Indirect three-phase meter

EDMk

Electronic three-phase energy meter with indirect connection for DIN rails or adaptable to panels

Description

Electronic three-phase meter (active and re-active energy) with an indirect connection for DIN rails or adaptable to a panel; 4 quadrants (measures the active (kW·h) and reactive (kvar·h) energy consumed and generated, both capacitive and inductive).

Other features include:

- Galvanic insulation transformers - I
- RS-485 Communications, depending on the type
- Two digital outputs with optoinsulated transistor
- Informs about possible connection errors on the display

Application

Features

Power supply circuit	230 Vac (-15...+10%)
Consumption	5 V·A
Frequency	45..0.65 Hz
Metering circuit	
Nominal voltage	300 V ac (phase-neutral) 520 V ac (phase-phase)
Frequency	45..0.65 Hz
Consumption of the circuit, voltage per phase	0.3 V·A
Consumption of the circuit, current per phase	0.3 V·A at 5 A or 0.06 V·A at 1 A
Nominal current	.../5 A or .../1 A (ITF-type insulated input)
Overload (permanent)	1.2 I_n
Maximum meter value	**9,999,999 kW**
Class	
Class in active energy Class in reactive energy	Class 1 - EN62053-21 Class 2 - EN62053-23
Output transistor	Optoinsulated (collector open) NPN
Maximum switching voltage	24 Vdc
Maximum switching current	50 mA
Max. Impulse frequency	10 impulse / s
Duration of the Impulse	50 ms
Output 1	Terminals 9-8
Output 2	Terminals 7-8
Ambient conditions	
Operating temperature	-20 ... +60 ºC
Humidity (non-condensing)	5 ... 95 %
Build features	
Minimum display resolution	10 W·h
Type of box	V0 self-extinguishing plastic
Degree of protection	Fitted unit (frontal): IP 51 Non-fitted unit (sides and rear cover): IP 31
Dimensions	85 x 52 x 70 mm (3 modules)
Weight	195 g
Safety	
Category III **EN-61010-1**. Protection to electric shock class II	
Standards	
EN 62052-11, EN 62053-21, EN 62053-23, EN 61010-1	

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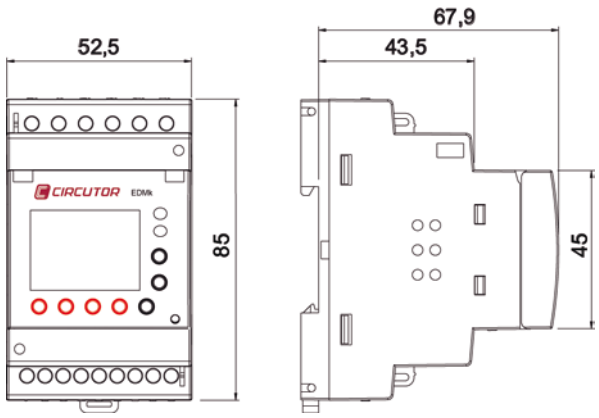
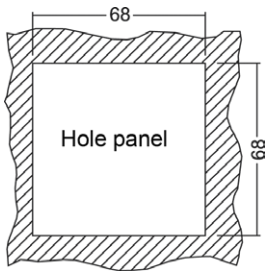
Electronic three-phase energy meter
with indirect connection for DIN rail mounting

Dimensions



Dimensions of the drill hole on the panel, 68x68 mm, using the M5ZZF1 accessory



References

Parameters measured	Metering range	Partial meters	Quadrants	Communications with the MODBUS (RTU) protocol	Rates	Digital output	DIN Modules	Type	Code
kW·h, kVarL·h, kvarC·h	2 mA.../1 A or 5 A	Yes	4	-	1	2	3	**EDMk-ITF-C2**	**M31741**
kW·h, kVarL·h, kvarC·h	2 mA.../1 A or 5 A	Yes	4	-	3	2	3	**EDM3k-ITF-C2**	**M31743**
kW·h, kVarL·h, kvarC·h	2 mA.../1 A or 5 A	Yes	4	RS-485	1	2	3	**EDMk-ITF-RS485**	**M31751**

Coding table

M	3	X	X	X	X	0	0	X	0	0	X
Code						Internal Code					
Power supply voltage			Standard (230 Vac)					0			
			85...265 Vac 95...300 Vdc					C			
Other											
			Standard (w/o battery)								0
			With battery (to read the meters when there is no power supply).								3

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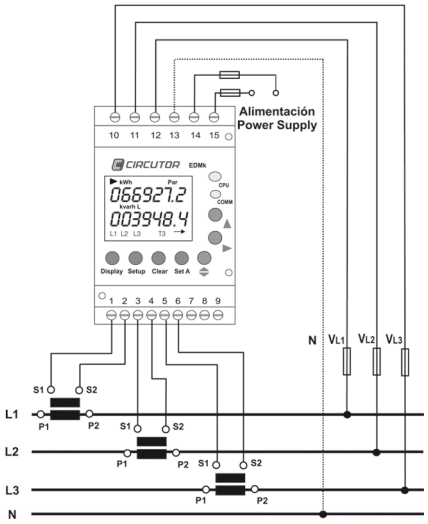
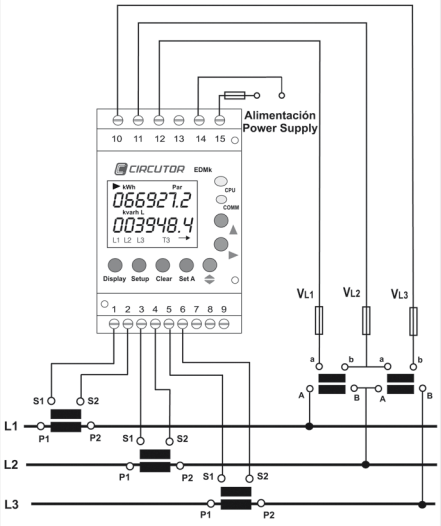
Connections

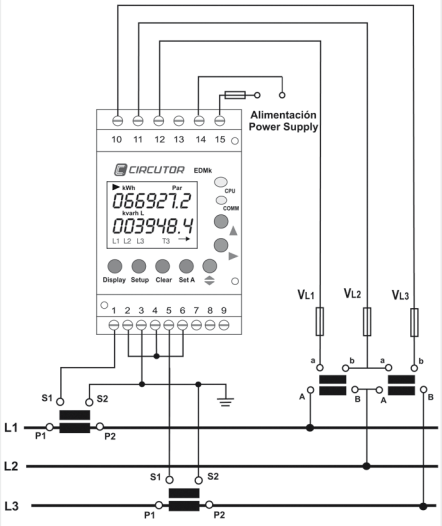
EDMk, 3 or 4 wires (low voltage)



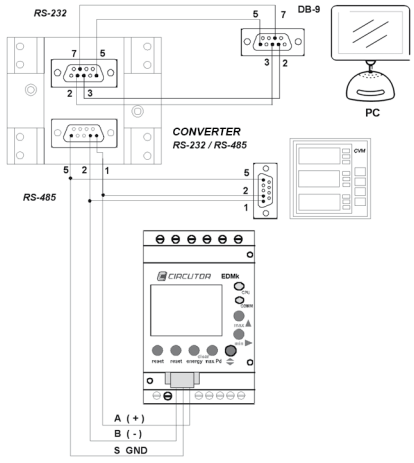
EDMk, 3 wires (2 TT and 3 TC)



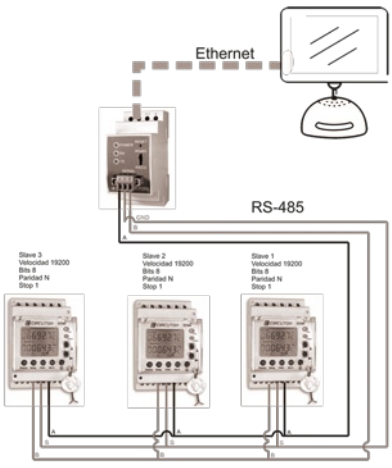
EDMk, 3 wires (2 TT and 2 TC)



RS-485 Connection diagram



Connection of Ethernet communications with TCP2RS 232 / 485 converter



Transistor output diagrams