

CARLO GAVAZZI
Automation Components

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REC

**Solid State Motor Contactors
and Reversing Contactors**

Up to 5Hp (4kW)



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 5Hp/4kW 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 3Hp/3kW.

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 3Hp/3kW 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 related 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.



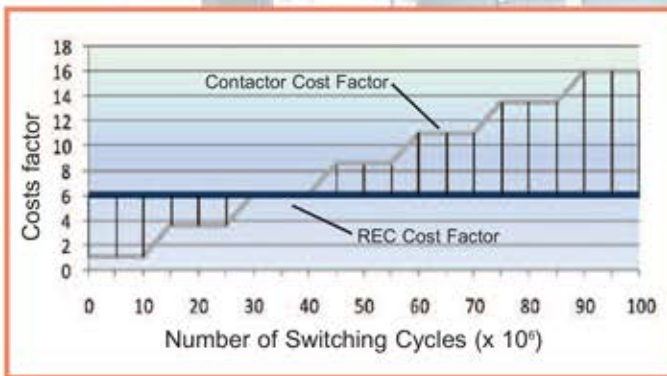
The REC Series of Solid State Contactors

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 REC's plastic housing. 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, an electronic interlock function is included 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 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)



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



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