



Building Automation

Solutions for
HVAC systems

HVAC systems

Solutions for



Air Handling Units

Heat pumps

Chillers

Roof Tops

Pellet Burners

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 21 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 five product lines: Sense, Switch, Control, Fieldbus and EcoEnergy equipment.

Our wide array of products includes sensors, monitoring relays, timers, solid-state relays, electronic motor controllers, energy management

equipment, fieldbus systems and components for the renewable energy. 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

Around 40% of energy is consumed in buildings and one of the most important parts is represented by Heating, Ventilation and Air Conditioning systems.

Efficient control and management of these systems, through the use of Carlo Gavazzi products, will result in noticeable energy savings. CO₂ emissions are reduced, thus respecting the environment, and the most comfortable living and working conditions are ensured.

It is possible to save up to 30% on energy consumption by using our

top quality and competitively-priced solutions for Heating, Ventilation and Air Conditioning market.

These solutions are innovative and involve state-of-the-art technology.

Our soft starters range for the compressors is able to reduce motor starting current thus increasing the system lifetime and allowing cheaper utility contracts.

Our monitoring relays reduce the risk of major failures, bringing to a higher comfort level at a lower overall cost.

Our energy meters ensure the basics of energy management, being able to send the energy related variables to the Building Management System so

as to keep the costs under control and monitor undesired trends.

When environmental conditions need to be controlled according to occupancy, thanks to our solutions, heating and air conditioning can be activated only when they are needed. This is extremely effective in saving energy in areas and periods where human presence is less frequent.

Carlo Gavazzi can provide a comprehensive range of products so as to maximize operating efficiency in both new and retrofit environments.

HVAC systems

Air Handling Units



Environmental Sensors

CGESCO2
CGESHT
CGESAIRVEL

Energy Meters

EM23

Soft Starters

RSHR
RSDR

Power Analysers

WM30
WM40

Power Transducers

CPT

Monitoring Relays

DWA01

Solid State Relays

RM
RG

In an air handling unit the air demand is highly variable, depending on the status of the dampers and the quality of the internal air.

To monitor the air quality CG-ES sensors measure CO₂, air humidity and temperature or any combination of these.

Mounted on the air duct, they convert the measured value into an analogue output for the unit controller.

To control the quality of the air in terms of temperature and humidity our Solid State Relays RM (hockey-puck version) and RG (DIN-rail version with integrated heatsink) provide

the necessary fast, reliable and quiet switching capacity. This allows de-humidification, pre-heating and even heating for places where most of the need is for air-conditioning. Eventually RG also comes in a 17.5 mm DIN-rail housing for the more space-demanding applications.



Heat Pumps



Soft Starters

**RSBD - RSBS
RSBS HP
RSBT**

Heat pumps are an alternative to conventional, fossil-fuel based burners for residential and commercial environments including cooling and production of domestic hot water. Heat pumps have the potential of cutting CO₂ emissions by nearly 8%.

In order to comply with the requirements of the energy suppliers, OEMs must ensure that certain levels of peak currents are not exceeded. Furthermore, in view of the installation of heat-pumps inside residential buildings, space is of a premium and hence heat pump designs, including the electrical panels, need to be very compact to save floor space.

Solid State Relays

**RM
RG**

Monitoring Relays

DPA51

Carlo Gavazzi HVAC softstarters, RSBS (1-phase systems), RSBD (3-phase systems) and RSBT (3-phase systems) are specifically designed for scroll compressors commonly used in heat pumps and chillers.

These products are very compact to ensure an easy fit in electrical panels. RSBS, RSBD and RSBT comply with emissions standards for residential installations.

Furthermore, these products are offered in a plug'n'play design which, apart from saving installation time, ensure that no tampering with the softstarter settings can be done in the field.

Energy Meters

**EM10
EM23**

Timers

**DAA51
DMB51**

Electromechanical Relays

RMIA

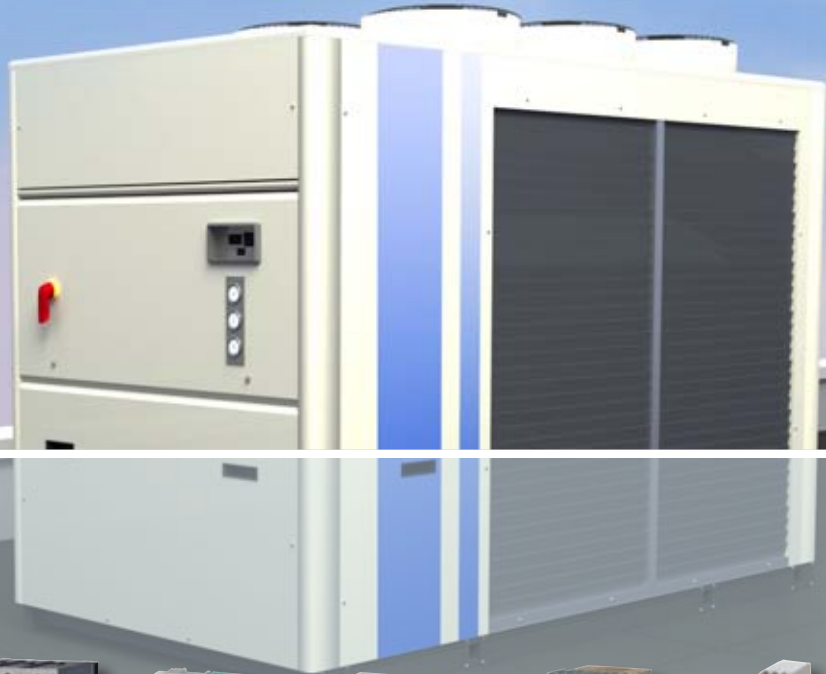
RSBD and RSBT include the patented autoadaptive algorithm, which allows the optimal current limit at every start.

Integrated diagnostic functions on RSBS, RSBD and RSBT ensure that the heat pump's compressor is protected in the event of abnormal conditions.



HVAC systems

Chillers



Monitoring Relays

DPA51 - DPB51
DLA71 - DPA53

Switching Power Supply

SPD
SPM
SPP

Soft Starters

RSHR - RSBT
RSDR - RSBD
RSQK - RSXK

Power Analysers

WM30
WM40

Energy Meters

EM21
EM23

Power Transducers

CPT

Timers

DAA51
DAC51

The compressors used in chillers can fail in case of incorrect phase sequence (needing replacement of the compressor), so the function has to be monitored. DPA51 is the market leader for the 17.5 mm DIN-rail dimensions with its phase loss detection capability.

In case undervoltage is a problem (overheating of the compressor motor), DPA53 adds a setpoint to facilitate keeping only the vital functions on until the grid is back to quality.

If installed directly on line, compressors start very abruptly with a huge inrush current; as a result voltage drops and

the utility company imposes a fine for exceeding the power limit.

To remove these effects the scroll compressor softstarters RSBT and RSBT, as well as RSHR and RSDR, are used with the additional benefit of a longer lifetime for the chiller.

To this purpose our energy meters provide energy monitoring and cost allocation: from EM23 to the Modbus transducer CPT - to deliver all the data to the supervision system - to WM40 for Bacnet connection to the building management system.



Roof Tops



Monitoring Relays	Switching power supply	Soft Starters	Power Analysers	Energy Meters	Solid State Relays	Timers	Environmental Sensors
DPA51 - DPB51 DPA53	SPD SPM SPP	RSHR - RSBT RSDR - RSBD RSQK - RSXK	WM30 WM40	EM24	RGC3A	DAA51 DAC51	CGESCO2 CGESHT CGESAIRVEL

This kind of plant needs to deliver high quality air (for temperature, flow, humidity and CO₂) at every single moment, requiring very high performance of sensing and control components.

CG-ES air quality sensors provide the control unit with the environmental values: RSBT, RSBD, RSHR and RSDR softstarters ensure proper and reliable starts without side effects on the surroundings;

RM and RG are used to heat and dry the air when needed, DPA51, DPA53 and DPB51 monitor the quality of the mains, while timers are used in a variety of cases, for instance DAC51 when star-delta start is installed.



HVAC systems

Pellet Burners



Inductive Proximity Sensors

ICB12

Capacitive Sensors

**CA18
EC30
CD50**

Solid State Relays

RM1A

Pellet burners for domestic heating use a remote reservoir of some cubic meters and a feeding system to transfer some of the pellets from the main reservoir to a smaller one in the burner.

To activate this system in case of low level or to stop the transfer of the

pellets because the burner reservoir is full, our CA18, EC30 or CD50 capacitive sensors are used.

Their main features are excellent EMC immunity and the best detection performance in the market, to allow correct detection in all conditions, including the cases where powder

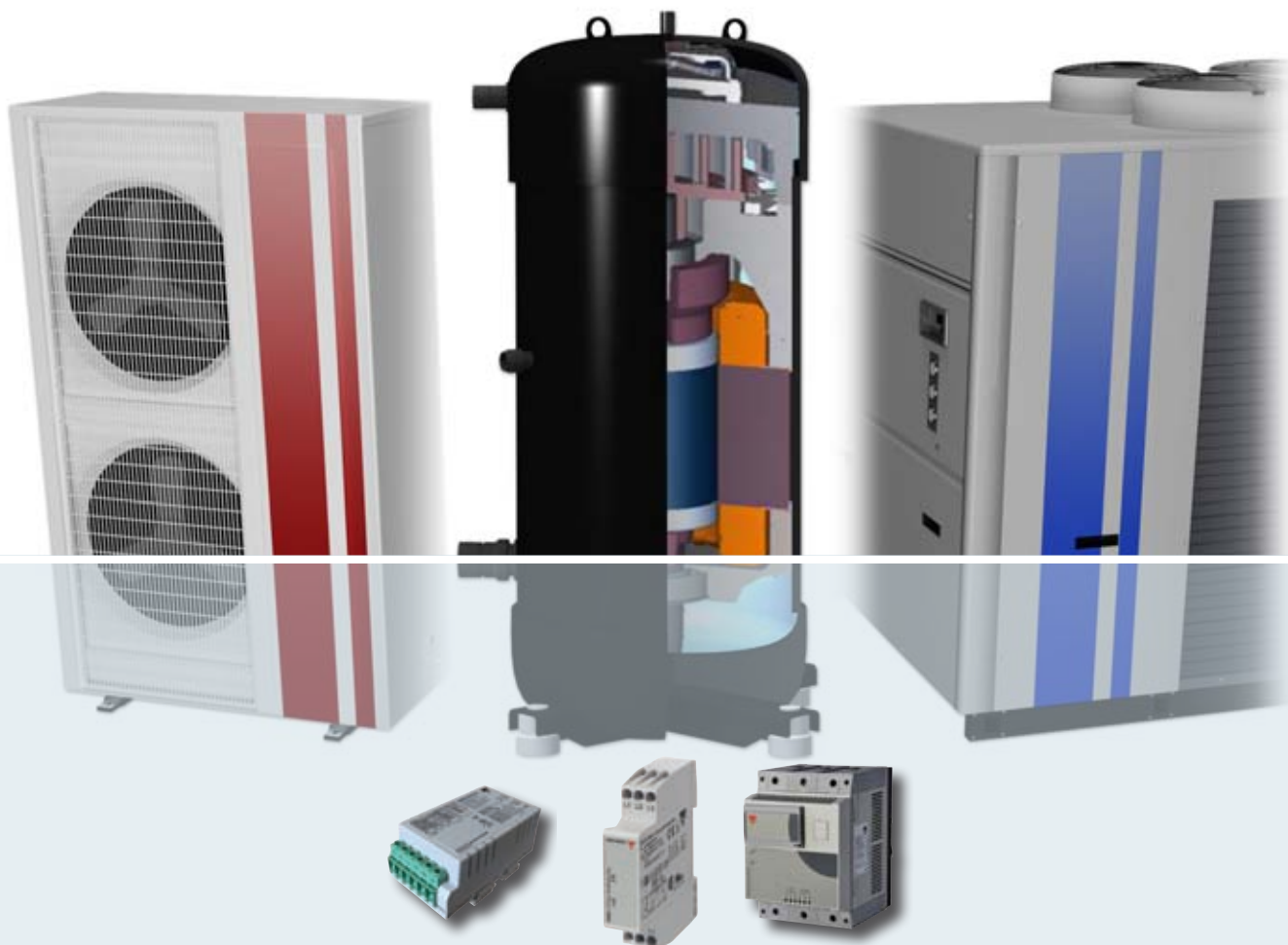
remains on the reservoir surface.

Solid state relay RM1A is used to start the water pumps or the fans for the smoke.

High frequency and silent operation make the difference in this application.



Our expertise in scroll compressors



Soft Starters

**RSBS
RSBS HP**

Monitoring Relays

DPA51

Soft Starters

**RSBD
RSBT**

Energy Efficiency in HVAC

Scroll compressors have earned a strong reputation in HVAC applications by proving to be a more reliable, compact and efficient solution than other categories of compressors. Worldwide initiatives promoting energy efficiency in the building sector are generating growing interest in more cost saving and efficient HVAC solutions, making the use of scroll compressors more and more a necessity.

Additionally, some countries have strict regulations on the maximum inrush current that is allowed during starting. In order to comply with such regulations, alternative means of starting the scroll compressor need to be installed.

Scroll compressors started via a direct on line (DOL) method normally require about 6 to 8 times the rated compressor current. This rapid inrush of current may cause undesirable effects on the system and equipment such as:

- Voltage fluctuations creating disturbances to neighbouring equipment.
- Light flickering.
- Triggering of protection equipment due to high peaks in starting current.
- Increased compressor noise and vibration during start.
- Excessive stresses on compressor, reducing compressor lifetime.
- Vibration & potential refrigerant leakage over time.

Our Soft Starters range

Carlo Gavazzi's HVAC compressor soft starters provide a means of reducing high values of inrush currents and the associated effects.

RSBS, RSBD and RSBT single and three phase softstarters are specifically designed for scroll compressor applications.

The innovative auto-adaptive algorithm patented on RSBT and RSBD ensures a typical inrush current reduction of >50% when compared to a DOL start. RSBS, on the other hand, has a fixed current limit to comply with regulations of certain utility companies such as in France.

HVAC systems

Our product range

Phase sequence and loss relays



DPA51 / DPA53

- Dimensions 81x17.5x67.2 mm DINrail housing
- Phase sequence and loss relay
- 3 phase AC (own power supply); regenerated voltage
- Power supply 208 to 480 VAC ($\pm 15\%$)
- Undervoltage detection
- UL, CSA and CCC approved

MAIN FEATURES

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

Monitoring relays



DPB51

- Dimensions 81 x 17.5 x 67.2 mm DIN-rail housing
- TRMS 3-phase over/under voltage, phase sequence and loss relay
- 3 phase AC (own power supply); regenerated voltage
- Power supply 208 to 480 VAC
- UL and CSA approved

MAIN FEATURES

- Detects the phase-phase or phaseneutral voltage
- 17.5 mm width: the smallest in the market
- Independent voltage setpoints and built-in delays

Cos ϕ relays



DWA01

- Dimensions 83 x 22.5 x 99.5 mm DIN-rail housing
- Cos ϕ monitoring relays
- 3 phase AC (own power supply); regenerated voltage
- Power supply 208 to 240 VAC or from 380 to 480 VAC
- UL and CSA approved

MAIN FEATURES

- Detects any potentially dangerous change of the cos ϕ
- Direct current connection or by CT
- Easy setup

Pump alternating relays



DLA71

- Dimensions 81x35.5x67.2 mm DINrail housing
- Pump alternating relay for 2 or 3 pumps
- Galvanically separated power supply, 24/48 or 115/230 VAC
- 2x or 3x 5A SPST output
- UL and CSA approved

MAIN FEATURES

- Built-in function for automaticrotation of the pumps
- Built-in delay for the second or thirdpump in case simultaneous activation is required
- Built-in function for automaticrotation of the pumps

Timers



DAA51 / DAC51

- Dimensions 81 x 17.5 x 67.2 mm DIN-rail housing
- Delay on operating function (DAA), start/delta function (DAC)
- Universal power supply
- Repeatability: < 0.2%
- UL and 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

3-phase scroll compressor soft starters



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

MAIN FEATURES

- Plug&Play: no external settings needed
- Typically >50% scroll compressor inrush current reduction
- Compact dimensions: better panel space savings

3-phase scroll compressor soft starters



RSBD 45mm

- Current balancing algorithm to reduce unbalance on uncontrolled phase
- Patented auto-adaptive algorithm for better inrush current reduction
- 2-phase controlled and internally bypassed
- Alarm and top of ramp indication

MAIN FEATURES

- Plug&Play: no external settings needed
- Operational current: 12AAC up to 45AAC @40°C
- Multi-voltage operation: 220 - 400 VAC

3-phase scroll compressor soft starters



RSBD / RSBT

- Enhanced current reduction capability with patented auto-adaptive algorithm
- Integrated advanced diagnostic functions
- 2-phase (RSBD) and 3-phase (RSBT) controlled and internally bypassed solutions
- Top of ramp and alarm relay indication

MAIN FEATURES

- No external settings required
- Multi-voltage operation: 220-480 VAC 50/60 Hz
- Operational current: 55/70/95 AAC
- Internally supplied

Our product range

1-phase scroll compressor soft starters	3-phase 7.5kW soft starters	22kW compact motor soft starters	3-phase 280kW soft starters
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RSBS / RSBS HP

- Current limit starting
- Advanced diagnostic functions
- Internally bypassed
- Up to 12 starts per hour
- cULus listed, EN60335-2-40 approval

MAIN FEATURES

- Plug&Play: no external settings needed
- Space saving IP20 design
- Integrated starting capacitor
- Optimised algorithm for high pressure starts (RSBS HP)



RSHR/RSHR Midi

- Operational Voltage: Up to 600 VAC 50/60 Hz
- Motor Rating: 3-phase up to 7.5 kW @ 400 V
- Ramp up time: 0.5 - 10 sec
- Ramp down time: 0.5 - 20 sec
- UL, cUL listed

MAIN FEATURES

- Up to 250 starts per hour
- Compact 45 mm housing
- Auxiliary relay for end of ramp (optional)



RSGD 45mm

- Operational voltage range: 187 - 440VAC, 187 - 660VAC
- Operational current range : 12AAC up to 45AAC
- Control voltage : 24VAC/DC, 110 - 400 VAC
- Auxiliary relays for top of ramp and alarms

MAIN FEATURES

- Compact dimensions: up to 22kW in 45mm wide housing
- Easy to setup: standard 3-knob setting
- Internally bypassed and supplied



RSDR

- Motor Rating: Up to 280 kW @400 V
- Ramp up time: 0.5 - 30 sec
- Internally bypassed
- 6-wire connection capability
- UL approved (pending)

MAIN FEATURES

- Multi voltage operation: 230 - 460 VAC, 50/60 Hz
- Auxiliary relays for top of ramp and alarms

3 phase 1050kW soft starters	1-phase solid state relays	1-phase proportional output	1-phase solid state relays
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RSQK/RSXK

- 3 phase controlled.
- Automatic application setup
- Inside delta capability
- Trip Class 30 starting duty

MAIN FEATURES

- Integrated keypad with LCD display.
- Alpha numeric display of parameters and alarms
- Energy optimising capability



RM, RAM Series

- Dimensions 58.2 x 44.8 x 28.8 mm, panel mount
- Operational voltage range: 24 - 660 VAC
- Rated Operational current: 25, 50, 75, 100, 125 AAC
- Control input ranges: 4 - 32 VDC, 20 - 280 VAC
- CE - cURus - CSA - VDE [RM1A..]

MAIN FEATURES

- Zero switching or Random Switching
- Low noise emission - EN55011 class B conformance [RM1A..L]
- Integrated over-voltage protection [RM1A]



RM1E Series

- Dimensions 58.2 x 44.8 x 28.8 mm, panel mount
- Operational voltage range: 90 - 660 VAC
- Rated Operational current: 25, 50, 75, 100 AAC
- Control input ranges: 0 - 10 VDC, 4 - 20 mADC
- CE - UR - CSA

MAIN FEATURES

- Phase Angle Control
- Optional Full cycle control (Distributed or Burst)
- Integral snubber network



RGS Series

- Dimensions 90 x 17.5 x 50.6 mm, panel mount
- Operational voltage range: 24 - 660 VAC
- Rated Operational current: 25, 50, 75, 90 AAC
- Control input ranges: 4 - 32 VDC, 20 - 275 VAC (24 - 190 VDC)
- CE - cURus - CSA - VDE (pending)

MAIN FEATURES

- Zero switching or Random Switching
- 10AAC ready to mount solution [RGS..DIN]
- Integrated over-voltage protection

HVAC systems

Our product range

1-phase hybrid relays



RMD1H Series

- Dimensions 81 x 17.5 x 67.2 mm, DIN-rail mount
- Operational voltage range: 195 - 253 VAC
- Rated Operational current: 20 AAC
- Control input ranges: 4 - 32 VDC, 24 - 275 VAC (24 - 190 VDC)
- CE - cURus

MAIN FEATURES

- Integrated bypass relay and overtemperature protection
- 5 million cycles operating lifetime
- No need for external heatsink

1-phase solid state contactors



RJ1P Series

- Dimensions 81.7 x 45 x 107 mm, DIN-rail mount
- Operational voltage range: 90 - 660 VAC
- Rated Operational current: 30, 50 AAC
- Control input ranges: 4 - 20 mAdc, 0 - 10 VDC
- CE - cURus

MAIN FEATURES

- Phase angle control or full cycle firing
- 0 to 99% power output control
- Integrated over-voltage protection

1-phase solid state contactors



RGC1 Series

- Zero cross or Instant On switching
- Product width: 17.5mm [20AAC] upto 70mm for [85AAC], DIN mount
- Operational voltage range: 24-660 VAC
- Control input ranges: 4-32 VDC, 20-275 VAC (24-190 VDC)
- CE - cULus Listing - VDE - GL [RGC..15, 20, 30]

MAIN FEATURES

- Optional overtemperature protection
- Integrated over-voltage protection
- SCCR 100kArms

3-phase solid state contactors



RGC2A/RGC3A Series

- 2-pole + direct link [RGC2A] or 3-pole [RGC3A] zero cross switching
- Operational ratings: up to 660 VAC, 75AAC per pole @ 40°C
- Control input ranges: 5-32 VDC, 20-275 VAC (24-190 VDC)
- Integrated over-voltage protection
- CE - cULus Listing

MAIN FEATURES

- SCCR 100kArms
- Optional System Monitoring [RGC..M]
- EMR alarm output and electronic auxiliary output [RGC..M]

Full cycle power regulator



RN2F

- Dimensions 120x90x103 mm, DIN-rail housing
- Distributed full cycle switching
- 2-pole switching for three phase heater control
- 4 - 20 mA or 0 - 10 VDC analogue control
- CE - UR - CSA

MAIN FEATURES

- Decreases thermo-mechanical stresses on heating element
- Alarm indication for loss of master phase
- 2-phase control

Environmental sensors CO₂



CGESC02

- CO₂ sensor
- Duct and wall mounting
- Working range 0-2000ppm/0-5000ppm
- 3 outputs: 0-10 V; 4-20 mA; switching output
- Supply voltage: 24 V AC/DC

MAIN FEATURES

- High accuracy ±50 ppm (+2%) at 2000 ppm
- Auto-calibration
- Plug&Play: no settings needed

Environmental sensors humidity and temp.



CGESHT

- Relative Humidity and Temperature sensor
- Duct and wall mounting
- Working range 0...95% RH; 0...50°C
- 2 outputs: 0-10 V; 4-20 mA; Supply voltage: 24 V AC/DC

MAIN FEATURES

- Different probe length
- Display
- Plug&Play: no settings needed

Environmental sensors air velocity



CGESAIRVEL

- Air Velocity sensor
- Duct mounting
- Working range 0...10/15/20 m/s
- Outputs: 0-10 V; 4-20 mA;
- Supply voltage: 24V AC/DC

MAIN FEATURES

- Low angular dependence
- Very good accuracy at low air velocity
- Plug&Play: no settings needed

Our product range

Energy meters



EM10 DIN

- Single-phase energy meters with direct connection
- Current input up to 32 A
- 1 DIN module dimension
- Class 1 (kWh) acc. to EN62053-1
- Pulse open collector output

MAIN FEATURES

- Direct measurement in a very compact housing to save space
- Suitable to measure generated energy
- MID Annex D certification available

Energy meters



EM2172D

- 3-phase energy meters with CT connection
- Solid or split-core 5A CT
- Dimensions 4-DIN rail module or 72x72 mm housing
- Class 1 (kWh) acc. to EN62053-1
- Pulse open collector or serial RS485 output

MAIN FEATURES

- Very compact and space saving meter
- The same meter can be installed both on DIN-rail or on the panel
- On request, MID annex D certification available

Energy meters



EM23, EM24

- Single-phase and 3-phase energy meters with direct connection
- Current rates up to 32 A (EM10) or 65 A (EM23 and EM24)
- 1 or 4 DIN-rail housing dimensions (EM10, EM23 and EM24)
- Class 1 (kWh) acc. to EN62053-1
- Pulse open collector output
- Modbus connection port (EM24)

MAIN FEATURES

- Direct measurement in a very compact housing to save space
- Enables and simplifies energy cost allocation
- MID Annex D certification available

Smart modular power analysers



WM30/WM40

- Dimensions 96 x 96 mm panel mounting housing.
- Accuracy 0.2 % (voltage, current)
- Universal power supply
- Front protection degree IP65, NEMA4X, NEMA12
- cULus approved

MAIN FEATURES

- Provides installation data to a SCADA to manage the whole system
- Modular housing to build the instrument according to the real application needs
- Modbus, Ethernet and BACnet-IP communication ports available

Power transducers



CPT

- Dimensions 83.5x45x98.5 mm DINrail housing
- Accuracy 0.5 % (voltage, current)
- Measurement by CT and VT
- Front protection degree IP20
- Analogue, digital, pulse or serial outputs available

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

Capacitive sensors



EC30

- High EMC Immunity.
- M30 mm housing, easy to mount
- Power supply 10-40 VDC, 200 mA NPN or PNP, NO and NC
- Power supply 20-250 VAC, 500 mA SCR, NO or NC
- CE, UL and CSA approved

MAIN FEATURES

- Reliable detection of pellets in the burner's feeding system

Capacitive sensors



CD50

- Flat pack sensor, easy to mount
- Dimensions: 50 x 30 x 7 mm
- Power supply 10-30 VDC, 50 mA NPN or PNP, NO or NC
- CE approved

MAIN FEATURES

- Detection of condensed water from Airconditioning system

Inductive Proximity Sensors



ICB Series

- M12 Nickel-brass housing in short or long barrel lengths
- Standard and double 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 and resistance to vibration and impacts

HVAC systems

Our product range

Switching power supply



SPD

- DIN-rail housing
- 1-phase (5-480W), 2-phase (100W), 3-phase (120-960W)
- Rated input voltage: 85-264 VAC (1-phase), 380-575 VAC (2-phase), 340-575 VAC / 480-820 VDC (3-phase)
- Approvals/Marks: UL, cUL listed and TÜV/CE approved

MAIN FEATURES

- Power Factor Correction (PFC)
- Parallel versions available
- High efficiency (up to 93%)

Switching power supply



SPM

- DIN-rail housing
- Universal input 90-264 VAC / 120-370 VDC
- Single phase and battery charger versions available
- Approvals/Marks: UL, cUL listed and TÜV/CE approved

MAIN FEATURES

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

Switching power supply



SPP

- DIN-rail housing
- Universal input 88-264 VAC / 120-375 VDC
- Single phase 20, 35 and 60W versions 5V to 24V
- Approvals/Marks: UL, cUL listed and TÜV/CE approved

MAIN FEATURES

- Operating temperature -40°C to +71°C
- Low stand-by power consumption
- High efficiency (up to 89%)

Conductive level systems



CLD / CLP

- Exact level detecting with insulated electrodes
- SPDT 8 A relay output
- Power supply 24 VAC/DC, 115 VAC or 230 VAC
- CE, UL and CSA approved

MAIN FEATURES

- Detection of condensed water from Airconditioning system
- Easy to install with simple electrodes

Conductive level probes



CLH

- 1 - 5 stainless steel electrodes
- Ø 4 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

Photoelectric level sensors



VP, VPA or VPB

- 3/8 "pipe thread x 70,5 (74 mm) housing
- Power supply 10-40 VDC, 200 mA NPN or PNP, NO and NC
- CE approved

MAIN FEATURES

- Detection of condensed water from Airconditioning system
- Reliable detecting of water even with oil presence

Electromechanical relays



RMIA Series

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

MAIN FEATURES

- Contacts suitable for High Inrush loads
- Very compact size
- LED, latchable mechanical pushbutton and flag as standard

Electromechanical relays



RCP Series

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

MAIN FEATURES

- Octal and Undecal
- LED, latchable mechanical pushbutton and flag as standard
- Wide selection of sockets for PCB and DIN rail

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
Petaksentie 2-4, FI-00661 Helsinki
Tel: +358 9 756 2000
Fax: +358 9 756 20010
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
7 Springlakes Industrial Estate,
Deadbrook Lane, Hants GU12 4UH,
GB-Aldershot
Tel: +44 1 252 339600
Fax: +44 1 252 326 799
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
Wijkemeerweg 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 94 480 10 61
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 32,
CH-6312 Steinhausen
Tel: +41 41 747 4535
Fax: +41 41 740 45 40
info@carlogavazzi.ch

OUR SALES NETWORK IN NORTH AMERICA

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

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

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Calle La Montaña no. 28, Fracc. Los Pastores
Naucalpan de Juárez, EDOMEX CP 53340
Tel & Fax: +52.55.5373.7042
mexicosales@carlogavazzi.com

OUR SALES NETWORK IN ASIA AND PACIFIC

SINGAPORE - Carlo Gavazzi Automation
Singapore Pte. Ltd.
61 Tai Seng Avenue
#05-06 UE Print Media Hub
Singapore 534167
Tel: +65 67 466 990
Fax: +65 67 461 980

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

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

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

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

HEADQUARTERS

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



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