DCRG8

AUTOMATIC POWER FACTOR CONTROLLER, DCRG SERIES, 8 STEPS, EXPANDABLE UP TO 24 STEPS

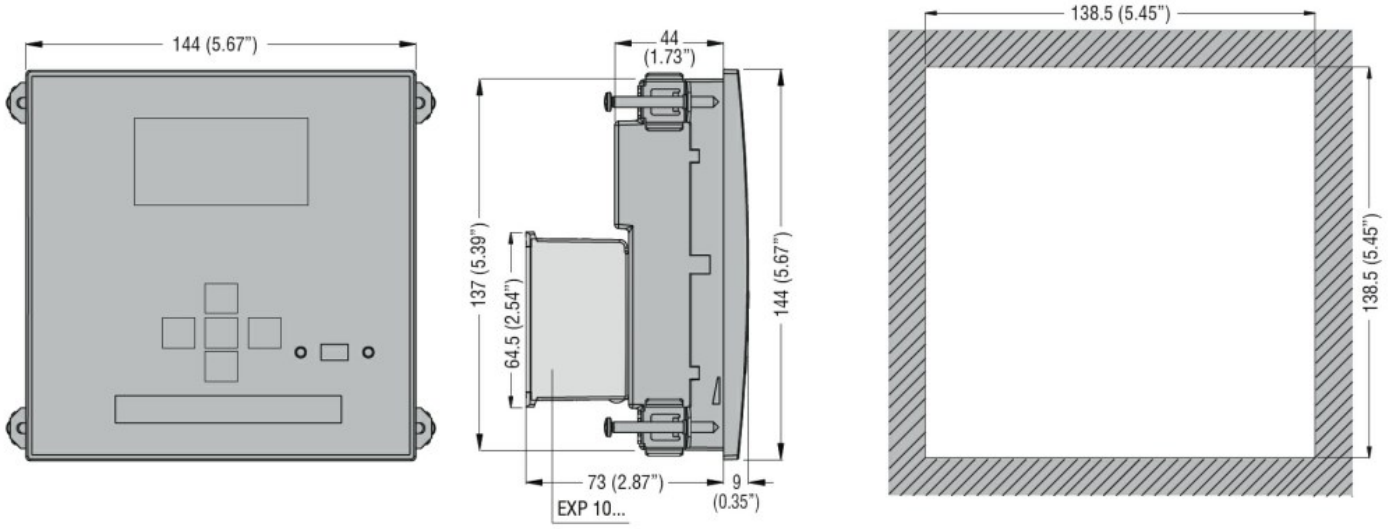
Product designation			Automatic power factor controller, 8 relay steps, graphic display
Product type designation			DCRG8
Auxiliary supply			
Rated auxiliary supply voltage Us			
AC			
	min	VAC	100
	Max	VAC	415
DC			
	min	VDC	110
	Max	VDC	250
Auxiliary operating range			90…484VAC / 93.5…300VDC
Auxiliary 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 Ie
Overload peak	A	50A for 1s
Burden per phase	W	<0.6VA
Measurement data		
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
Relay outputs		
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	10^5
Mechanical life	cycles	30×10^6
Static Outputs		
Number of static output		0 (up to 8 with EXP1001)
Insulations		
Rated insulation voltage Ui IEC/EN	V	600
Rated impulse withstand voltage Uimp	kV	9.5
Operating frequency withstand voltage	kV	5.2
Functions		
Automatic recognition of current flow direction		Yes
4-quadrant operation		Yes
Master-Slave function		Yes
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		No
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

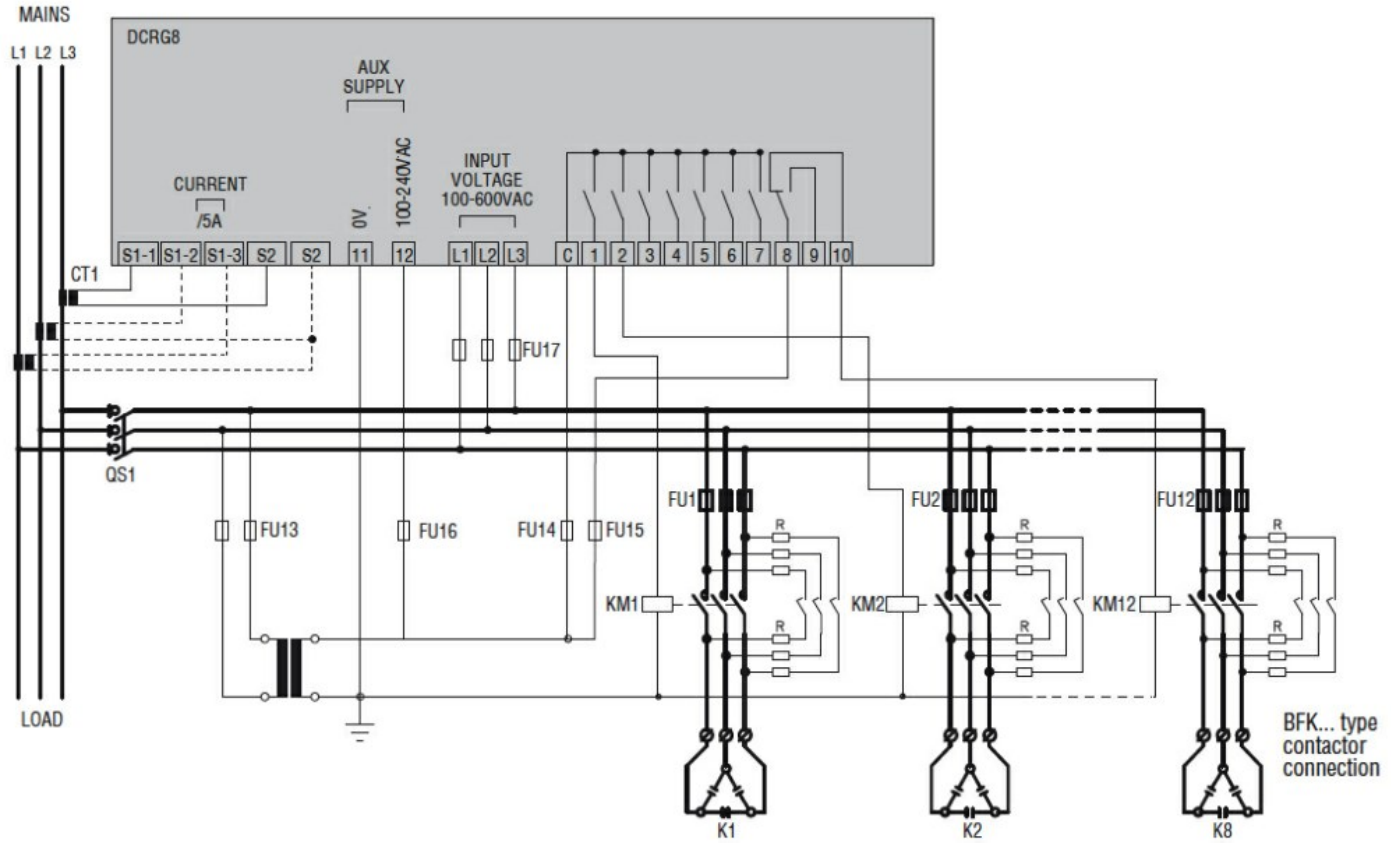
USB communication interface			Yes
RS232 communication interface			Yes
Opto-isolated RS485 communication interface			Yes
Ethernet communication interface			Yes
Opto-isolated Profibus-DP interface			Yes
GPRS/GSM modem			Yes
Optical USB communication port on front			Yes
Optical Wi-Fi communication port 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
Connections			
Type of terminal			Plug-in, removable
Conductor cross section			
	min	mm²	0.2
	Max	mm²	2.5
	min	AWG	24AWG (18AWG according to UL/CSA)
	Max	AWG	12
Tightening torque (Max)			
		Nm	0.56
		lbin	5Ibin (4-5Ibin according to UL/CSA)
Ambient conditions			
Temperature			
Operating temperature			
	min	°C	-20
	max	°C	+70
Storage temperature			
	min	°C	-30
	max	°C	+80
Relative humidity		%	<80%
Maximum Pollution degree			2
Overvoltage 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)
Housing			
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
	EAC
	RCM

ETIM classification

ETIM 8.0	EC001443 - Effective power (cos phi) monitoring relay