



Product designation

Automatic power factor controller, 8 relay steps, graphic display, for capacitive reactive power factor correction  
**DCRG8IND**

Product type designation

**Auxiliary supply**

Rated auxiliary supply voltage Us

AC

min	VAC	100
Max	VAC	415

DC

min	VDC	110
Max	VDC	250

Auxiliary operating range

90...484VAC /  
93.5...300VDC

Auxiliary rated frequency

Hz 50/60 ±10%

Power consumption Max

VA 27 (with 4 EXP modules)

Power dissipation Max

W 10.5 (with 4 EXP modules), 5.5 (with no EXP modules)

Immunity time for microbreakings

ms ≥35ms  
(110VAC);≥80ms  
(220...415VAC)

**Voltage inputs**

Rated voltage (Ue)

VAC 600VAC L-L (rated max)

Operating range

50...720VAC L-L (415VAC L-N)

Frequency range

Hz 45...65 Hz / 360...440 Hz

Type of measure

True RMS value

No-voltage release

ms ≥8

Measurement input impedance

kΩ >1.10MΩ L-L,  
>0.55MΩ L-N

Type of connection

Single phase, two phase, three phase with or without neutral or balanced three phase system

**Current inputs**

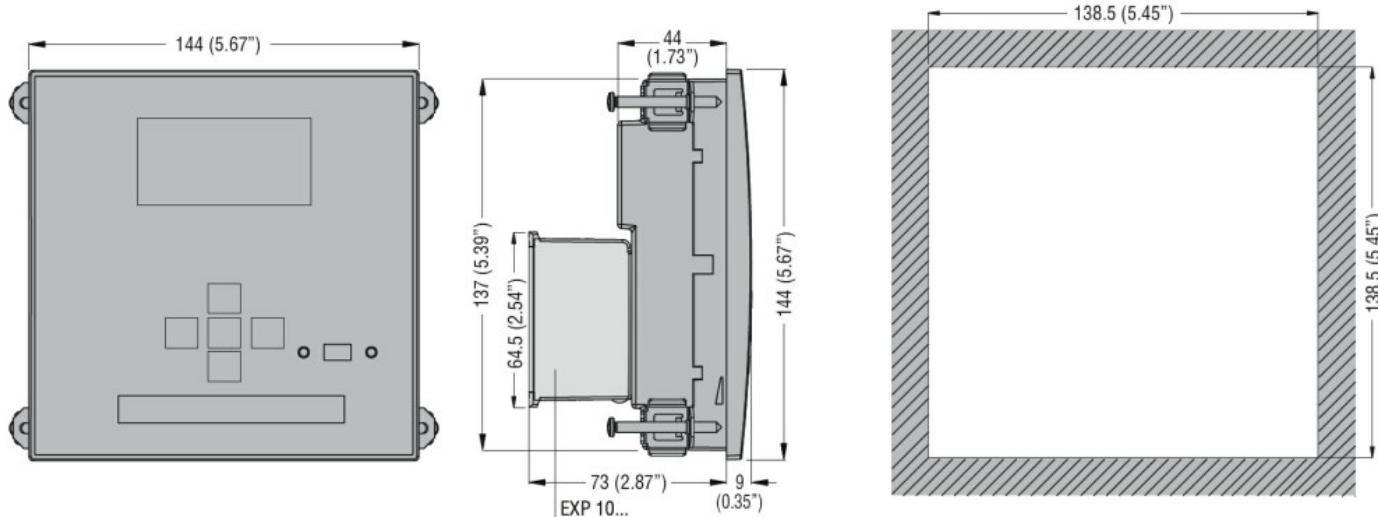
Number of current input

Nr. 3

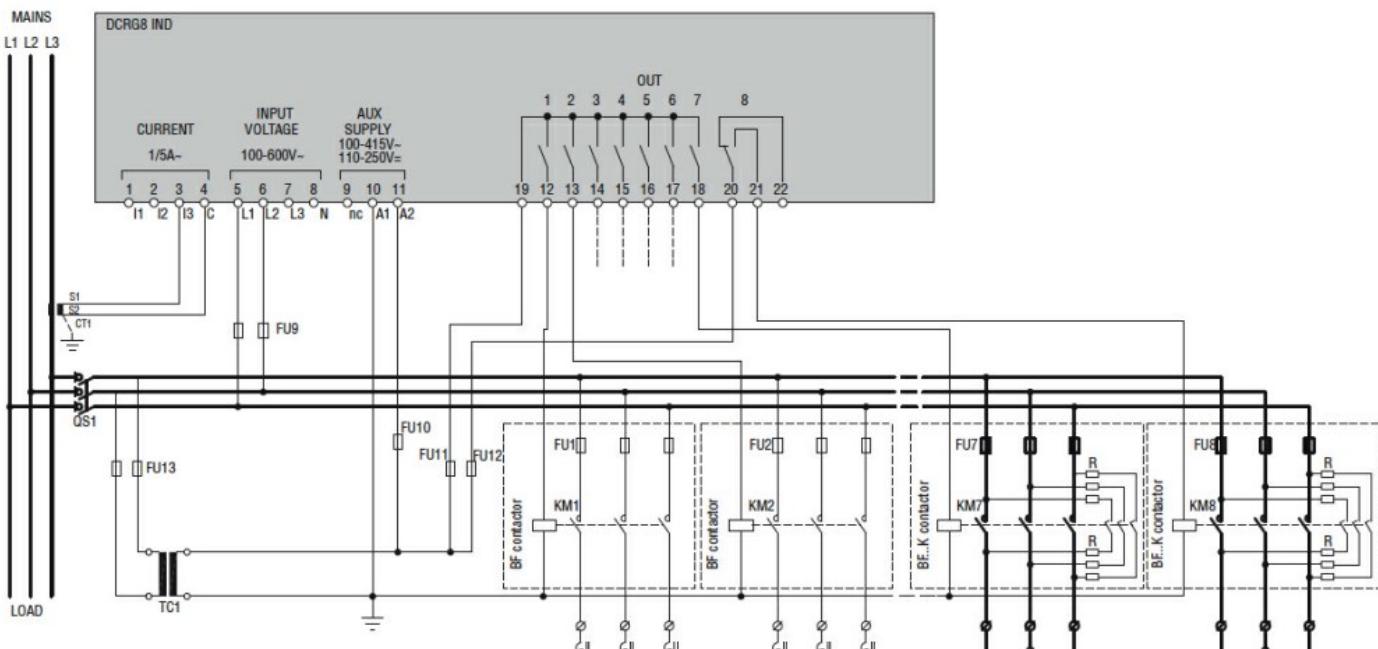
Type of input	Shunt supplied by external current transformer (low voltage). Max 5A
Measurement range	0.025...6A~ for 5A scale; 0.025...1.2A~ for 1A scale
Measurement method	True RMS value
Constant overload	Ie 1.2 le
Overload peak	A 50A for 1s
Burden per phase	W <0.6VA
<b>Measurement data</b>	
Type of voltage and current measurement	True RMS value
Power factor adjustment	0.5ind...0.5cap.
Type of temperature sensor	Internal + PT100 with EXP1004 + NTC with EXP1016
Temperature measurement range	°C 0...+212
<b>Relay outputs</b>	
Number of relay output	Nr. 8 (up to 18 with EXP10 06 - EXP10 07)
Contact arrangement	7 NO-SPST + 1 C/O-SPDT
Rated current	5A 250V AC1
UL/CSA and IEC/EN 60947-5-1 designation	B300
Maximum current at common contact terminal	A 10
Maximum switching voltage	VAC 415
Electrical life (with rated load)	cycles 10 <sup>5</sup>
Mechanical life	cycles 30 x 10 <sup>6</sup>
<b>Static Outputs</b>	
Number of static output	0 (up to 8 with EXP1001)
<b>Insulations</b>	
Rated insulation voltage Ui IEC/EN	V 600
Rated impulse withstand voltage Uimp	kV 9.5
Operating frequency withstand voltage	kV 5.2
<b>Functions</b>	
Automatic recognition of current flow direction	Yes
4-quadrant operation	Yes
Master-Slave function	No
Independent auxiliary supply input	Yes
Three-phase voltage control	Yes
Current inputs	3
Dynamic (FAST) power factor correction	Yes
Power factor correction by single phase	Yes
Possibility of connecting inductive steps	Yes
Possibility of use in medium voltage	Yes
Possibility of phase-neutral insertion on a three-phase system	Yes
Analog outputs	Yes
Input programmable as function or external temperature sensor	Yes

USB communication interface	Yes		
RS232 communication interface	Yes		
Opto-isolated RS485 communication interface	Yes		
Ethernet communication interface	Yes		
Opto-isolated Profibus-DP interface	Yes		
GPRS/GSM modem	Yes		
Optical USB communication port on front	Yes		
Optical Wi-Fi communication port on front	Yes		
Fast setting of current transformer	Yes		
Compatible with Xpress configuration and remote control software	Yes		
Compatible with Synergy and Synergy Cloud, supervision and energy management software	Yes		
Compatible with Sam1 App	Yes		
Calendar-clock with backup reserve power	Yes		
Data logging memory	Yes		
Event logging: alarms, setup changes, etc.	Yes		
Customisable internal counters	Yes		
<b>Connections</b>			
Type of terminal	Plug-in, removable		
Conductor cross section	min	mm <sup>2</sup>	0.2
	Max	mm <sup>2</sup>	2.5
	min	AWG	24AWG (18AWG according to UL/CSA)
	Max	AWG	12
Tightening torque (Max)	Nm	0.56	
	lbin	5lbin (4-5lbin according to UL/CSA)	
<b>Ambient conditions</b>			
Temperature			
Operating temperature	min	°C	-20
	max	°C	+70
Storage temperature	min	°C	-30
	max	°C	+80
Relative humidity	%	<80%	
Maximum Pollution degree		2	
Overshoot category		3	
Measurement category		III	
Climatic sequence	Z/ABDM (IEC/EN 60068-2-61)		
Shock resistance	15g (IEC/EN 60068-2-27)		
Vibration resistance	0.7g (IEC/EN 60068-2-6)		
<b>Housing</b>			
Execution	Flush mount		
Material	Polycarbonate		

Mounting	Flush-mount 144x144mm (5.67x5.67")
Degree of protection	IP65 on front, IP20 terminals
Dimensions (W x H x D)	mm 144 x 144 x 53.2
Weight	g 980
Dimensions	



### Wiring diagrams



### Certifications and compliance

#### Compliance

CSA C22.2 n°14

IEC 61010-1

IEC/EN 61000-6-2

IEC/EN 61000-6-3

UL 508

#### Certificates

cULus

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EAC

ETIM classification

ETIM 8.0

EC001443 -  
Effective power  
(cos phi)  
monitoring relay