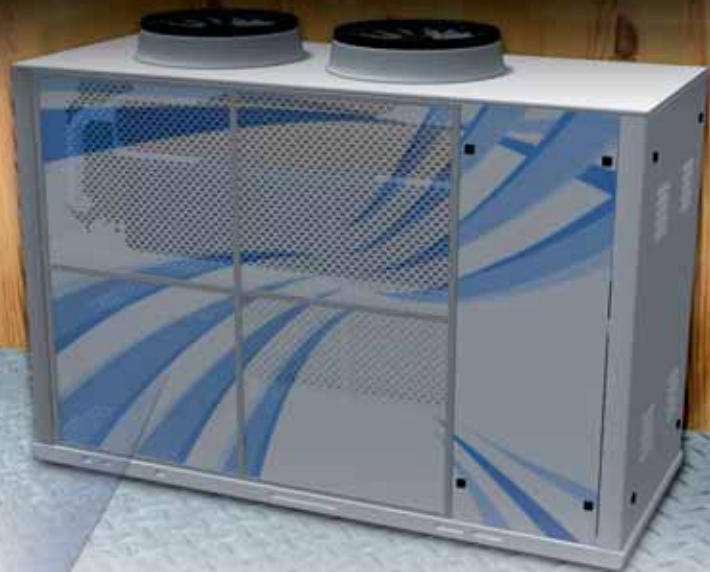
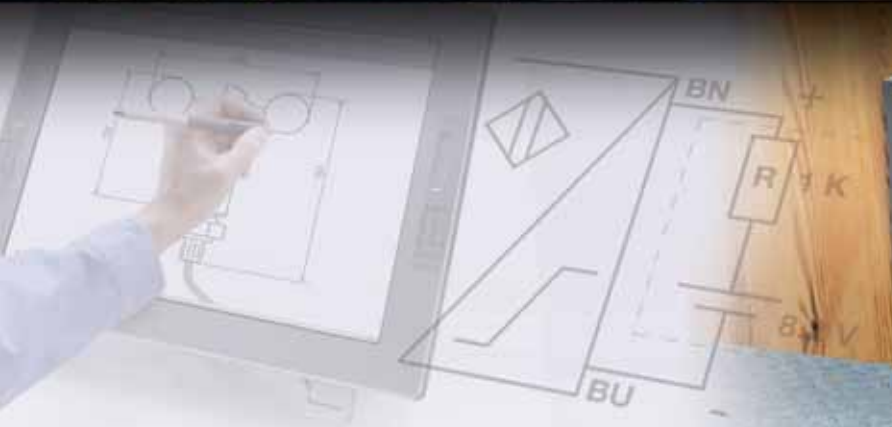


**CARLO GAVAZZI**  
Automation Components



*Solutions for HVAC Systems*

# *Components designed*

With more than 35 years' expertise in  
designing and building components  
for HVAC solutions,



# *for Your requirements*

**Carlo Gavazzi** can provide fully customised solutions,  
whatever your requirements





**IA...**

**MAIN FEATURES**

- Dimensions: M5 ÷ M30
- 2 wire or 3 wire
- Sensing distance: up to 11mm
- Short and long body
- Connections: M12 connector or cable
- Housing material: nickel-plated brass or stainless steel
- Degree of protection: IP67
- Approvals/Marks: CE-UL-CSA



**EC...**

**MAIN FEATURES**

- Dimensions: M18, M30
- Output: Transistor NPN or PNP, make or break switching; SCR, make or break switching
- Adjustable sensing distance
- Housing material: thermoplastic polyester, cylindrical
- Protection: reverse polarity and short-circuit



**CA...**

**MAIN FEATURES**

- Dimensions: M12 ÷ M32
- 2, 3 or 4 wire
- Sensing distance: up to 30mm
- Teach-in function
- Connections: M12 connector or cable
- Housing material: thermoplastic polyester
- Degree of protection: IP68
- Approvals/Marks: CE-UL-CSA



**ILMM...**

**MAIN FEATURES**

- AISI 304 316 stainless steel body
- NO or NC output function
- Suited for use in corrosive environments
- High temperature version available
- XLPE cable output connection



**RP1A/B...**

**MAIN FEATURES**

- AC Solid State Relay for PCB surface mounting
- Zero switching or instant-on
- Rated operational current: 3, 5 or 5.5A
- Rated operational voltage: up to 480V
- Control voltage: 3 to 32 VDC / 16 to 32 VAC
- Approvals/Marks: CE-UL-cUL-VDE

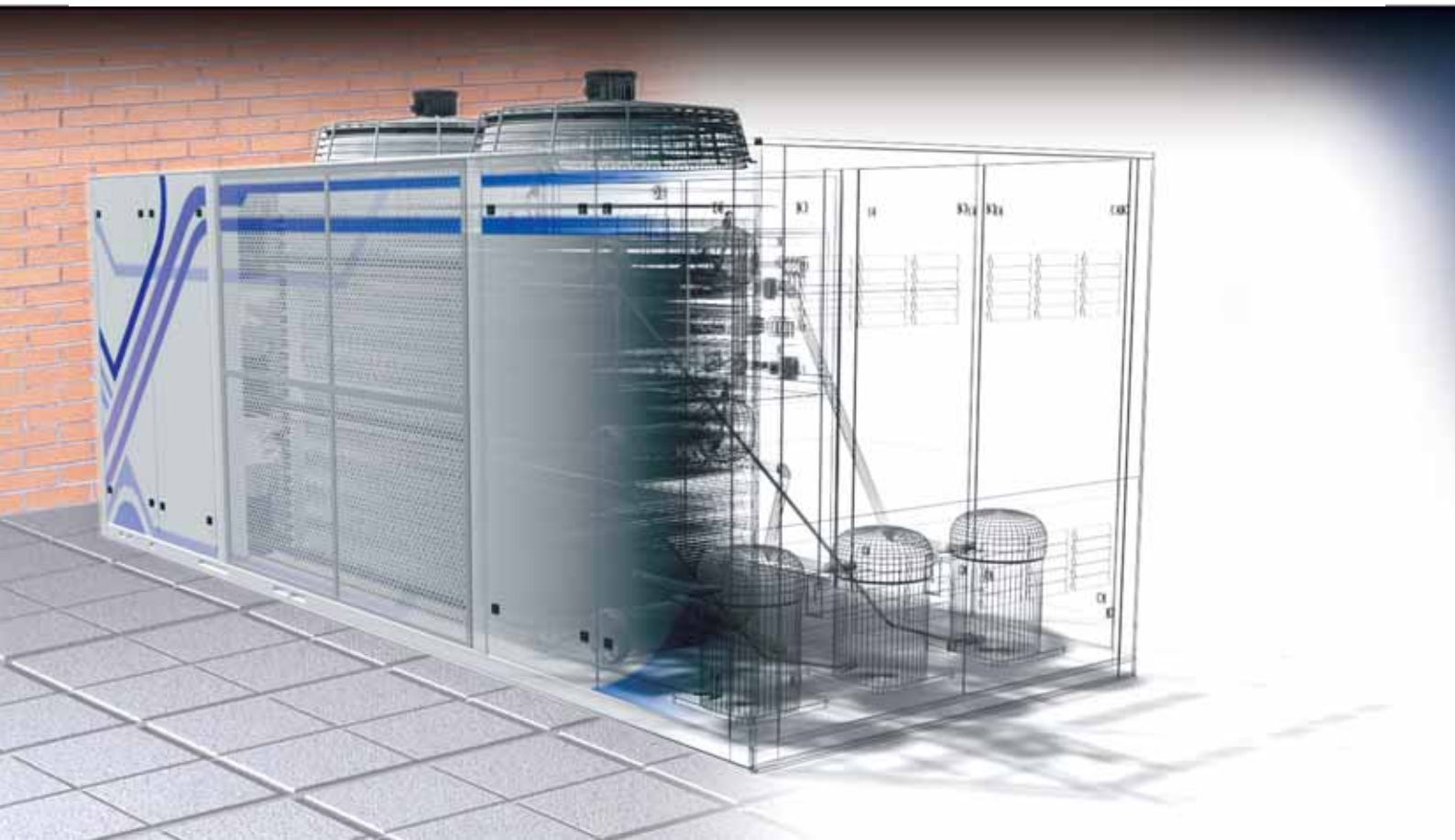
**Inductive Proximity Sensor**

**Capacitive Proximity Sensor**

**Capacitive Proximity Sensor**

**Proximity Magnetic Sensor**

**Solid State Relay**



# Our product range



**RM...**

**MAIN FEATURES**

- Dimensions: 58.2X44.8X28.8
- 1-phase solid state relay
- Zero switching or instant-on
- Rated operational current: 25, 50, 75, 100, 125 ACA
- Rated operational voltage: up to 660VAC
- Control input range: 3-48 VDC or 20-280 VAC



**RMD...**

**MAIN FEATURES**

- Dimensions: 81x35,5x67,2 DIN-rail housing
- Hybrid relay: SSR/EMR
- Operational ratings up to 230V, 20A Acrms
- Integral bypassing of semiconductors
- Internal over-temperature protection
- Electrical life: >1x10<sup>5</sup> operations
- No external heatsink needed
- Minimum audible noise



**RN...**

**MAIN FEATURES**

- Dimensions: 120x45x110 120x90x110
- Solid state contactor, 1- and 2 poles, DIN-rail mountable
- Zero switching or instant-on
- Rated operational current (1-pole): 30, 50 and 63 ACA
- Rated operational current (2-pole): 2x15 and 2x25 ACA
- Rated operational voltage: 230 VAC, 400/480 VAC



**RSE...-B**

**MAIN FEATURES**

- Dimensions: 77.4x45x102.5
- Soft starting and stop ping of 3-phase motors
- Rated operational current: 3A or 12 AAC 53 b
- Rated operational voltage: up to 600VACrms, 50/60 Hz
- Potential-free control input
- Transient overvoltage protection built-in
- Approvals/Marks: CE-UL-cUL-CSA



**RSHR...**

**MAIN FEATURES**

- Dimensions: 90x90x100
- Soft starting and stop ping of 3-phase motors
- Up to 22kW at 400VAC
- Control input range: A1-A2 24-550VAC/DC
- Rated operational current: 25A, 45A
- Rated operational voltage: up to 600VAC, 50/60 Hz
- Approvals/Marks: CE-UL-cUL

**Solid State Relay**

**Solid State Hybrid Relay**

**Solid State Relay**

**Soft Starter**

**Soft Starter**



## Designed to Market Requirements

Dedicated applications engineering teams custom design products and applications to client specification.

## Solution to Applications Challenges

Carlo Gavazzi offers a full range of plastics manufacturing products, individually designed and built to the highest standards, while offering the customer all the advantages of a complete system.

## Guaranteed reliability

All product ranges are designed and manufactured in a centre of excellence to ensure that each individual product is the best in its field. Carlo Gavazzi products are subject to stringent quality tests to guarantee they meet the performance specifications set.

# for HVAC Systems



## RMI...

### MAIN FEATURES

- Dimensions: 36x21,5x28
- No. of contacts (change-over): 2/4
- Contact rating: 5/10A
- Max. load AC1: 6/12 A 250 VCA
- Min. load AC1: 100 mA / 5 VDC
- Electrical life: >1x105 cycles
- Approvals/Marks: UL, CSA, TUV, IMQ



## DPA51.../DPA53...

### MAIN FEATURES

- Dimensions: 81x17,5x67,2 DIN-rail housing
- Phase sequence, total and partial phase loss monitoring relay
- 3-phase AC (own power supply); regenerated voltage
- Knob-adjustable under voltage detection
- Output: 1xSPDT relay normally energized
- Electrical life: >1x105 operations
- Power supply: from 208 to 480 VAC ( $\pm 15\%$ )
- Approvals/Marks: CE-UL-CSA



## DPA71...

### MAIN FEATURES

- Dimensions: 81x35,5x67,2 DIN-rail housing
- Phase sequence, total and partial phase loss monitoring relay
- 3-phase AC (own power supply); regenerated voltage
- Knob-adjustable under voltage detection
- Output: 1xSPDT relay normally energized
- Electrical life: >1x105 operations
- Power supply: from 208 to 480 VAC ( $\pm 15\%$ )
- Approvals/Marks: CE-UL-CSA



## DWA...

### MAIN FEATURES

- Dimensions: 80x22,5x99,5 DIN-rail housing
- $\cos\phi$  monitoring relay. 1- or 3-phase AC (own power supply). Direct input or through external CT. Power ON delay adjustable.
- Output: 1xSPDT relay
- Electrical life: >1x105 operations
- Power supply: 208-240 VAC [M23] 380-480 VAC [M48]
- Approvals/Marks: CE-UL-CSA



## DLA71...

### MAIN FEATURES

- Dimensions: 81x35,5x67,2 DIN-rail housing
- Pump alternating relay for 2 or 3 pumps
- Output: 1xSPST relay
- LED indication for relay and power supply ON
- Galvanically separated power supply
- Built-in function for automatic rotation of the pumps

## Midi Industrial Relay

## Monitoring Relays

## Monitoring Relays

## Monitoring Relay

## Monitoring Relay

### Heating

Problems in the mains, if not stopped in time, can lead to the burning of compressors requiring their replacement. DPA51 from Carlo Gavazzi immediately detects incorrect phase sequence in the mains, stopping it in time so that burning of the compressors is prevented. The starting up of the heat-pump can cause dips in the mains supply. Carlo Gavazzi's RSE-B reduces disturbance to the mains supply by gradually ramping up the voltage when ever the heat-pump has to be started up.

### Building ventilation

Often the bus modules that are available for use, in the HVAC standard solution, are too complex and expensive for simple ON/OFF control and monitoring functions (e.g. those used in fire protection systems).

Carlo Gavazzi's DUPLINE provides an alternative cost-effective and easy-to-use solution for such functions. immediately detected so that maintenance can be activated in a timely manner.

Often the bus modules that are available for use, in the HVAC standard solution, are too complex and expensive for simple ON/OFF control and monitoring functions (e.g. those used in fire protection systems). Carlo Gavazzi's DUPLINE provides an alternative cost-effective and easy-to-use solution for such functions.

### Air conditioning

In order to guarantee the constant circulation of heating or cooling fluid, even when pump failure occurs, a backup pump is required. DLA71 designed by Carlo Gavazzi automatically alternates two pumps every



### DAA.../DAC...

#### MAIN FEATURES

- Dimensions: 81x17,5x67,2(DAA51) 81x17,5x67,2(DAC51) 81x35,5x67,2(DAA71) DIN-rail housing
- Delay on operate (automatic start)
- Output: 1xSPDT relay
- Electrical life: >1x105 operations
- Power supply: 24VDC/24 to 240 VAC
- Approvals/Marks: CE-UL-CSA



### WM12.../WM14...

#### MAIN FEATURES

- Dimensions: 90x07,8x64,5
- 3-phase multi-function power indicator (-12) and analyzer (-14)
- System: VLL, VLN, An, VA, VAdmd, Wdmd, W, var, PF, Hz. Max: A, Wdmd. Single phase: VLL, VLN, A, VA, W, var, PF.
- Instant variables: 3 DGT (-12); 8+1 DGT (-14)
- Energy variables: N.A. (-12); 8+1 DGT (-14)
- Accuracy:  $\pm 0,5\%$  FS (V, A)
- Degree of protection: IP40
- Approval/Marks: CE-UL



### WM22 DIN...

#### MAIN FEATURES

- Dimensions: 90x162.5x63
- 3-phase power analyzer. Direct connection up to 90A. Back-lighted LCD display. Measurement of system and phase variables. Measurement of THD.
- Instant variables: 4x3<sup>1</sup>/<sub>2</sub> DGT
- Energy variables: 7<sup>1</sup>/<sub>2</sub> DGT
- Accuracy:  $\pm 0.5\%$  RDG (A, V) cl. 1(EN61036) – cl. 2(EN61268)
- Degree of protection: IP40
- Approvals/Marks: CE



### CPT DIN...

#### MAIN FEATURES

- Dimensions: 45x83.5x98.5
- Power analyzer and energy meter. 2 alarm, or pulse or -1-2 analogue outputs. Dupline bus. RS 232 485/422 (Modbus). Measurement of all instantaneous variables.
- Instant variables: N.A.
- Energy variables: N.A.
- Accuracy: class 0.5 (A, V)
- Degree of protection: IP20
- Approvals/Marks: CE



### WM3 96...

#### MAIN FEATURES

- Dimensions: 96x96x124
- 3-phase power quality analyzer. System: VNL, VLL, An, VA, VAdmd, Wdmd, W, var, PF, Hz, THD, total/partial KWh, kvarh (4 tariff). Single phase: VNL, VLL, A, W, var, PF, THD.
- Instant variables: 4x3<sup>1</sup>/<sub>2</sub> DGT
- Energy variables: N.A.
- Accuracy:  $\pm 0.5\%$  RDG (V, A)
- Degree of protection: IP65
- Approvals/Marks: CE, UL, CSA

Timers

Energy Management

Energy Management

Compact Power Transducer

Energy Management

six hours and ensures that one pump works in case the other one fails. In the event that one pump should fail maintenance can be conveniently performed in a six hours timeframe. Such a system therefore guarantees the circulation of fluid at all times.

### Refrigeration

The switching on and off of compressors according to a certain power-saving algorithm can generate a system capable of optimizing power consumption. CPT and WM3 from Carlo Gavazzi make this possible by providing the proper variables set to a PLC so that compressors can be switched on and off according to the chosen algorithm. Reduction of power consumption is therefore achieved and in turn cost-savings are also delivered.



## OUR SALES NETWORK IN EUROPE

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

**BELGIUM** - Carlo Gavazzi NV/SA  
Schaarbeecklei 213/3, 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 42, 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-00630 Helsinki  
Tel: +358 9 756 2000  
Fax: +358 9 756 20010  
myynti@carlogavazzi.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  
Rudolf-Diesel-Strasse 23,  
D-64331 Weiterstadt  
Tel: +49 6151 81000  
Fax: +49 6151 81 00 40  
kontakt@carlogavazzi.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  
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  
gavazzi@carlogavazzi.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@carlogavazzi-sa.es

**SWEDEN** - Carlo Gavazzi AB  
Nattvindsgatan 1, S-65221 Karlstad  
Tel: +46 54 85 1125  
Fax: +46 54 85 11 77  
gavazzi@carlogavazzi.se

**SWITZERLAND** - Carlo Gavazzi AG  
Verkauf Schweiz/Vente Suisse  
Sumpfstrasse 32,  
CH-632 Steinhausen  
Tel: +41 41 747 4535  
Fax: +41 41 740 45 40  
verkauf\_vente@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

**CANADA** - Carlo Gavazzi LTEE  
3777 Boulevard du Tricentenaire  
Montreal, Quebec H1B 5W3  
Tel: +1 514 644 2544  
Fax: +1 514 644 2808  
gavazzi@carlogavazzi.com

## OUR SALES NETWORK IN ASIA AND PACIFIC

**SINGAPORE** - Carlo Gavazzi Automation  
Singapore Pte. Ltd.  
No. 178 Paya Lebar Road  
#04-01/05 409030 Singapore  
Tel: +65 67 466 990  
Fax: +65 67 461 980

**MALAYSIA** - Gavazzi Automation  
Sdn Bhd.  
54, Jalan Rugby 13/30,  
Tadisma Business Park Seksyen13  
40100 Shah Alam, Selangor  
Tel: +60 3 55 121162  
Fax: +60 3 55 126098

**CHINA** - Carlo Gavazzi Automation  
(China) Co. Ltd.  
No. 1001 Shangbu Middle Road,  
Futian, Shenzhen  
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., Kowloon,  
Hong Kong  
Tel: +852 23041228  
Fax: +852 23443689

## OUR PRODUCTION SITES

Carlo Gavazzi Industri A/S  
Hadsten - **DENMARK**

Carlo Gavazzi Ltd  
Zejtun - **MALTA**

Carlo Gavazzi Controls SpA  
Controls Division  
Belluno - **ITALY**

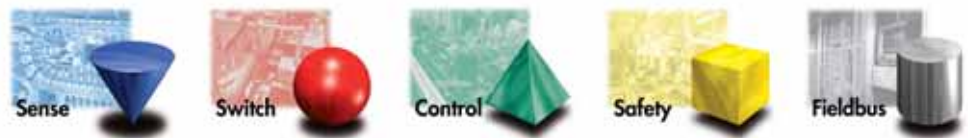
Carlo Gavazzi Controls SpA  
Sensors Division  
Castel Maggiore (BO) - **ITALY**

Uab Carlo Gavazzi Industri Kaunas  
Kaunas - **LITHUANIA**

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@gavazzi-automation.com  
www.carlogavazzi.com/ac



**CARLO GAVAZZI**  
Automation Components

Further information on [www.carlogavazzi.com/ac](http://www.carlogavazzi.com/ac)

**CARLO GAVAZZI**