Solutions

HVAC systems
HVAC systems

Solutions for

Carlo Gavazzi Automation is an international 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.

ABOUT CARLO GAVAZZI

Air handling units  Heat pumps  Chillers  Roof tops  Pellet burners
DESIGNED TO MEET MARKET REQUIREMENTS

It is becoming more and more important to have an energy-efficient integrated HVAC system for buildings. That is why HVAC components, such as heat pumps, rooftops, chillers and air handling units need more effective control and energy saving features to improve overall performance. HVAC trends also show the increasing use of permanent magnet motors to increase system efficiency, greatly reducing the footprint while increasing performance.

Communication is crucial between the building management system and the components downstream. The use of protocols such as BACnet or MODBUS is becoming more and more common, involving components such as the main controllers, the compressor, the expansion valve, the energy meter and the softstarter.

Enhance performance with our monitoring relay solutions
- Various monitoring functions: phase sequence, phase loss and voltage level
- Compact dimensions

Increase system efficiency with our solutions for energy management
- Energy meters & power transducers
- Power analysers
- Current transformers
- Serial communications
- Solutions with BACnet communication
- Web-server solutions

Extend the lifetime of scroll compressors with easy to use soft starting solutions
- Dedicated solutions for scroll compressors
- 1- and 3-phase compact solutions
- 2- and 3-phase controlled solutions
- Integrated monitoring functions
- Modbus communication

Resistive heaters switching with solid state relays
- ON/OFF solid-state contactors
- Proportional controllers
- Wide range of 1-phase and 3-phase solutions
- Modular solutions
Air handling units

Carlo Gavazzi’s comprehensive range of energy meters, energy analysers and power transducers keep your plant monitored 24/7. The following communication protocols are available: Modbus, BACnet, M-bus and Profibus. Our web server solutions also provide multi-site monitoring.

Our easy to use and reliable soft starter range, with extended ramp-up times, ensures smoother centrifugal fan starts. An intelligent algorithm for current reduction and current balancing results in fewer electrical disturbances and less vibrations during starts. A wide selection of solid-state relays offers analogue switching versions for the efficient control of resistor packs for heating or dehumidification and Zero Cross switching to reduce electrical spikes on the network. Our compact monitoring relays for power factor monitoring allow the detection of broken belts in centrifugal fans.

- Efficiency improvement
- Easy access to monitored data via IT network
- Reduced maintenance and lower mechanical noise when fan starts
- Fewer electrical disturbances and lower current peaks
- Reduced air pressure shocks in the case of canvas ducts
- Optimal dehumidification
**Heat pumps**

Carlo Gavazzi’s comprehensive range of solid state relays for auxiliary heater switching also includes low noise versions so as to reduce disturbance to the supply network. Slim energy meters are available for 1-phase applications. Our wide range of monitoring relays provides phase loss, phase sequence, over and undervoltage monitoring.

The complete range for fixed speed scroll compressors consists of 1- and 3-phase dedicated to soft starters and 2- and 3-phase controlled solutions with a patented self-learning algorithm to limit scroll compressor start current. The RSBS and RSBT soft starters are compliant with EMC Class B (residential).

<table>
<thead>
<tr>
<th>Soft starters</th>
<th>Solid state relays</th>
<th>Monitoring relays</th>
<th>Energy meters/analysers</th>
<th>Timers</th>
<th>Variable frequency drives</th>
<th>Electromechanical relays</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDMS</td>
<td>RG</td>
<td>DPA52</td>
<td>EM110</td>
<td>DAA51</td>
<td>RVLF</td>
<td>DMB51</td>
</tr>
<tr>
<td>RSBS</td>
<td>RM</td>
<td></td>
<td>EM111</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RSBD/RSBT</td>
<td>RGC3P</td>
<td></td>
<td>EM340</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Noise-free switching of auxiliary heaters
- Plug’n’play soft starting solutions
- Best-in class current reduction
- Compliant with the stringent requirements for noise emissions
- Easy to fit in electrical panels
- More protection for the compressor
- Quick detection of abnormal conditions
- Compatibility with permanent magnet motors
Carlo Gavazzi’s compact and cost-effective range of power supplies, timers for star/delta switching and monitoring relays are designed to meet your toughest specification requirements for panel mounting. 2-phase controlled solutions with current balancing, 3-phase scroll compressor soft starters up to 95 A with a dedicated algorithm for multi-scroll compressor applications. Our solutions for energy management for DIN and panel mount are comprehensive and versatile for the monitoring and power analysis.

- Modbus or BACnet communication ports are available for communication with controllers and BMS.
- Easy installation even in limited space
- Protection of compressors
- Reduction of starting current by 50%
- No settings required
- Improved efficiency
- Remote access to data
- Easy integration into existing communication networks
Roof tops

Carlo Gavazzi’s range of energy meters and power analyzers fulfil all requirements in terms of both features and costs, for remote monitoring of energy consumption. The comprehensive communication protocols and web-server solutions allow flexible and easy integration. We offer proportional controllers for heaters and fans. Our compact IP20 solutions with phase angle control for fan speed regulation (1-phase and 3-phase), also 2-phase solutions for resistive heater modulation (RGC2P) full cycle switching. Our range of soft starters are able to provide integrated diagnostic functions for additional protection.

The related operational temperature range is up to 60°C. The self-learning algorithm, which is active at every compressor start, ensures that the compressor always starts with the correct parameters. Modbus communication is also available to transmit real-time data to the machine controller.

- Efficiency improvement
- Easy data transmission to the BMS or the controller
- Automatic settings
- Reliable operation even at high temperatures
- Compact and cost-effective solutions
Carlo Gavazzi’s compact and cost-effective series of solid state relays is widely known for its reliability and robustness for high switching frequencies of water pump or smoke fan.

Our ICB inductive sensors are used to detect the position of the dampers so as to direct the air flow where needed.

Short circuit, reverse polarity and transients protection is assured.

Our new 4th generation of Tripleshield sensors CA30CA.. allows a dust alarm to be sent when the sensor gets dirty and needs to be cleaned.

A temperature alarm is sent when the temperature exceeds 60°C.

EMC immunity and high sensing capability ensure correct detection in all conditions, especially where pellet-dust remains on the reservoir surface.

The new CA30CAN25... IO-Link sensor has a 16 bit “analogue” value present in the cyclic process data file, giving information about the density of the wooden pellets around the sensor, allowing the customer to change the speed of the worm drive to feed the correct amount of pellets to the burner.

The alarm temperature in this sensor can be set up at the appropriate value by the customer.

- High switching frequency
- Silent and reliable operation even in harsh environments
- Safer operation of the burner
- Intelligent alarms
- Different configurations available, tailored to specific needs
Our expertise in scroll compressors

In a heat pump, as well as in a rooftop or in a chiller unit, the compressor is the heart of the system. It supplies the inverse cycle and is also the most expensive and energy-consuming device in the machine. When starting, the scroll compressor operates in a very abrupt way and this can lead to undesirable effects to the machine itself and to the nearby environment. A direct on-line (DOL) start is performed in just 3 cycles (around 60 ms) for a 3-phase machine and a little more for 1-phase ones. This can result in rapid inrush current (around 8 times the nominal current) and significant vibrations. The first effect of high inrush current is voltage fluctuations during starts, especially where the grid is not so resistant, as in many domestic or commercial environments or in locations far from the energy source. This leads to lights flickering and potential interference with equipment such as LAN networks, Wifi, smartphones and tablets. The second effect is that the nominal current for the utility contract may be exceeded, which could result in fines from the energy supplier or having to increase the contract power at a higher cost. In addition, direct on-line starts cause wear and tear to the coils, reducing the lifetime of the compressor. Vibrations mainly cause a shock to the motor, starting from the shaft, which means shorter compressor lifetime. They also lead to mechanical shock to the pipes which, especially in the long term and for larger machines, can cause refrigerant leakage. Last but not least, the noise of a direct on-line start can be rather annoying. These problems can be solved by using our range of soft starters specifically designed for scroll compressor applications. Inrush current is reduced by 50 to 55% and the compressor is started within 1s, allowing a smooth start and proper compression and lubrication. The 3-phase RSBD and RSBT soft starters are provided with an auto-adaptive algorithm which ensures the best inrush current reduction at every start. As the soft starter follows the changes in the compressor and the system over time, no setting is needed. At the same time, when unexpected conditions occur, such as a very high pressure difference in the refrigeration circuit, the soft starter will react ensuring starting even in the worst conditions.
## HVAC systems

### Our product range

<table>
<thead>
<tr>
<th>3-phase scroll compressor soft starters</th>
<th>3-phase pump and ventilator soft starters</th>
<th>1-phase scroll compressor dynamic starter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RSBT 120 mm</strong></td>
<td><strong>RSWT 45/75/120 mm</strong></td>
<td><strong>RSBS / RSBS HP</strong></td>
</tr>
<tr>
<td>- Enhanced current reduction capability with patented auto-adaptive algorithm</td>
<td>- Motor rating: up to 45 kW (90 AAC)</td>
<td>- Current limit starting</td>
</tr>
<tr>
<td>- Integrated advanced diagnostic functions</td>
<td>- 3-phase controlled &amp; internally bypassed</td>
<td>- Advanced diagnostic functions</td>
</tr>
<tr>
<td>- 3-phase controlled and internally bypassed</td>
<td>- Ramp-up/Ramp-down time: up to 20 sec</td>
<td>- Internally bypassed</td>
</tr>
<tr>
<td>- Compliant with Residential (Class B) Limits for Emissions</td>
<td>- &quot;Operational voltage: RSWT40: 220 - 400 VAC, RSWT60: 220 - 600 VAC&quot;</td>
<td>- Up to 12 starts per hour</td>
</tr>
<tr>
<td>- Patented algorithm achieves 50% current reduction vs direct on line start</td>
<td>- PTC input, Alarm - Top of Ramp - Run relay output</td>
<td>- cULus listed</td>
</tr>
<tr>
<td>- Operational current: 55/70/95 AAC</td>
<td>- cULus, CCC, EAC approved</td>
<td>- EAC approved</td>
</tr>
<tr>
<td>- Operational voltage: 220 - 480 VAC, 50/60 Hz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Alarm, Top of ramp relay output</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HDMS</strong></td>
<td><strong>RSBD 45mm / RSBD 75 mm</strong></td>
<td><strong>R5BS / R5BS HP</strong></td>
</tr>
<tr>
<td>- Operational current: up to 37 AAC</td>
<td>- Self-learning algorithm</td>
<td>- Plug and play: no external settings required</td>
</tr>
<tr>
<td>- Operational voltage: 110 - 230 VAC 50/60 Hz</td>
<td>- Internally bypassed</td>
<td>- Advanced diagnostic functions</td>
</tr>
<tr>
<td>- Current reduction vs DOL: up to 75%</td>
<td>- Up to 12 starts per hour</td>
<td>- Internally bypassed</td>
</tr>
<tr>
<td>- Compliant with residential (Class B) limits for emissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- cULus approved</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MAIN FEATURES</strong></td>
<td><strong>MAIN FEATURES</strong></td>
<td><strong>MAIN FEATURES</strong></td>
</tr>
<tr>
<td>- Plug and play: no external settings needed</td>
<td>- Multi-voltage operation: 220 - 480 VAC</td>
<td>- No need for a start capacitor</td>
</tr>
<tr>
<td>- Typically &gt;50% scroll compressor inrush current reduction</td>
<td>- Plug and play: no user settings required</td>
<td>- Self-learning algorithm</td>
</tr>
<tr>
<td>- Compact dimensions: better panel space savings</td>
<td>- 3-phase controlled with internal bypass</td>
<td>- Plug and play: no user settings required</td>
</tr>
<tr>
<td></td>
<td>- Modbus RTU over RS485 serial communication</td>
<td>- Modbus RTU and NFC interface</td>
</tr>
<tr>
<td><strong>RSWT 45/75/120 mm</strong></td>
<td><strong>RSBD 45mm / RSBD 75 mm</strong></td>
<td><strong>R5BS / R5BS HP</strong></td>
</tr>
<tr>
<td>- Motor rating: up to 45 kW (90 AAC)</td>
<td>- Self-learning algorithm for current reduction and current balancing</td>
<td>- Plug and play: no external settings required</td>
</tr>
<tr>
<td>- 3-phase controlled &amp; internally bypassed</td>
<td>- Operational current: 55/70/95 AAC</td>
<td>- Advanced diagnostic functions</td>
</tr>
<tr>
<td>- Ramp-up/Ramp-down time: up to 20 sec</td>
<td>- 12 AAC up to 45 AAC @ 40°C (RSBD 45 mm)</td>
<td>- Internally bypassed</td>
</tr>
<tr>
<td>- &quot;Operational voltage: RSWT40: 220 - 400 VAC, RSWT60: 220 - 600 VAC&quot;</td>
<td>- Multi-voltage operation: 220 - 600 VAC (RSBD 75 mm)</td>
<td>- Up to 12 starts per hour</td>
</tr>
<tr>
<td>- PTC input, Alarm - Top of Ramp - Run relay output</td>
<td>- 220 - 400 VAC (RSBD 45 mm), 50/60 Hz</td>
<td>- cULus listed</td>
</tr>
<tr>
<td>- cULus, CCC, EAC approved</td>
<td>- Alarm, Top of ramp relay output</td>
<td></td>
</tr>
</tbody>
</table>

**RSBT**
- Enhanced current reduction capability with patented auto-adaptive algorithm
- Integrated advanced diagnostic functions
- 3-phase controlled and internally bypassed
- Compliant with Residential (Class B) Limits for Emissions
- cULus listed, VDE (EN60335-2-40), CCC approved

**RSBD 45mm / RSBD 75 mm**
- Self-learning algorithm for current reduction and current balancing
- Operational current: 55/70/95 AAC (RSBD 75 mm), 12 AAC up to 45 AAC @ 40°C (RSBD 45 mm)
- Multi-voltage operation: 220 - 600 VAC (RSBD 75 mm), 220 - 400 VAC (RSBD 45 mm), 50/60 Hz
- Alarm, Top of ramp and Run relay output
- cULus, CCC, EAC approved

**RSWT 45/75/120 mm**
- Motor rating: up to 45 kW (90 AAC)
- 3-phase controlled & internally bypassed
- Ramp-up/Ramp-down time: up to 20 sec
- “Operational voltage: RSWT40: 220 - 400 VAC, RSWT60: 220 - 600 VAC”
- PTC input, Alarm - Top of Ramp - Run relay output
- cULus, CCC, EAC approved

**RSBS / RSBS HP**
- Current limit starting
- Advanced diagnostic functions
- Internally bypassed
- Up to 12 starts per hour
- cULus listed

**MAIN FEATURES**
- Plug and play: no external settings required
- Internally bypassed
- Compact dimensions: 95 A in 75 mm wide housing (RSBD 75 mm)
Our product range

### Compact motor soft starters

**RSGD 45 / 75 mm**
- Operational voltage range: 187-440 VAC, 187-660 VAC
- Operational current range: 12 AAC up to 100 AAC
- Control voltage: 24 VDC, 110-400 VAC
- Auxiliary relays for top of ramp and alarms
- cULus, CCC, EAC approved

**MAIN FEATURES**
- Compact dimensions: up to 22 kW in 45 mm wide housing (RSGD 45 mm), up to 55 kW in 75 mm wide housing (RSGD 75 mm)
- Easy to setup: self-learning algorithm
- Internally bypassed and supplied

### Variable frequency drives

**RVFF**
- 6 compact frame sizes. Panel mount
- 3-phase supply. Output ratings up to 160 kW
- Multi motor control: VF, SLV, PMSLV
- Integrated filters up to 55 kW
- cULus, CE approved

**MAIN FEATURES**
- Permanent magnet motor control with sensor-less vector algorithms
- Built-in multi fans/pumps control, up to 8 with IO card
- On board PID and PLC functions for efficient control of HVAC system

### Variable frequency drives

**RVLF**
- 4 mini frame sizes for ratings up to 11 kW
- Input voltage options for 110 V, 230 V and 400 V
- Efficient control via VF or SLV algorithms
- Integrated Class A filters for most models
- cULus, CE approved

**MAIN FEATURES**
- Sensor-less vector control for precise speed control
- PTC inputs allow monitoring of motor temperature
- On board PID functions for effective control via feedback

### Environmental sensors

**ESCO2THWxxDM**
- CO₂, Humidity, Temperature
- 0 - 2000 ppm or 5000 ppm
- 0°C...50°C, 0 - 100 %RH
- 0 - 10 V or 4 - 20 mA output
- Wall mounting

**MAIN FEATURES**
- 3 variables in 1 compact unit
- LCD display
- Modbus communication

**ESAV**
- Air velocity, Temperature
- 0 to 20 m/s
- 0 to 50°C
- 0 - 10V or 4 - 20 mA output
- Duct or remote mounting

**MAIN FEATURES**
- Dedicated monitoring software
- LCD display for remote mounting
- Modbus communication

**ESTxD50xM**
- Humidity, Temperature
- -40...100°C
- 0 to 100% RH
- 0 - 10 V or 4 - 20 mA output
- Duct mounting

**MAIN FEATURES**
- Dedicated monitoring software
- Suitable for HVAC ducting
- Modbus communication
### Our product range

<table>
<thead>
<tr>
<th>PCB mounted solid state relays</th>
<th>1-phase solid state relays</th>
<th>1-phase proportional controllers</th>
</tr>
</thead>
</table>

#### RP1
- Dimensions: 37 x 43 x 22 mm, PCB mounted
- Rated operational voltage: up to 480 VAC
- Rated operational current: up to 10 AAC
- Control input range: 4-32 VDC
- CE, cURus approved

**MAIN FEATURES**
- Zero cross or instant-on switching
- Optional DIN mounting with RP..Mx accessory

#### RGS1A / RGC1A
- Product width 17.5 mm up to 70 mm, DIN or panel mounting
- Ratings: up to 660 VAC, 90 AAC, 18000 A's
- Integrated output overvoltage protection
- Control input: 4-32 VDC, 20-275 VAC (22-190 VDC)
- CE, cULus (RGC), UR (RGS), CSA (RGS), VDE, EAC, GL (up to 30 AAC) approved

**MAIN FEATURES**
- Integrated heatsink (RGC1A) or without heatsink (RGS1A)
- 100 kA short circuit current rating
- Optional overtemperature protection (RGC1A)

#### RP1
- Dimensions: 37 x 43 x 22 mm, PCB mounted
- Rated operational voltage: up to 480 VAC
- Rated operational current: up to 10 AAC
- Control input range: 4-32 VDC
- CE, cURus approved

**MAIN FEATURES**
- Zero cross or instant-on switching
- Optional DIN mounting with RP..Mx accessory

#### RGS1P / RGC1P
- Product width 35 mm up to 70 mm, DIN or panel mounting
- Ratings: up to 660 VAC, 90 AAC, 18000 A's
- Control input: 4-20 mA, 0-10 VDC, 0-5 VDC, 1-5 VDC, external potentiometer
- LED indication for control and load status
- CE, cULus (RGC), UR (RGS), CSA (RGS), EAC approved

**MAIN FEATURES**
- Integrated heatsink (RGC1P) or without heatsink (RGS1P)
- 100 kA short circuit current rating
- Optional overtemperature protection (RGC1P)

#### RM1A / RAM1A
- Dimensions: 58.2 x 44.8 x 28.8 mm, panel mount
- Rated operational voltage: up to 660 VAC
- Rated current: 25 AAC, 50 AAC, 75 AAC, 100 AAC, 125 AAC
- Control input: 4-32 VDC, 20-280 VAC
- CE, cURus, CSA, VDE (RAM), EAC, CCC approved

**MAIN FEATURES**
- Zero cross or Random switching
- Suited for resistive, inductive or capacitive loads
- Integrated output overvoltage protection (RM1)

#### RM1E
- Dimensions: 58.2 x 44.8 x 28.8 mm, panel mount
- Rated operational voltage: up to 660 VAC
- Rated current: 25 AAC, 50 AAC, 100 AAC
- Control input: 4-20 mA, 0-10 V
- CE, cURus, CSA, EAC approved

**MAIN FEATURES**
- Phase angle switching
- Integrated overvoltage protection
- 0 to 99% power output control

#### RK
- Dimensions: 45 x 58 x 33 (44) mm, panel mount
- Independent control (RKD2...) or common control (RK2...)
- Ratings: up to 660 VAC, 75 AAC /pole
- Control input: 4-32 VDC
- CE, cURus, CSA, VDE, EAC approved

**MAIN FEATURES**
- Integrated output overvoltage protection
- Pre-attached thermal pad
- Conformant to EN 60335-1
Our product range

<table>
<thead>
<tr>
<th>3-phase solid state contactors</th>
<th>3-phase proportional controllers</th>
<th>3-phase monitoring relays</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RGC2A / RGC3A</strong></td>
<td><strong>RGC2P / RGC3P</strong></td>
<td><strong>DPD</strong></td>
</tr>
<tr>
<td>• Product width 54 mm up to 70 mm, DIN mount</td>
<td>• Product width 54 mm up to 70 mm, DIN mount</td>
<td>• Dimensions: 22.5 mm DIN rail mounting Enclosure</td>
</tr>
<tr>
<td>• Rated operational voltage: up to 660 VAC</td>
<td>• Rated operational voltage: 180-660 VAC</td>
<td>• 120 VAC to 480 VAC Delta &amp; Star mains</td>
</tr>
<tr>
<td>• Rated current: up to 75 AAC/pole (RGC2A), 65 AAC/pole (RGC3A) @ 40°C</td>
<td>• Rated current: up to 75 AAC/pole (RGC2P), 65 AAC/pole (RGC3P) @ 40°C</td>
<td>• Voltage and frequency monitoring</td>
</tr>
<tr>
<td>• Control input: 5-32 VDC, 20-275 VAC (24-190 VDC)</td>
<td>• Control input: 0-20 mA, 4-20 mA, 12-20 mA, 0-10 V, 0.5 V, 1.5 V, external potentiometer</td>
<td>• 2 SPDT 8 A relay outputs</td>
</tr>
<tr>
<td>• CE, cULus, EAC, CCC approved</td>
<td>• CE, cULus, EAC, CCC approved</td>
<td>• UL, CSA, CCC approved</td>
</tr>
</tbody>
</table>

**MAIN FEATURES**
- Integrated output overvoltage protection
- Optional monitoring for SSR and load circuit malfunction (RGC..M)
- 100 kA short circuit current rating

**DPA52 / DPA53**
- 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 208-480 VAC (±15%)
- Undervoltage detection (DPA53)
- CE, cULus, CCC approved

**MAIN FEATURES**
- Compressor protection from reverse running and phase loss
- DPA51 features switch mode supply
- Low consumption

**DPB01 / DPB52**
- Dimensions 81 x 17.5 x 67.2 mm (DPB52) or 83 x 22.5 x 99.5 mm (DPB01) DIN-rail housing
- TRMS 3-Phase sequence, Phase and Neutral loss relay
- 3 phase independent over and under voltage with adjustable delay
- Star and Delta power supply from 208-480 VAC ±15% (DPB01) -40% +30% (DPB52)
- CE, cULus, CCC approved

**MAIN FEATURES**
- Compressors protection from reverse running and phase loss
- 17.5 mm width: the smallest in the market
- Independent voltage setpoints and built-in delays

**DPD**
- Dimensions: 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
- UL, CSA, CCC approved

**MAIN FEATURES**
- NFC programming
- Up to 10 configurable setpoints
- Apps for Android and Windows PC programming
**HVAC systems**

*Our product range*

<table>
<thead>
<tr>
<th>Pump alternating relays</th>
<th>Timers</th>
<th>Timers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DLA71</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions: 81 x 35.5 x 67.2 mm DIN rail housing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pump alternating relay for 2 or 3 pumps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Galvanically separated power supply, 24/48 or 115/230 VAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2x or 3x 5A SPST relay output</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UL, CSA approved</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MAIN FEATURES**

- Built-in function for automatic rotation of the pumps
- Built-in delay for the second or third pump in case simultaneous activation is required
- Plug and play: no settings needed

| **DAA51 / DAC51** |        |        |
| Dimensions: 81 x 17.5 x 67.2 mm DIN rail housing |        |        |
| Delay on operating function (DAA), start/delta function (DNC) |        |        |
| Universal power supply |        |        |
| Repeatability: < 0.2% |        |        |
| UL, CSA approved |        |        |

**MAIN FEATURES**

- Extended delay-on-operating time, selectable from 0.1 s to 100 h
- Star-delta control function with star and star-to-delta adjustable times
- Protection against frequent compressor starting and from big inrush currents

| **DMB51** |        |        |
| Dimensions: 81 x 17.5 x 67.2 mm DIN rail housing |        |        |
| 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 0.1 s to 100 h

<table>
<thead>
<tr>
<th><strong>Timers</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ET340</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions: 3 DIN module; DIN-rail mounting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measurement of voltage, current, power, power factor, frequency, THD (V, A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bidirectional energy metering, 2 tariffs, cl. 1 (EN62053-1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measuring inputs: 208 to 400 V AC, 65 A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MAIN FEATURES**

- Self-powered
- RS485 Modbus port (screw, 2x RJ45)
- Optical port
- Sealable terminal covers
- CE approved

<table>
<thead>
<tr>
<th><strong>Earth leakage protection relays</strong></th>
<th><strong>Power transducers</strong></th>
<th><strong>3-phase energy transducers</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DEA71 / DEB71</strong></td>
<td><strong>CPT-DIN</strong></td>
<td><strong>ET340</strong></td>
</tr>
<tr>
<td>35 mm Mini-DIN housing</td>
<td>Dimensions: 83.5 x 45 x 98.5 mm DIN rail housing</td>
<td>Dimensions: 3 DIN module; DIN-rail mounting</td>
</tr>
<tr>
<td>2 SPDT 5 A relay outputs</td>
<td>Accuracy 0.5 % (voltage, current)</td>
<td>Measurement of voltage, current, power, power factor, frequency, THD (V, A)</td>
</tr>
<tr>
<td>LED leakage Level indicator</td>
<td>Measurement by CT and VT</td>
<td>Bidirectional energy metering, 2 tariffs, cl. 1 (EN62053-1)</td>
</tr>
<tr>
<td>Power supply from 24 V to 240 VAC</td>
<td>Front protection degree IP20</td>
<td>Measuring inputs: 208 to 400 V AC, 65 A</td>
</tr>
</tbody>
</table>
| UL and CE (IEC EN 60947-2 Annex M compliant) | Analogue, digital, pulse or serial outputs available | **MAIN FEATURES**

**MAIN FEATURES**

- Fixed (DEA71) or Adjustable (DEB71) Trip Current Setting
- Remote Test / Reset push button input
- Warning Indication and output

**MAIN FEATURES**

- Very compact size power transducer
- Provides electrical variables set to a PLC to manage compressors and other loads
- Suitable for on-board panel installation

**MAIN FEATURES**

- Self-powered
- RS485 Modbus port (screw, 2x RJ45)
- Optical port
- Sealable terminal covers
- CE approved
# Our product range

<table>
<thead>
<tr>
<th>1-phase energy meters /analyzers</th>
<th>3-phase energy analyzers</th>
<th>3-phase energy analyzers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EM110 / EM111</strong></td>
<td><strong>EM210</strong></td>
<td><strong>EM24 DIN</strong></td>
</tr>
<tr>
<td>• Dimensions: 1 DIN module; DIN-rail mounting</td>
<td>• Dimensions: 4 DIN modules or 72 x 72 mm</td>
<td>• 4 DIN modules</td>
</tr>
<tr>
<td>• Electromechanical totalizer (EM110) or backlit touch LCD (EM111)</td>
<td>• Installation: 4 DIN modules or 72 x 72 mm</td>
<td>• 3-phase energy meters with direct connection</td>
</tr>
<tr>
<td>• Measurement of voltage, current, power, power factor and frequency (EM111)</td>
<td>• 3-phase energy meters with CT/VT connection</td>
<td>• Current input up to 65 A or 5 A</td>
</tr>
<tr>
<td>• Bi-directional energy metering, 7 digits, cl. B (EM50470)</td>
<td>• Measurement of voltage, current, power, power factor and frequency</td>
<td>• Class B (KWh) acc. to EN50470</td>
</tr>
<tr>
<td>• Measuring inputs: 115/230 VAC, 32 A (max 45 A)</td>
<td>• Pulse output</td>
<td>• Pulse open collector output</td>
</tr>
<tr>
<td><strong>MAIN FEATURES</strong></td>
<td><strong>MAIN FEATURES</strong></td>
<td><strong>MAIN FEATURES</strong></td>
</tr>
<tr>
<td>• Self-powered</td>
<td>• Self-powered</td>
<td>• Direct measurement in a very compact housing to save space</td>
</tr>
<tr>
<td>• Pulse output or as an alternative: RS485 Modbus, M-Bus (EM111)</td>
<td>• Sealable terminal covers</td>
<td>• Suitable for measuring generated and consumed energy</td>
</tr>
<tr>
<td>• Sealable terminal covers</td>
<td>• Very compact housing to save space</td>
<td>• CE, cULus, MID approved</td>
</tr>
<tr>
<td>• CE, MID (PFA (EM111) and PFB) approved</td>
<td>• CE, MID approved</td>
<td><strong>EM330 / EM340</strong></td>
</tr>
<tr>
<td><strong>3-phase energy analyzers for direct current up to 65A</strong></td>
<td><strong>WM20</strong></td>
<td><strong>WM30 / WM40</strong></td>
</tr>
<tr>
<td>• 3 DIN modules</td>
<td>• Dimensions: 96 x 96 mm panel mounting housing</td>
<td>• Dimensions: 96 x 96 mm panel mounting housing</td>
</tr>
<tr>
<td>• Backlit touch LCD</td>
<td>• Accuracy 0.2 % (voltage, current)</td>
<td>• Accuracy 0.2 % (voltage, current)</td>
</tr>
<tr>
<td>• Measurement of voltage, current, power, power factor and frequency</td>
<td>• Universal power supply</td>
<td>• Universal power supply</td>
</tr>
<tr>
<td>• Bi-directional energy metering, 3x 8-digit, cl. B (EM50470)</td>
<td>• Front protection degree IP65, NEMA4X, NEMA12</td>
<td>• Front protection degree IP65, NEMA4X, NEMA12</td>
</tr>
<tr>
<td>• Measuring inputs: 230 to 400 VAC AC, 5 A (EM330) 65 A (EM340)</td>
<td>• cULus approved</td>
<td>• cULus approved - Solar California listed</td>
</tr>
<tr>
<td><strong>MAIN FEATURES</strong></td>
<td><strong>MAIN FEATURES</strong></td>
<td><strong>MAIN FEATURES</strong></td>
</tr>
<tr>
<td>• Self-powered (EM340) 90 - 260 VAC/DC (EM330)</td>
<td>• Provides installation data to a SCADA to manage the whole system</td>
<td>• 16-alarm PLC logic and digital inputs for utility metering (WM40)</td>
</tr>
<tr>
<td>• Dual tariff management</td>
<td>• Modular housing to build the instrument according to the real application needs</td>
<td>• Modular housing to build the instrument according to the real application needs</td>
</tr>
<tr>
<td>• Pulse output or RS485 Modbus or M-Bus port</td>
<td>• Modbus and BACnet (both RS485 or Ethernet) and Profinet IP communication ports available</td>
<td>• Modbus and BACnet (both RS485 or Ethernet), Profinet DVP0 and Ethernet/IP communication ports available</td>
</tr>
<tr>
<td>• Sealable terminal covers</td>
<td>• CE, MID (PFA and PFB), cULus approved (EM330)</td>
<td>• Built-in datalogger for instantaneous variables, dmd profiles and events (WM40)</td>
</tr>
<tr>
<td>• CE, MID (PFA and PFB), cULus approved (EM330)</td>
<td><strong>EM24 DIN</strong></td>
<td><strong>EM24 DIN</strong></td>
</tr>
<tr>
<td><strong>3-phase power analyzers</strong></td>
<td><strong>3-phase power analyzers</strong></td>
<td><strong>3-phase power quality analyzers</strong></td>
</tr>
<tr>
<td><strong>EM330 / EM340</strong></td>
<td><strong>WM20</strong></td>
<td><strong>WM30 / WM40</strong></td>
</tr>
<tr>
<td>• 3 DIN modules</td>
<td>• Dimensions: 96 x 96 mm panel mounting housing</td>
<td>• Dimensions: 96 x 96 mm panel mounting housing</td>
</tr>
<tr>
<td>• Backlit touch LCD</td>
<td>• Accuracy 0.2 % (voltage, current)</td>
<td>• Accuracy 0.2 % (voltage, current)</td>
</tr>
<tr>
<td>• Measurement of voltage, current, power, power factor and frequency</td>
<td>• Universal power supply</td>
<td>• Universal power supply</td>
</tr>
<tr>
<td>• Bi-directional energy metering, 3x 8-digit, cl. B (EM50470)</td>
<td>• Front protection degree IP65, NEMA4X, NEMA12</td>
<td>• Front protection degree IP65, NEMA4X, NEMA12</td>
</tr>
<tr>
<td>• Measuring inputs: 230 to 400 VAC AC, 5 A (EM330) 65 A (EM340)</td>
<td>• cULus approved</td>
<td>• cULus approved - Solar California listed</td>
</tr>
<tr>
<td><strong>MAIN FEATURES</strong></td>
<td><strong>MAIN FEATURES</strong></td>
<td><strong>MAIN FEATURES</strong></td>
</tr>
<tr>
<td>• Self-powered (EM340) 90 - 260 VAC/DC (EM330)</td>
<td>• Provides installation data to a SCADA to manage the whole system</td>
<td>• 16-alarm PLC logic and digital inputs for utility metering (WM40)</td>
</tr>
<tr>
<td>• Dual tariff management</td>
<td>• Modular housing to build the instrument according to the real application needs</td>
<td>• Modular housing to build the instrument according to the real application needs</td>
</tr>
<tr>
<td>• Pulse output or RS485 Modbus or M-Bus port</td>
<td>• Modbus and BACnet (both RS485 or Ethernet) and Profinet IP communication ports available</td>
<td>• Modbus and BACnet (both RS485 or Ethernet), Profinet DVP0 and Ethernet/IP communication ports available</td>
</tr>
<tr>
<td>• Sealable terminal covers</td>
<td>• CE, MID (PFA and PFB), cULus approved (EM330)</td>
<td>• Built-in datalogger for instantaneous variables, dmd profiles and events (WM40)</td>
</tr>
<tr>
<td>• CE, MID (PFA and PFB), cULus approved (EM330)</td>
<td><strong>EM24 DIN</strong></td>
<td><strong>EM24 DIN</strong></td>
</tr>
</tbody>
</table>
HVAC systems

Our product range

Capacitive sensors

**CA18**
- Dimensions: M18 / M30
- Tripleshield™ sensor protection
- Plastic housing, DC and AC versions
- Sensing distance 0.5-12 mm
- CE, UL, CSA approved

**MAIN FEATURES**
- Optimised features for level detection in plastic and rubber applications
- Sensing face can withstand temperatures up to 120°C
- Protection: short circuit, transient and reverse polarity

**CA30**
- 4-12 mm sensing distance adjustable
- Time delay on operate or release, up to 10 minutes adjustable
- Multi voltage supply: 20.4-255 VAC/DC
- 2 A, SPDT relay output
- Housing M30 x 100 mm
- CE, cULus approved

**MAIN FEATURES**
- Reliable detection of pellets in the burner’s feeding system
- Dust alarm output
- Temperature alarm output at 60°C

**CA30CA.. series**
- High EMC Immunity
- M30 mm housing, easy to mount
- Power supply 10-40 VDC, 200 mA NPN or PNP, NO and NC
- CE, UL, CSA approved

Capacitive sensors

**CA18../CA30..IO series**
- Dimensions: M18 / M30 (Plastic)
- 4th generation TRIPLESHIELD™ Technology
- IO-Link communication with timer, diagnostics and logic functions
- Sensing distance up to 30 mm
- CE, cULus approved

**MAIN FEATURES**
- High EMC immunity
- ESD ratings up to 40 KV
- Sensing face temperature up to 120°C
- Best immunity towards Inverters

Capacitive sensors with IO-Link

**CA18../CA30../IO series**
- Dimensions: M18 / M30 (Plastic)
- 4th generation TRIPLESHIELD™ Technology
- IO-Link communication with timer, diagnostics and logic functions
- Sensing distance up to 30 mm
- CE, cULus approved

**MAIN FEATURES**
- High EMC immunity
- ESD ratings up to 40 KV
- Sensing face temperature up to 120°C
- Best immunity towards Inverters

Conductive level systems

**CLD / CLP**
- Exact level detecting with insulated electrodes
- SPDT 8 A relay output
- 24-240 AC/DC or 230 AC or 115 AC
- CE, UL, CSA approved

**MAIN FEATURES**
- Detection of condensed water from air conditioning system
- Easy to install with simple electrodes
- Wide sensitivity 250 Ω to 500 kΩ

Conductive level probes

**CLH**
- 3/5 stainless steel electrodes
- User defined electrode length
- Insulation available in Kynar or Polyolefine
- 1 1/2” pipe thread mounting
- IP65/68 rating

**MAIN FEATURES**
- -20°C to 90°C
- Replaceable electrodes
- Extendable electrodes
### Our product range

<table>
<thead>
<tr>
<th>Capacitive sensors</th>
<th>Inductive proximity sensors</th>
<th>Inductive proximity sensors with IO-Link</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CD50</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions: 50 x 30 x 7 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flat pack sensor, easy to mount</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power supply 10-30 VDC, 50 mA NPN or PNP, NO or NC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CE approved</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MAIN FEATURES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detection of condensed water from Air-conditioning system</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>ICB12 / ICB18</strong></th>
<th></th>
<th><strong>ICB12..IO / ICB18..IO / ICB30..IO</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>M12 and M18 NPB housing in short or long barrel lengths</td>
<td></td>
<td>Nickel-plated brass M12, M18 or M30 cylindrical threaded barrel housings</td>
</tr>
<tr>
<td>Sensing distance from 2 mm up to 20 mm</td>
<td></td>
<td>Sensing distance from 4 mm to 22 mm</td>
</tr>
<tr>
<td>Output functions: NO or NC, NPN or PNP</td>
<td></td>
<td>Output functions: programmable NO or NC, NPN, PNP or push-pull</td>
</tr>
<tr>
<td>Two meter oil resistant PVC cable or M12 plug version</td>
<td></td>
<td>Two meter oil resistant PVC cable or M12 plug version</td>
</tr>
<tr>
<td>CE, cULus approved</td>
<td></td>
<td>CE, cULus approved</td>
</tr>
<tr>
<td><strong>MAIN FEATURES</strong></td>
<td></td>
<td><strong>MAIN FEATURES</strong></td>
</tr>
<tr>
<td>High precision and reliability thanks to the microprocessor technology</td>
<td></td>
<td>Operating temperature: -25°C to +70°C (-13°F to +158°F), and -40°C to +70°C (-40°F to +158°F) for M12-plug version</td>
</tr>
<tr>
<td>Eco-friendly potting material</td>
<td></td>
<td>Adjustable sensing distance and hysteresis and configurable output</td>
</tr>
<tr>
<td>Short-circuit and overload LED indication</td>
<td></td>
<td>Up to 2 kHz operating frequency</td>
</tr>
<tr>
<td>Laser engraved on front cap, permanently legible</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Photoelectric level sensors</strong></th>
<th><strong>Switching power supplies</strong></th>
<th><strong>Switching power supplies</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VP / VPA / VPB</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/8 &quot;pipe thread x 70.5 (74 mm) housing</td>
<td></td>
<td>Plastic and metal housing with compact size</td>
</tr>
<tr>
<td>Power supply 10-40 VDC, 200 mA NPN or PNP, NO and NC</td>
<td></td>
<td>Output power 30 W to 240 W</td>
</tr>
<tr>
<td>CE approved</td>
<td></td>
<td>Universal input range of 110-240 VAC or up to 370 VDC</td>
</tr>
<tr>
<td><strong>MAIN FEATURES</strong></td>
<td></td>
<td>Short Circuit, overload and overvoltage protection</td>
</tr>
<tr>
<td>Detection of condensed water from Air-conditioning system</td>
<td></td>
<td>PFC &gt; 100 W</td>
</tr>
<tr>
<td>Reliable detecting of water even with oil presence</td>
<td></td>
<td>CE, cULus and cURus (up to 120 W), UL1310 Class 2 (up to 72 W, for 72 W only for 24 VDC models)</td>
</tr>
<tr>
<td><strong>MAIN FEATURES</strong></td>
<td></td>
<td><strong>MAIN FEATURES</strong></td>
</tr>
<tr>
<td>DC OK signal</td>
<td></td>
<td>Save up to 20% panel space</td>
</tr>
<tr>
<td>Parallel connection</td>
<td></td>
<td>High efficiency and wide operating temperature</td>
</tr>
<tr>
<td>Screw, spring or detachable terminal connectors</td>
<td></td>
<td>Screw, spring terminal connectors</td>
</tr>
</tbody>
</table>

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

### Switching power supplies

**SPDC**
- Compact dimensions, 120 W / 240 W / 480 W
- 120 W - 12 / 24 VDC ; 240 W - 24 VDC ; 480 W - 24 / 48 VDC
- High efficiency >90%, and operating temperature -25°C to 70°C
- Universal Input 90 VAC – 264 VAC / 127 VDC – 370 VDC
- CE, cULus and cURus

**MAIN FEATURES**
- 150% power boost for up to 3 seconds
- In-built active PFC
- Parallel connection selection switch

### Switching power supplies

**SPM**
- DIN rail housing
- Low profile models
- Universal input 99-264 VAC / 120-370 VDC
- Single phase and battery charger versions available
- CE, cULus, cURus, UL1310 Class 2 (up to 91.2 W), ISA 12.12.1 Class I Div2, TÜV

**MAIN FEATURES**
- Operating temperature w/o derating -25°C to +60°C
- Short circuit and Overload protection
- High efficiency (up to 89%)

### Enclosed power supplies

**SPPC**
- Universal Input 115 / 230Vac
- Output Voltages: 5V, 12V, 24V and 48V
- Output powers from 25 to 800W
- Wide temp range from -25°C to +70°C (-13°F to 158°F)
- CE, cURus

**MAIN FEATURES**
- Fully protected output: OVP, SCP
- Very compact dimension
- PFC versions available from >75W

### AC Current transformers

**E83**
- Dimensions: 56 x 22.5 x 49 mm
- 7 input ranges
- Output 4-20 mA DC
- No power supply
- UL, CSA approved

**MAIN FEATURES**
- Easy interface to PLC
- Built-in hall sensor for current sensing
- LED indication

### Slim industrial relays

**RSLM**
- 28.0 x 5.0 x 15.0 mm
- Ultra slim – 5 mm width
- Surge protection up to 6 kV
- Nominal voltage up to 60 VDC
- High sensitivity: Approx. 170 mW

**MAIN FEATURES**
- Highly-compact and space-saving
- Available in SPDT or SPST
- Conforms to VDE 0700, 0631 reinforced insulation

### Electromechanical relays

**RMIA series**
- 2 x 10 A and 4 x 5 A versions
- DC coils: 6-220 V
- AC coils: 6-380 V
- Free wheeling diode integrated
- Sockets for PCB or DIN rail installations

**MAIN FEATURES**
- Contacts suitable for High Inrush loads
- Very compact size
- LED, latching mechanical push button and flag as standard

### Electromechanical relays

**RCP series**
- 2 x 10 A and 3 x 10 A contacts
- Industry standard relay
- High immunity to supply voltage fluctuation
- DC coils: 6-110 V
- AC coils: 6-230 V

**MAIN FEATURES**
- Octal and Undeocel
- LED, latching mechanical push button and flag as standard
- Wide selection of sockets for PCB and DIN rail

### Switching power supplies

**SPM**
- DIN rail housing
- Low profile models
- Universal input 99-264 VAC / 120-370 VDC
- Single phase and battery charger versions available
- CE, cULus, cURus, UL1310 Class 2 (up to 91.2 W), ISA 12.12.1 Class I Div2, TÜV

**MAIN FEATURES**
- Operating temperature w/o derating -25°C to +60°C
- Short circuit and Overload protection
- High efficiency (up to 89%)

### Electromechanical relays

**RMIA series**
- 2 x 10 A and 4 x 5 A versions
- DC coils: 6-220 V
- AC coils: 6-380 V
- Free wheeling diode integrated
- Sockets for PCB or DIN rail installations

**MAIN FEATURES**
- Contacts suitable for High Inrush loads
- Very compact size
- LED, latching mechanical push button and flag as standard

### Electromechanical relays

**RCP series**
- 2 x 10 A and 3 x 10 A contacts
- Industry standard relay
- High immunity to supply voltage fluctuation
- DC coils: 6-110 V
- AC coils: 6-230 V

**MAIN FEATURES**
- Octal and Undeocel
- LED, latching mechanical push button and flag as standard
- Wide selection of sockets for PCB and DIN rail
OUR COMPETENCE CENTRES AND PRODUCTION SITES

DENMARK
Carlo Gavazzi Industri A/S
Hadsten

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

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