceeds 80% of the set fault current.

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.

Gates and barriers

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

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.

Pedestrian doors

Photoelectric sensors	Photoelectric sensors	Photoelectric sensors	Earth leakage relays	Combined motion and presence detectors	Monitoring relays
PE12	PD112	PD70	DEB71 DEA71 CTG	Guardian	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.

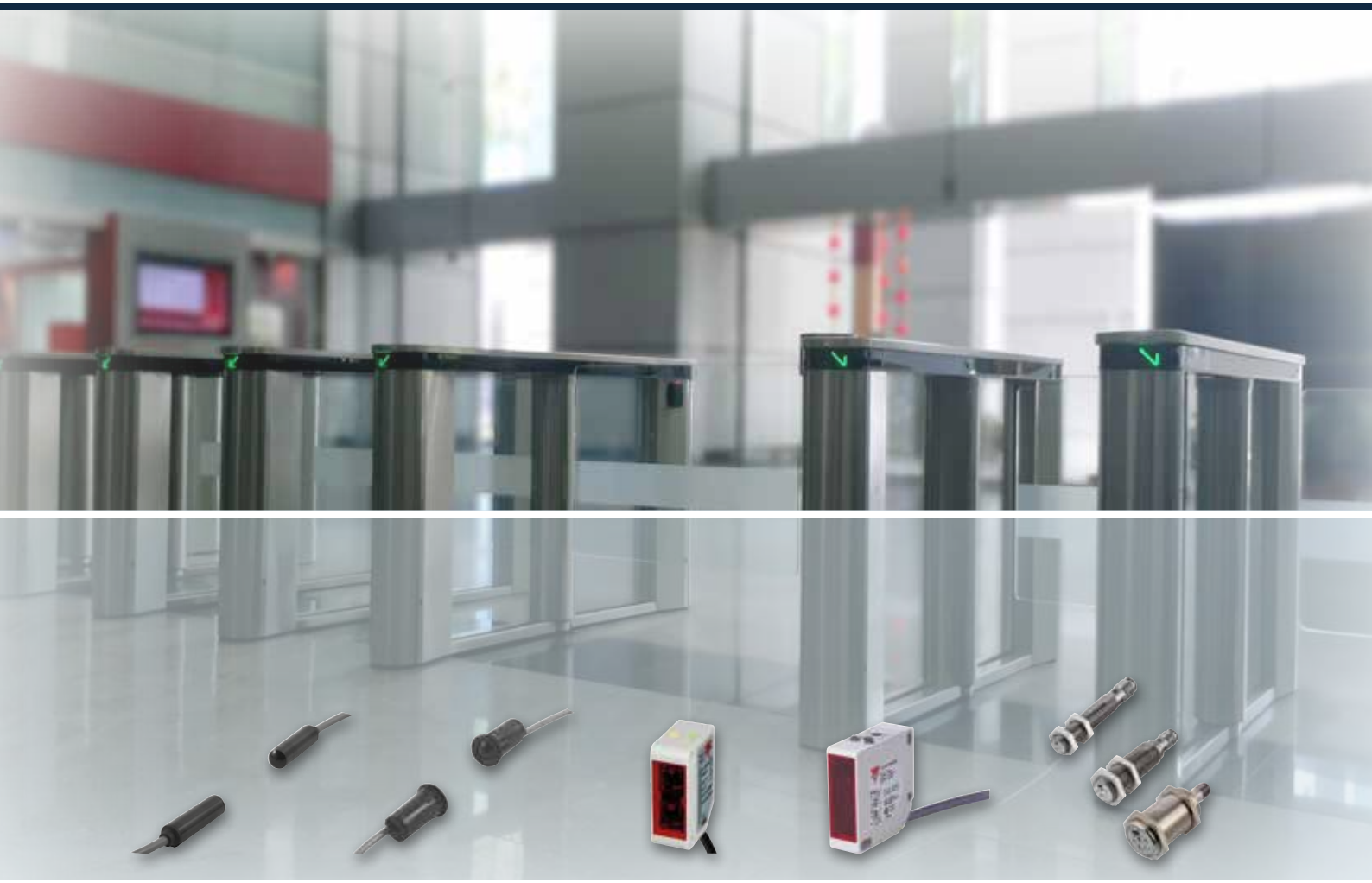
The Guardian series is TÜV-certified according to DIN 18650-1 (prEN 16005), EN13241-1, EN12978, EN61508, ENISO13849-1:2008.

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.

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.

Our expertise in Parking Guidance System

45° ultrasonic sensors	360° LED indicators	Carpark displays	Carpark controller
SBPSUSL45	**SBPILED**	**SBPDISxxxx**	**SBP2WEB24**

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.

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, PL C
- 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, PL C
- 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 Infrared 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 Infrared 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

PD86 / PD86HNP

- Dimensions: 39 x 46 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 metal housing cover [PD86HNP]

MAIN FEATURES
- Light beam approved to Safety Category 2
- UL325, UL508, EN12445, EN12453, EN12978
- Visible polarized light, 3 detection directions

PD86xAP12

- Dimensions: 39 x 46 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 or Polycarbonate housing cover

MAIN FEATURES
- ESPE category 2, Performance level c
- UL325, UL508, EN12453, EN12978
- Adjustable lenses +/- 4.5 degree horizontal and vertical

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

Photoelectric sensors	Photoelectric sensors	Photoelectric sensors	Photoelectric sensors

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

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

Our product range

Wireless safety system

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

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 and/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

Timers

DMB51

- Dimensions: 81 x 17.5 x 67.2 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

Limit switches

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)

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; e.g. stall prevention, PTC input

Our product range

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
- UL1310 Class 2 (up to 90 W)
- cULus, TÜV, CCC, ISA C1D2 approved

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

Switching power supplies

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
- UL1310 Class 2 (up to 75 W)

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

Switching power supplies

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
- cULus, TÜV, CCC, ISA C1D2

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

Switching power supplies

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 and UL approved

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

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 and UL approved

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

Switching power supplies

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

Industrial relays and sockets

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

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

Industrial relays and sockets

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

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

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 de-central installation
- Easy and fast commissioning through central PC-based tool

Carpark displays with symbols+digits

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 50 m of distance
- Automatic adjustment of brightness according to surroundings lux level
- Indoor and outdoor use

Carpark displays with digits

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

Carpark displays with digits

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

3-phase monitoring relays

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

3-phase over/under monitoring relays

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

3-phase over/under monitoring relays

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 set points
- Apps for Android and Windows PC programming

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

Our product range

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]

Earth leakage relays

DEA71

- 35 mm Mini-DIN housing
- 2 SPDT 5 A relay outputs
- Disconnected CT detection
- Power supply from 24 V to 240 VAC
- UL and CE (IEC EN 60947-2 Annex M compliant)

MAIN FEATURES
- Fixed trip current 30 mA or 300 mA
- Remote Test / Reset push button input
- Warning Indication and output

Earth leakage relays

DEB71

- 35 mm Mini-DIN housing
- 2 SPDT 5 A relay outputs
- LED leakage level indicator
- Power supply from 24 V to 240 VAC
- UL and CE (IEC EN 60947-2 Annex M compliant)

MAIN FEATURES
- Adjustable trip current setting from 30 mA to 30 A
- Remote Test / Reset push button input
- Warning Indication and output

Core balance current transformers

CTG

- 6 sizes from 35 mm to 210 mm
- Closed round core type
- Screw terminals connection
- 1:1000 ratio
- UL and CE (IEC EN 60947-2 Annex M compliant)

MAIN FEATURES
- 1:1000 current reduction ratio
- Current transformer
- Single and three-phase

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 I_{nom}, 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 I_{nom}, 40 kA I_{max} 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

OUR SALES NETWORK IN EUROPE

AUSTRIA
Carlo Gavazzi GmbH
Ketzergasse 374,
A-1230 Wien
Tel: +43 1 888 4112
Fax: +43 1 889 10 53
office@carlogavazzi.at

BELGIUM
Carlo Gavazzi NV/SA
Mechelsesteenweg 311,
B-1800 Vilvoorde
Tel: +32 2 257 4120
Fax: +32 2 257 41 25
sales@carlogavazzi.be

DENMARK
Carlo Gavazzi Handel A/S
Over Hadstenvej 40,
DK-8370 Hadsten
Tel: +45 89 60 6100
Fax: +45 86 98 15 30
handel@gavazzi.dk

FINLAND
Carlo Gavazzi OY AB
Ahventie, 4 B
FI-02170 Espoo
Tel: +358 9 756 2000
myynti@gavazzi.fi

FRANCE
Carlo Gavazzi Sarl
Zac de Paris Nord II, 69, rue de la Belle Etoile,
F-95956 Roissy CDG Cedex
Tel: +33 1 49 38 98 60
Fax: +33 1 48 63 27 43
french.team@carlogavazzi.fr

GERMANY
Carlo Gavazzi GmbH
Pfnorstr. 10-14
D-64293 Darmstadt
Tel: +49 6151 81000
Fax: +49 6151 81 00 40
info@gavazzi.de

GREAT BRITAIN
Carlo Gavazzi UK Ltd
4.4 Frimley Business Park,
Frimley, Camberley, Surrey GU16 7SG
Tel: +44 1 276 854 110
Fax: +44 1 276 682 140
sales@carlogavazzi.co.uk

ITALY
Carlo Gavazzi SpA
Via Milano 13,
I-20020 Lainate
Tel: +39 02 931 761
Fax: +39 02 931 763 01
info@gavazziacbu.it

NETHERLANDS
Carlo Gavazzi BV
Wijkermeerweg 23,
NL-1948 NT Beverwijk
Tel: +31 251 22 9345
Fax: +31 251 22 60 55
info@carlogavazzi.nl

NORWAY
Carlo Gavazzi AS
Melkeveien 13,
N-3919 Porsgrunn
Tel: +47 35 93 0800
Fax: +47 35 93 08 01
post@gavazzi.no

PORTUGAL
Carlo Gavazzi Lda
Rua dos Jerónimos 38-B,
P-1400-212 Lisboa
Tel: +351 21 361 7060
Fax: +351 21 362 13 73
carlogavazzi@carlogavazzi.pt

SPAIN
Carlo Gavazzi SA
Avda. Iparraguirre, 80-82,
E-48940 Leioa (Bizkaia)
Tel: +34 94 480 4037
Fax: +34 94 431 6081
gavazzi@gavazzi.es

SWEDEN
Carlo Gavazzi AB
V:a Kyrkogatan 1,
S-652 24 Karlstad
Tel: +46 54 85 1125
Fax: +46 54 85 11 77
info@carlogavazzi.se

SWITZERLAND
Carlo Gavazzi AG
Verkauf Schweiz/Vente Suisse
Sumpfstrasse 3,
CH-6312 Steinhausen
Tel: +41 41 747 4535
Fax: +41 41 740 45 40
info@carlogavazzi.ch

OUR SALES NETWORK IN THE AMERICAS

USA
Carlo Gavazzi Inc.
750 Hastings Lane,
Buffalo Grove, IL 60089, USA
Tel: +1 847 465 6100
Fax: +1 847 465 7373
sales@carlogavazzi.com

CANADA
Carlo Gavazzi Inc.
2660 Meadowvale Boulevard,
Mississauga, ON L5N 6M6, Canada
Tel: +1 905 542 0979
Fax: +1 905 542 22 48
gavazzi@carlogavazzi.com

MEXICO
Carlo Gavazzi Mexico S.A. de C.V.
Calle La Montaña no. 28, Fracc. Los Pastores
Naucalpan de Juárez, EDOMEX CP 53340
Tel & Fax: +52.55.5373.7042
mexicosales@carlogavazzi.com

BRAZIL
Carlo Gavazzi Automação Ltda.Av.
Francisco Matarazzo, 1752
Conj 2108 - Barra Funda - São Paulo/SP
Tel: +55 11 3052 0832
Fax: +55 11 3057 1753
info@carlogavazzi.com.br

OUR SALES NETWORK IN ASIA AND PACIFIC

SINGAPORE
Carlo Gavazzi Automation Singapore Pte. Ltd.
61 Tai Seng Avenue #05-06
Print Media Hub @ Paya Lebar iPark
Singapore 534167
Tel: +65 67 466 990
Fax: +65 67 461 980
info@carlogavazzi.com.sg

MALAYSIA
Carlo Gavazzi Automation (M) SDN. BHD.
D12-06-G, Block D12,
Pusat Perdagangan Dana 1,
Jalan PJU 1A/46, 47301 Petaling Jaya,
Selangor, Malaysia.
Tel: +60 3 7842 7299
Fax: +60 3 7842 7399
sales@gavazzi-asia.com

CHINA
Carlo Gavazzi Automation
(China) Co. Ltd.
Unit 2308, 23/F.,
News Building, Block 1,1002
Middle Shennan Zhong Road,
Shenzhen, China
Tel: +86 755 83699500
Fax: +86 755 83699300
sales@carlogavazzi.cn

HONG KONG
Carlo Gavazzi Automation
Hong Kong Ltd.
Unit 3 12/F Crown Industrial Bldg.,
106 How Ming St., Kwun Tong,
Kowloon, Hong Kong
Tel: +852 23041228
Fax: +852 23443689

OUR COMPETENCE CENTRES AND PRODUCTION SITES

DENMARK
Carlo Gavazzi Industri A/S
Hadsten

CHINA
Carlo Gavazzi Automation (Kunshan) Co., Ltd.
Kunshan

MALTA
Carlo Gavazzi Ltd
Zejtun

ITALY
Carlo Gavazzi Controls SpA
Belluno

LITHUANIA
Uab Carlo Gavazzi Industri Kaunas
Kaunas

HEADQUARTERS

Carlo Gavazzi Automation SpA
Via Milano, 13
I-20020 - Lainate (MI) - ITALY
Tel: +39 02 931 761
info@gavazziautomation.com

Printed on 100% recycled paper
produced using
post consumer de-inked waste.

CARLO GAVAZZI
Automation Components

Energy to Components!

www.gavazziautomation.com

CARLO GAVAZZI

DOORS BRO ENG REV.10 05/18