

CARLO GAVAZZI
Automation Components



REC Series

Solid State Motor Contactors and Reversing Contactors

Up to 4kW (5Hp)





The REC Series

Three versions of solid state contactors are offered in a compact and stylish 44.5mm wide housing.



Two Pole
Solid State Contactor



Three Pole
Solid State Contactor



Reversing
Solid State Contactor

REC2B

A three-phase contactor with two switched poles, while the other pole connects the mains directly to the motor. This version can switch motors up to 4kW (5Hp) and is the most compact solid state motor contactor on the market, which employs SCR technology. It is a more economical version of the REC3B Series.

REC3B

A three-phase contactor, in which all three poles are switched. Three pole switching eliminates any phase imbalance and provides a safer switching solution. This option can switch motors up to 3kW (3Hp)

REC2R

A three-phase reversing contactor in which two poles interchange the mains connection, while the other pole is a direct connection from the mains to the motor. Motors up to 3kW (3Hp) can be reversed.





A Solid State Idea...

- To switch on and off (or reverse) three phase motors with short duty cycles, with the ability to do so more frequently
- To cut down on long term costs related to mechanical contactor replacements and maintenance
- To drastically reduce system downtime, thus maximizing operations efficiency and profitability
- To guarantee repeatable results with each and every switching operation
- To completely eliminate irritating clicking sounds
- To reverse the direction of three-phase motors with a compact solution
- A solid state switch based upon the latest technology and designed using decades of experience



Long Term
Reliability



Space
Optimization



Cost
Saving



User
Friendly

The REC Series of Solid State Contactors

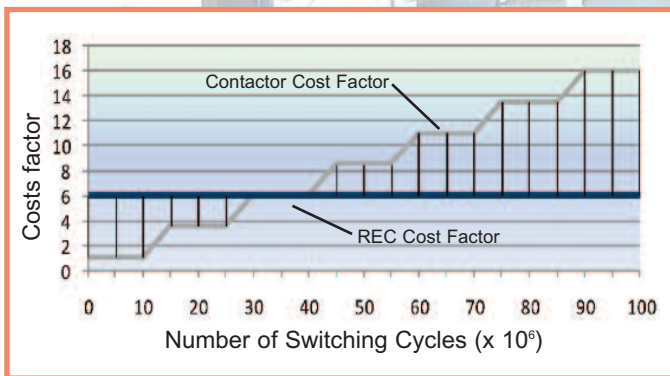
The **REC Series** of three-phase solid state motor contactors and reversers are designed to cope with all these requirements. The motor current is switched by a robust combination of back-to-back power thyristors (SCRs).

The output semiconductors will switch on instantaneously upon the application of a control input signal. The solid state switch has an integrated heatsink that is enclosed in the plastic housing of the **REC Series**. This eliminates the need for a protective earth (ground) connection, thus making the switch from a mechanical contactor easier.





Starting and Running Cost Comparison REC Series vs Mechanical Contactor



Selection Guide – REC Switching Contactors

Rated Voltage	No of Poles	Control Voltage	Power Rating @ 40C			
			2.2kW (3Hp) @ 480V	2.2kW (3Hp)*	3.0kW (5Hp)	4.0kW (5Hp)
48-530Vrms	2	24Vdc, -15%, +20%**	REC2B48D20GKE	-	REC2B48D30GKE	REC2B48D40GKE
		90-253 VAC	REC2B48A20GKE	-	REC2B48A30GKE	REC2B48A40GKE
	3	24Vdc, -15%, +20%**	REC3B48D20GKE	REC3B48D21GKE	REC3B48D30GKE	-
		90-253 VAC	REC3B48A20GKE	-	REC3B48A30GKE	-
48-600Vrms	2	24Vdc, -15%, +20%**	-	-	REC2B60D30GKE	-
		90-253 VAC	-	-	REC2B60A30GKE	-
	3	24Vdc, -15%, +20%**	REC3B60D20GKE	-	-	-
		90-253 VAC	REC3B60A20GKE	-	-	-

* higher ITSM rating

** according to EN61131-2

Selection Guide – REC Reversing Contactors

Rated Voltage	No of Poles	Control Voltage	Power Rating @ 40C and 480V	
			2.2kW (3Hp)	3.0kW (5Hp)
48-530 VAC	2	15 - 32VDC*	REC2R48D20GKEV	REC2R48D30GKEV
		90-253VAC	REC2R48A20GKEV	REC2R48A30GKEV
48-600 VAC	2	15 - 32VDC*	-	REC2R60D30GKEV
		90-253VAC	-	REC2R60A30GKEV

* According to EN61131-2



High Frequency Switching

Productivity requirements are continuously on the increase and so is the reliability of the process. Unlike mechanical contactors, the **REC Series** does not exhibit any contact de-bouncing or contact degradation by arcing. This leads to an excellent response time between application of the control signal to the **REC** and the switching of the output semiconductors.



Long-Term Reliability

This is always a priority and is mostly needed in processes where a system failure is costly since the raw material being worked upon would have to be scrapped.

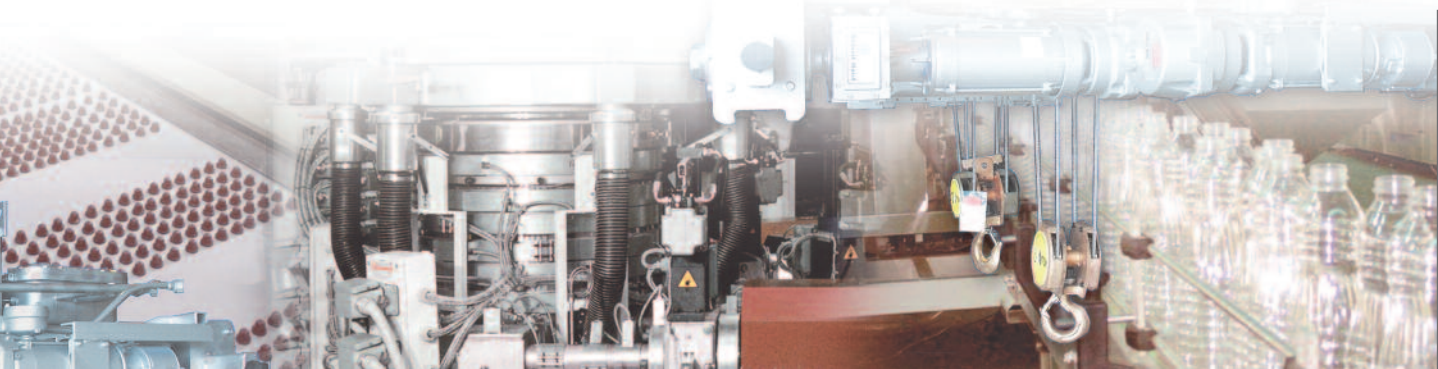
The **REC Series** of solid state contactors contributes to a decrease in maintenance costs, an increase in process efficiency, as well as a decrease in long term costs related to repair and contactor replacements.



Easy to Install

The **REC** can be mounted on DIN-rail and also directly to the enclosure back panel though the mounting bracket.

Control voltage is applied through a detachable input connector located on the front of the contactor. The screw terminals for motor and mains connection are similar to conventional mechanical contactors. The **REC2R Series** features an electronic interlock as a standard feature to prevent simultaneous switching of two phases.



Space Saver

Typically, an electromechanical reversing contactor consists of two contactors occupying a minimum width of 90mm of panel space, together with a timing/control module. With the **REC2R Series**, only 45mm is required, thus saving at least 50% of panel space compared to a conventional electromechanical reversing contactor assembly.

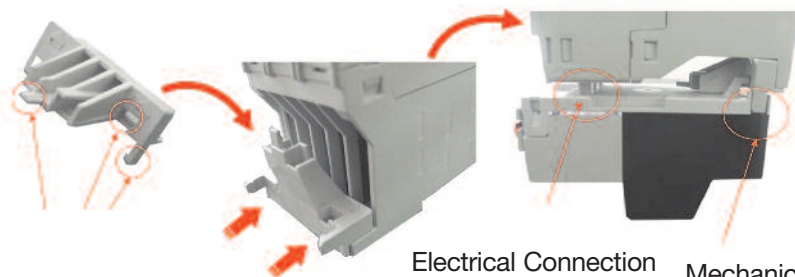


Accessories

A selection of motor overload relays can also be mounted directly to the electrical connection. The adaptor can be snapped to the base of the **REC Series** in order to also provide a reliable and sturdy mechanical connection between of the **REC Series** and the motor overload relay.

Overload Relay Adaptor

- Easily connected to the base of the **REC** housing
- Provides mechanical compatibility for other overload relays
(Please see the datasheet for more information)



Electrical Connection Mechanical Connection

Adaptor has three different anchoring or clipping areas



Applications

The REC series may be used in, but definitely not limited to, the following applications

Supermarket Checkouts

Economic

Electrical Hoists

Compact

Valve Actuators

Reliability

Conveyor System

Durable

Palletizers

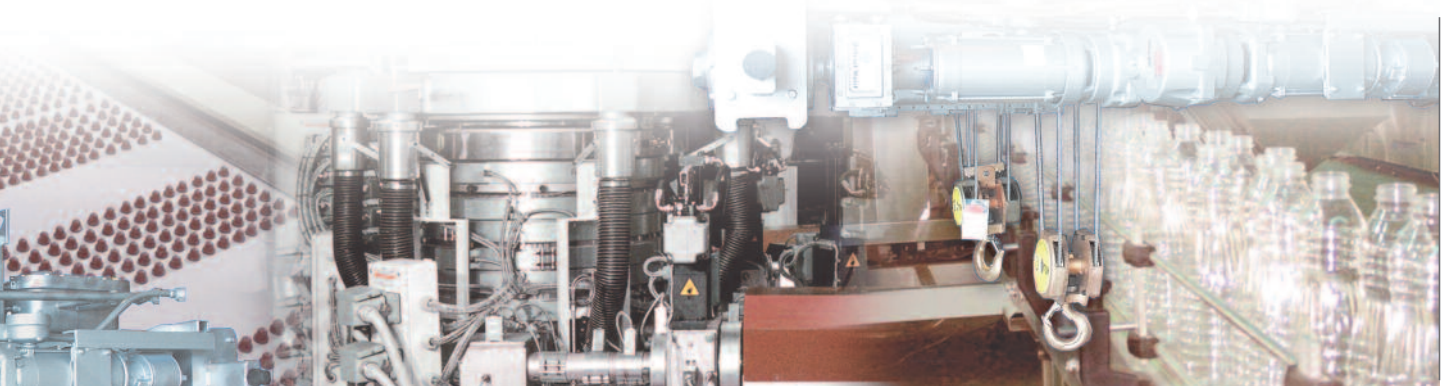
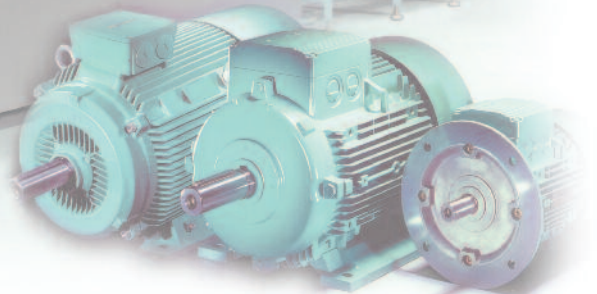
Precision

Wood Cutters

Robust

High-speed Postal Sorting

Repeatability



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
Schaarbeeklei 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 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@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
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
Wijkmeerweg 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@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-632 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,
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 S.A. de C.V.
Mexico City, Mexico
Tel: +52 55 2955 7978
Fax: +001 800 222 2659
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 PUJ 1A/46, 47301 Petaling Jaya,
Selangor, Malaysia.
Tel: +60 3 7842 7299
Fax: +60 3 7842 7399

CHINA - Carlo Gavazzi Automation
(China) Co. Ltd.
Rm. 2308 - 2310, 23/F.,
News Building, Block 1,
1002 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., Kowloon,
Hong Kong
Tel: +852 23041228
Fax: +852 23443689

OUR COMPETENCE CENTRES & PRODUCTION SITES

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

Carlo Gavazzi Ltd
Zeitun - **MALTA**

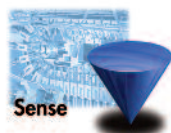
Carlo Gavazzi Controls SpA
Belluno - **ITALY**

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



CARLO GAVAZZI
Automation Components

Further information on
www.gavazzionline.com

CARLO GAVAZZI