

## 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 reactive 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**

<b>Power supply circuit</b>	230 Vac (-15...+10%)
Consumption	5 V·A
Frequency	45..0.65 Hz
<b>Metering circuit</b>	
Nominal voltage	300 Vac (phase-neutral) 520 Vac (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 $I_n$
<b>Maximum meter value</b>	<b>9,999,999 kW</b>
<b>Class</b>	
Class in active energy	Class 1 - EN62053-21
Class in reactive energy	Class 2 - EN62053-23
<b>Output transistor</b>	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
<b>Ambient conditions</b>	
Operating temperature	-20 ... +60 °C
Humidity (non-condensing)	5 ... 95 %
<b>Build features</b>	
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
<b>Safety</b>	
Category III EN-61010-1. Protection to electric shock class II	
<b>Standards</b>	
EN 62052-11, EN 62053-21, EN 62053-23, EN 61010-1	

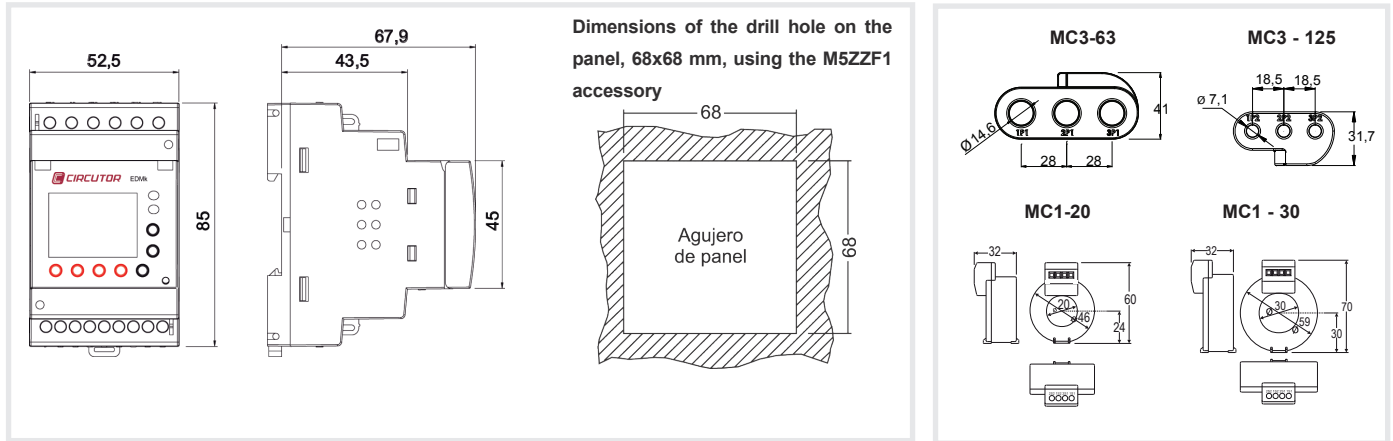
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Electronic three-phase energy meter with indirect connection for DIN rail mounting



### Dimensions



### 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

#### EDMk-MC, Efficient measuring Systems

kW-h, kVarL-h, kvarC-h	2 mA.../1 A or 5 A	Yes	4	-	3	2	3	EDMk-MC-ITF	M31771
kW-h, kVarL-h, kvarC-h	2 mA.../1 A or 5 A	Yes	4	RS-485	1	2	3	EDMk-MC-ITF-RS485	M31781

#### MC1 single-phase and MC3 three-phase Efficient Transformers, MC Series

A máx.	Ranges	Class 0,5 Power	Measurement	Internal diameter					
63	-	0,1 VA	3 phases	7,1 mm				MC3-63	M73121
125	-	0,1 VA	3 phases	14,6 mm				MC3-125	M73122
250	150/200/250	0,25 VA	1 phases	20 mm				MC1-20-150/200/250	M73113
500	250/400/500	0,25 VA	1 phases	30 mm				MC1-30-250/400/500	M73114

### 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		C								
	95...300 Vdc										
Other	Standard (w/o battery)		0								
	With battery (to read the meters when there is no power supply).		3								

#### EDMK-MC



#### MC3



#### EDMK-MC



#### 3 MC1



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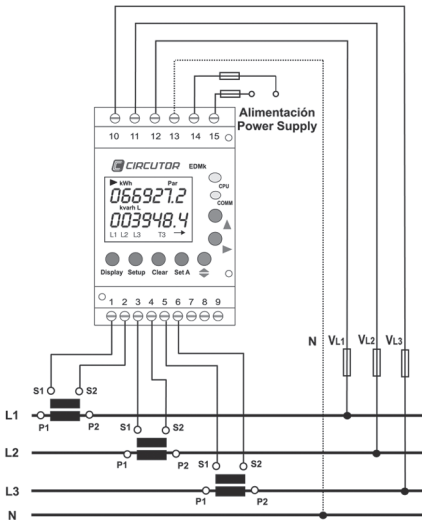
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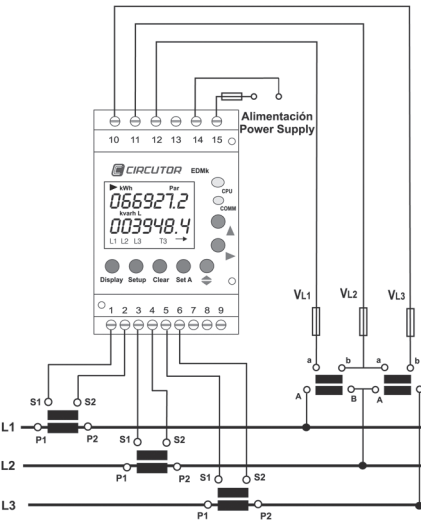


Connections

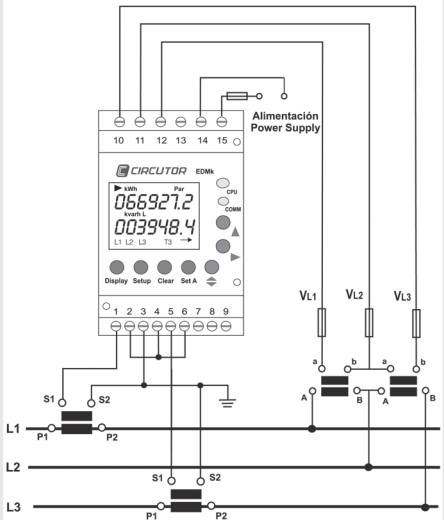
EDMk, 3 or 4 wires (low voltage)



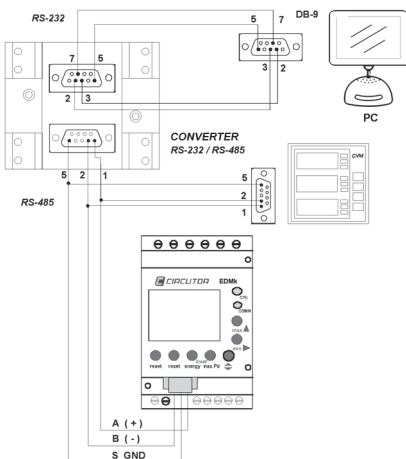
EDMk, 3 wires (2 TT and 3 TC)



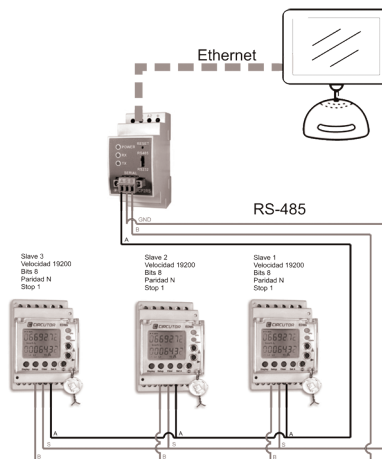
EDMk, 3 wires (2 TT and 2 TC)



RS-485 Connection diagram



Connection of Ethernet communications with TCP2RS 232 / 485 converter



Transistor output diagrams

