

### DCRG series



DCRG 8



Order code	Description	Qty per pack	Weight [kg]
	no.	no.	[kg]
<b>DCRG 8</b>	8 steps, expandable up to 24 steps, 100...440VAC	1	0.980
<b>DCRG 8IND</b>	8 steps, expandable up to 24 steps, 100...440VAC, for capacitive reactive power factor correction	1	0.980

#### Accessories.

<b>NTC 01</b>	Remote temperature sensor, length 3m/118,11"	1	0.150
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Order code	Description
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#### EXPANSION MODULES

##### Additional steps.

<b>EXP10 06</b>	2 relay outputs to increase number of power factor correction steps
<b>EXP10 07</b>	3 relay outputs to increase number of power factor correction steps



##### Inputs and outputs.

<b>EXP10 00</b>	4 opto-isolated digital inputs
<b>EXP10 01</b>	4 opto-isolated static outputs to increase number of static steps
<b>EXP10 02</b>	2 digital inputs and 2 opto-isolated static outputs
<b>EXP10 03</b>	2 relay outputs 5A 250VAC
<b>EXP10 04</b>	2 PT100 opto-isolated analogue inputs, either 0/4...20mA, 0...10V or 0...±5V
<b>EXP10 05</b>	2 opto-isolated analogue inputs 0/4...20mA, 0...10V or 0...±5V
<b>EXP10 08</b>	2 opto-isolated digital inputs and 2 relay outputs 5A 250VAC
<b>EXP10 16</b>	Capacitor protection with 2 inputs for temperature measurement with NTC sensors and 2 three-phase measurement inputs

##### Communication ports.

<b>EXP10 10</b>	Opto-isolated USB interface
<b>EXP10 11</b>	Opto-isolated RS232 interface
<b>EXP10 12</b>	Opto-isolated RS485 interface
<b>EXP10 13</b>	Opto-isolated ETHERNET interface with web server function
<b>EXP10 14</b>	Opto-isolated Profibus-DP interface

##### Other functions.

<b>EXP10 30</b>	Data memory, calendar-clock with backup reserve energy for data logging
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EXP 10...

#### Maximum expandability DCRG 8 / DCRG 8IND

DCRG 8 / DCRG 8IND	EXP10 06	EXP10 07	EXP10 01	TOTAL STEPS	
				Relay	Static
Controller	Module with 2 relay outputs	Module with 3 relay outputs	Module with 4 static outputs		
Steps	no. of modules	no. of modules	no. of modules		
8	4 (2 steps)	–	–	16	–
8	2 (2 steps)	max. 2 (3 steps)	–	18	–
8	–	–	max. 4 (4 steps)	8	16

#### Snap-in fixing of 4 EXP... expansion modules DCRG 8 / DCRG 8IND



MAX 4

#### General characteristics

The DCRG automatic power factor controller satisfies the technical requirements of modern electrical systems in industry.

It is designed to satisfy them, with the option of extending its functionality by using specific EXP series expansion modules. Mention should also be made of the optical communication port as standard, for programming the controller, diagnostics and data download.

The backlit graphic LCD facilitates data reading even in poor lighting conditions and permits the display of system information clearly and intuitively.

Its main features are:

- 128x80-pixel backlit graphic LCD with texts in 10 languages: Italian, English, Spanish, French, German, Czech, Polish, Russian, Portuguese and one customisable
- connection in single- and three-phase lines as well as three-phase lines with neutral control and cogeneration systems (4 quadrants)
- capacitive reactive power factor correction (DCRG 8IND)
- independent power factor correction for each single phase (SPPFC)
- use with medium-voltage lines with VTs
- capability for correct operation even in systems characterised by high harmonic content
- drastic reduction in the number of switching operations
- balanced use of steps with same power rating
- measurement of reactive power installed for each step
- recording of the number of connections for each step
- capacitor over-current protection on all three phases
- panel over-temperature protection via internal sensor and external sensor
- accurate micro-breaking protection
- current and voltage harmonic analysis
- quick CT programming function
- USB (CX 01) and Wi-Fi (CX 02) communication port for PC, smartphone and tablet connection
- Modbus-RTU TCP and ASCII communication protocol
- compatible with Synergy supervision software, Xpress remote control and configuration software and with the Sam1 application for Android/iOS
- sending and reception of SMSs, sending of e-mails with alarm diagnosis and data files, FTP Client function (with EXP1012 and EXC M3G 01)

#### Operational characteristics

- voltage measurement circuit:
  - auxiliary supply voltage: 100...415VAC
  - rated frequency: 50/60Hz (±10%)
- current measurement circuit:
  - single- and three-phase input
  - rated current: 5A (1A programmable)
- measurements and control:
  - power factor adjustment: 0.5ind...0.5cap.
  - voltage measurement range: 50...720VAC
  - current measurement range: 0.025...6A
  - temperature measurement range: -30...+85°C
  - capacitor overload current measurement range: 0...250%
  - type of voltage and current measurement: true root mean square (TRMS).
- relay outputs:
  - 7 each with NO contact and the last as changeover
  - rated current: 5A 250VAC AC1
- flush-mount housing (144x144mm / 5.67x5.67")
- IEC degree of protection: IP65 on front; IP20 on terminals.

#### Certifications and compliance

Certifications obtained: cULus, EAC, RCM (only for DCRG 8).

Compliant with standards: IEC 61010-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, UL 508, CSA C22.2 no. 14.

#### Contactors for power factor correction

See section 1, page 1-13.

Software: Synergy, Xpress and Sam1

See section 16.

#### EXP expansion modules

See section 16.