



### Auxiliary supply

Rated auxiliary supply voltage  $U_s$   
AC

	min	VAC	100
	Max	VAC	440
Auxiliary operating range			90...484VAC
Auxiliary rated frequency		Hz	50/60 $\pm$ 10%
Power consumption Max		VA	9.5
Power dissipation Max		W	3.5
Immunity time for microbreakings		ms	<25

### Voltage inputs

Rated voltage ( $U_e$ )		VAC	600VAC L-L (rated max)
Operating range			50...720VAC L-L (415VAC L-N)
Frequency range		Hz	45...65
Type of measure			True RMS value
No-voltage release		ms	$\geq$ 8
Measurement input impedance		k $\Omega$	>1.10M $\Omega$ L-L, >0.55M $\Omega$ 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.	1
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		I <sub>e</sub>	1.2 I <sub>e</sub>
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
Temperature measurement range		$^{\circ}$ C	0...+212

### Relay outputs

Number of relay output	Nr.	3 (up to 6 with EXP10 06 - EXP10 07)
Contact arrangement		2 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	10 <sup>7</sup>

### 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	No
Independent auxiliary supply input	Yes
Three-phase voltage control	No
Current inputs	1
Dynamic (FAST) power factor correction	No
Power factor correction by single phase	No
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	No
Input programmable as function or external temperature sensor	No
USB communication interface	No
RS232 communication interface	Yes
Opto-isolated RS485 communication interface	Yes
Ethernet communication interface	Yes
Opto-isolated Profibus-DP interface	No
GPRS/GSM modem	No
Optical port on front for the connection of USB devices	Yes
Optical port on front for the connection of Wi-Fi devices	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	No
Data logging memory	No
Event logging: alarms, setup changes, etc.	No
Customisable internal counters	No

### Connections

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
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Tightening torque (Max)		Nm	0.56
		lbin	5 (4-5 according to UL/CSA)

**Ambient conditions**

Temperature			
Operating temperature			
	min	°C	-20
	max	°C	+60

Storage temperature			
	min	°C	-30
	max	°C	+80

Relative humidity		%	<80%
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Maximum Pollution degree			2
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Overvoltage category			3
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Measurement category			III
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Climatic sequence			Z/ABDM (IEC/EN 60068-2-61)
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Shock resistance			15g (IEC/EN 60068-2-27)
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Vibration resistance			0.7g (IEC/EN 60068-2-6)
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**Housing**

Execution			Flush mount
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Material			Polycarbonate
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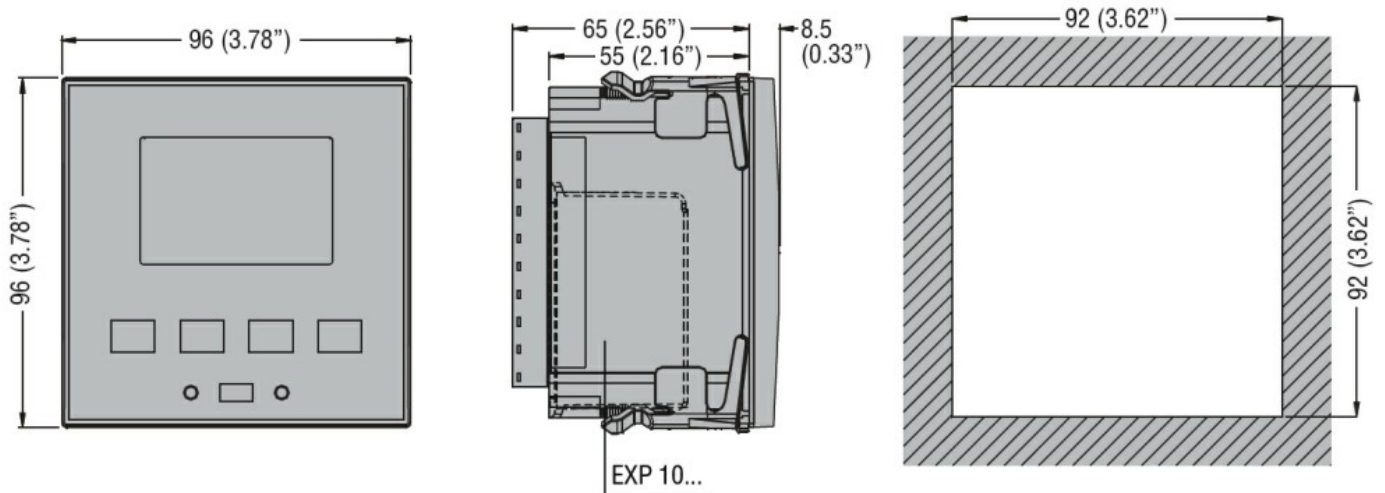
Mounting			Flush-mount 96x96mm (3.78x3.78")
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Degree of protection			IP54 on front with gasket, if mounted in class IP54 panel or better. IP20 terminals
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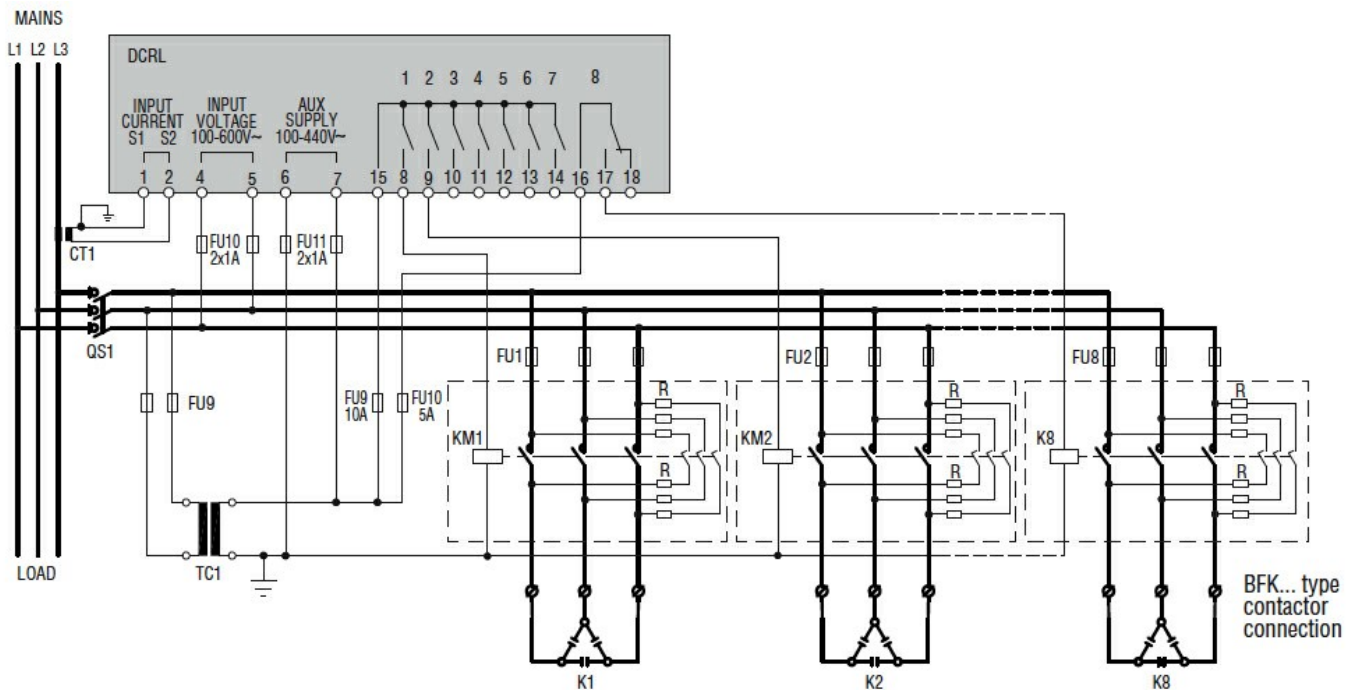
Dimensions (W x H x D)		mm	96 x 96 x 73.5
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Weight		g	340
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**Dimensions**



**Wiring diagrams**



**Certifications and compliance**

**Compliance**

- CSA C22.2 n°14
- IEC/EN 61000-6-2
- IEC/EN 61000-6-4
- IEC/EN 61010-1
- IEC/EN 61010-2-030
- UL 508

**Certificates**

- cULus
- EAC
- RCM

**ETIM classification**

ETIM 8.0

EC001443 -  
Effective power  
(cos phi)  
monitoring relay