

CVM-E3-MINI

Three-phase power analyzer for DIN rail



Description

Three-phase power analyzer (balanced and unbalanced) for mounting on DIN rail, very compact, with measurements in 4 quadrants.

Other features:

- Current measurement .../5 or .../1 A or .../250 mA*
- With ITF technology: ITF galvanic insulation protection
- DIN rail with only 3 modules
- High-contrast backlit display
- 72 x 72 mm panel mounting with front adapter
- RS-485 communication (Modbus/RTU up to 57.6 kbps) (Bacnet up to 38.4 kbps)
- One transistor output (programmable)
- One digital input for selecting tariff or logic states
- Sealable terminal cover
- Harmonic display (V, A) up to 31°

Applications

- Control application in low- and medium-voltage distribution panels and switchboards where it is necessary to place an analyzer on the DIN rail due to problems of space.
- Alarm control. Maximum value, minimum value and programmable delay.
- Control of active or reactive energy by impulse output.
- Capture of maximum and minimum instantaneous data of electrical parameters measured.



CVM-E3-MINI with front adapter (72 x 72)

Technical features

Power circuit	Rated voltage	207 ... 253 V~		
	Frequency	50 ... 60 Hz		
	Consumption	3.5 VA		
	Installation category	CAT III 300 V		
Voltage measurement circuit	Rated voltage (U_n)	300 Vac (p-N) / 520 Vac (p-p)		
	Voltage measurement margin	5 ... 120% U_n		
	Frequency measurement margin	45 ... 65 Hz		
	Input impedance	400 kΩ		
	Minimum measurement voltage (Vstart)	11 V ac (p-N)		
	Installation category	CAT III 300 V		
Current measurement circuit	Nominal current (I_n)	...5 A or .../1 A (MC series: .../250mA)*		
	Current measurement margin	2 ... 120% I_n		
	Minimum measurement current (I_{start})	10 mA		
	Consumption	0.9 VA		
Measurement accuracy	Installation category	CAT III 300 V		
	Voltage measurement	0.5 % ± 1 digit		
	Current measurement	0.5 % ± 1 digit		
	Frequency measurement	0.5%		
	Active power measurement	0.5% ± 2 digits		
	Reactive power measurement	1% ± 2 digits		
	Active energy measurement	I < 0.1 I_n	Class 1	I > 0.1 I_n
		Reactive energy measurement	Class 2	
	Pulse output	Quantity	1	
		Type	Output NPN	
Maximum voltage		24 V dc		
Maximum current		50 mA		
Maximum frequency		16 imp/s		
Digital input	Pulse width	30 ms to 500 ms (programmable)		
	Quantity	1		
	Type	Potential-free contact NPN		
	Insulation	Optoisolated		

*According to type

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Communications	Fieldbus	Modbus RTU	BACnet
	Communications protocol	RS-485	MS/TP
	Speed	Modbus RTU	BACnet
	Stop bits	9600 to 57600	9600 to 38400 bps
	Parity	1 - 2	1
		none - even - odd	none
User interface	Display	High-contrast backlit custom LCD	
	Keypad	3 keys	
	LED	2 LEDs	
Environmental features	Operating temperature	-5 ... + 45 °C	
	Storage temperature	-10...+50°C	
	Relative humidity (without condensation)	5 to 95%	
	Maximum altitude	2000 m	
	Protection degree	IP30	
Mechanical features	Dimensions	52.5 x 118 x 74 mm	
	Weight	300 g	
	Enclosure	V0 self-extinguishing plastic	
	Attachment	DIN rail	
	Front panel: IP40		
Standards	IEC 61010-1, IEC 61326-1, IEC 61557-12, IEC 61010-2-030 (UNE EN 61000-6-3, UNE EN 61000-6-1, UNE EN 61000-6-2, UNE EN 61000-6-4), UL94		

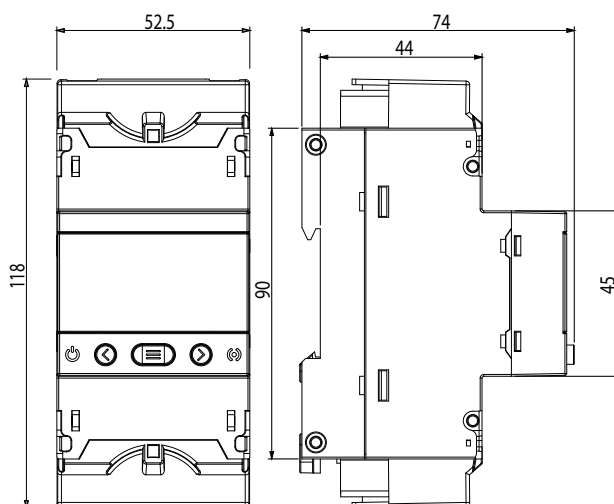
References

Isolated input	Current input	Digital output	Digital input	Harmonics	Protocol	Communication RS-485	Type	Code
Yes	.../1 A, .../5 A	1	1		Modbus RTU		CVM-E3-Mini-ITF-485-IC	M56414
Yes	.../250 mA	1	1	31st	BACnet	9.6 to 57,6 kbps 9.6 to 34,8 kbps	CVM-E3-Mini-MC-485-IC*	M56424
Yes	Rogowski	1	1				CVM-E3-MINI-FLEX-485-IC**	M56454
Panel adapter for CVM-E3-MINI (72 x 72 mm)							Panel adapter	M5ZZF100000E3

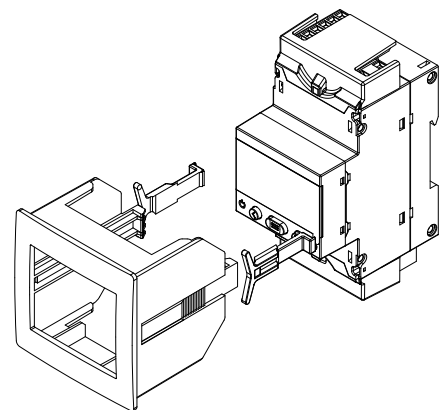
(*) Needs **MC** series efficient transformers

(**) Needs **FLEX-MAG** series flexible clamps

Dimensions



Accessories



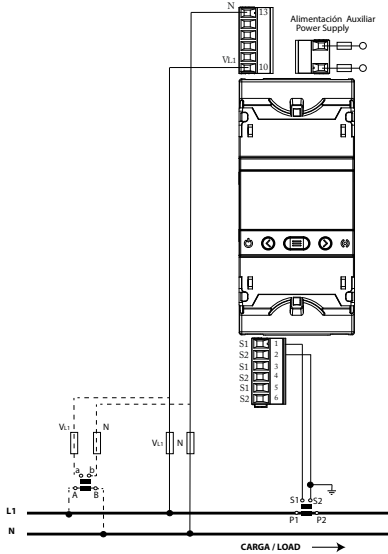
Mounting of CVM-E3-MINI adapter 72x72 mm

CVM-E3-MINI

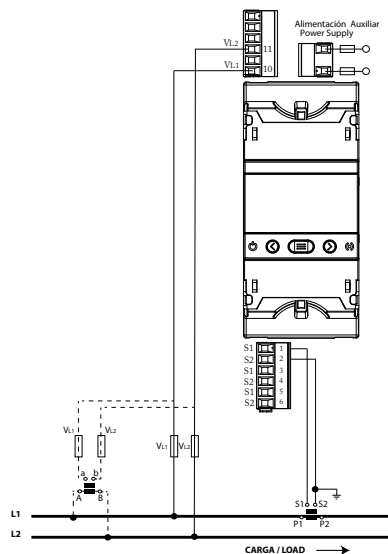
Three-phase power analyzer for DIN rail

Connections

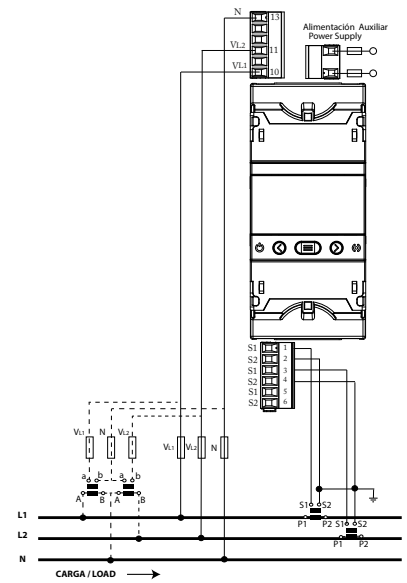
Phase-neutral network - 2-wire



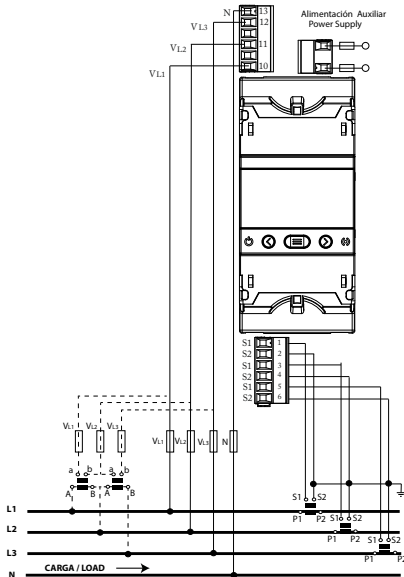
Phase-phase network - 2 wires



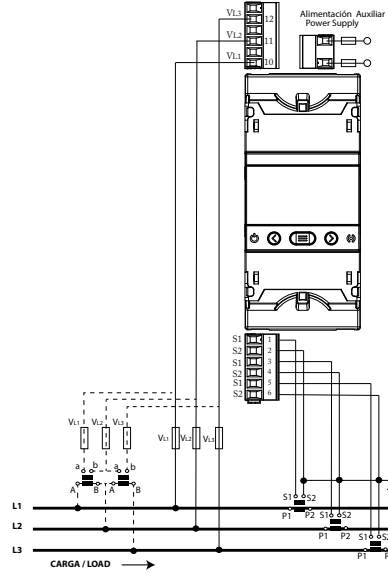
Two-phase network - 3 wires



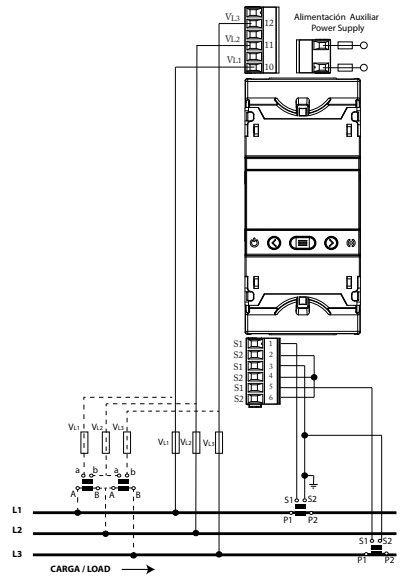
Three-phase network - 4-wire



Three-phase network - 3 wires



Three-phase network - 3-wire - ARON



RS-485 connection diagram

