

# CVM-E3-MINI-WiEth

## Three-phase electrical grid analyser for DIN rails



CVM-E3-MINI with 72x72 front adapter

### Description

Three-phase electrical network analyser (balanced and unbalanced) for DIN rail mounting and panel option with 72x72 adapter, with measurements in 4 quadrants.

Other features are:

- Current measurement with ITF measuring transformers .../5 A, .../1A, **MC** transformers .../250 mA and **FLEX-MAG** clamps
- With ITF technology: ITF galvanic insulation protection
- DIN rail format with only 3 modules
- High contrast backlit display
- 72x72 mm panel mounting with front adapter
- Ethernet, Wi-Fi and Bluetooth® communications
- Configuration of communications on the App (MyConfig) and on the website.
- Sealable terminal cover
- Display of voltage and current harmonics up to 31°

### Applications

- Control application in switchboards and low and medium voltage connections where there is a need for an analyser on the DIN rail.
- Instantaneous data capture, maximum and minimum levels of electrical parameters measured.
- Installation with Ethernet cable (RJ-45)
- Installation without the need for communications wiring in facilities that have a Wi-Fi network.

### Technical features

<b>Power circuit</b>	Rated voltage	100...240 ±10% Vc.a./c.c.		
	Frequency	50...60 Hz		
	Consumption	4...5.2 VA / 2.5...2.8 W		
	Installation Category	CAT III 300 V		
<b>Voltage measurement circuit</b>	Rated voltage ( $U_n$ )	300 OCV (f-N) / 520 OCV (f-f)		
	Voltage measurement range	5...120% $U_n$		
	Frequency measurement range	45...65 Hz		
	Input impedance	400 kΩ		
	Minimum measuring voltage ( $U_{start}$ )	11 OCV (f-N)		
<b>Current measurement circuit</b>	Installation category	CAT III 300 V		
	Rated current ( $I_n$ )	.../5 A, .../1 A, .../250 mA and FLEX clamps		
	Current measurement range	2...120% $I_n$		
	Minimum measurement current ( $I_{start}$ )	10 mA		
	Consumption	0.9 VA		
	Installation category	CAT III 300 V		
<b>Accuracy of measurements</b>	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	
		$I > 0.1 I_n$	Class 0.5	
Reactive energy measurement	Class 2			
<b>Ethernet communication</b>	Type	Ethernet 10BaseT - auto-detect 100BaseTX		
	Connector	RJ-45		
	Protocol	Web server - MQTT - REST		
	Network connection mode	DHCP ON/OFF (ON by default)		
<b>Wi-Fi communication</b>	Band	2.4 GHz (Range: 2.4...2.5 GHz)		
	Standards	<b>IEEE 802.11b/g, IEEE 802.11n</b> (up to 150 Mbps)		
	Maximum output power	<b>IEEE 802.11 b</b> : 20 dBm <b>IEEE 802.11 n</b> : 14 dBm		
<b>Bluetooth communication</b>	Protocols	Bluetooth v4.2 BR/EDR and BLE specification		
	Radios	NZIF receiver with – 97 dBm sensitivity Class-1, class-2 and class-3 transmitter Adaptive Frequency Hopping (AFH)		

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## Three-phase electrical grid analyser for DIN rails

<b>User interface</b>	Display	Custom high-contrast backlit LCD
	Keyboard	3 keys
	LED	2 LEDs
<b>Environmental characteristics</b>	Working temperature	-5 ... +45 °C
	Storage temperature	-10...+50°C
	Relative humidity (non-condensing)	5 ... 95%
	Maximum altitude	2000 m
	Degree of protection	IP30 Frontal: IP40
<b>Mechanical properties</b>	Dimensions	52.5 x 118 x 74 mm
	Weight	300 g
	Enclosure	Self-extinguishing V0 plastic
	Fixture	DIN rail
<b>Standards</b>	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, Directive 2014/53/EU (RED)	

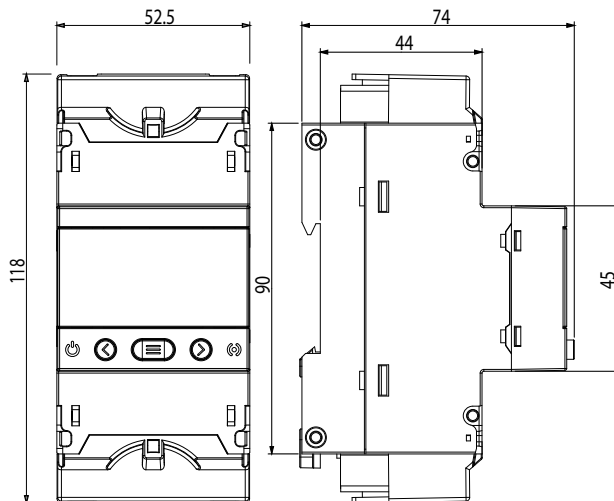
### References

Isolated input	Current input	Harmonics	Protocol	Communications	Type	Code	
Yes	.../1 A, .../5 A			Ethernet	<b>CVM-E3-MINI-ITF-WiEth</b>	<b>M56470.</b>	
Yes	.../250 mA	31°	Modbus TCP	Wi-Fi	<b>CVM-E3-MINI-MC-WiEth*</b>	<b>M56480.</b>	
Yes	Rogowski			Bluetooth®	<b>CVM-E3-MINI-FLEX-WiEth**</b>	<b>M56490.</b>	
Panel adapter for <b>CVM-E3-MINI</b> (72 x 72 mm)					-	<b>Panel adapter</b>	<b>M5ZZF10000E3</b>

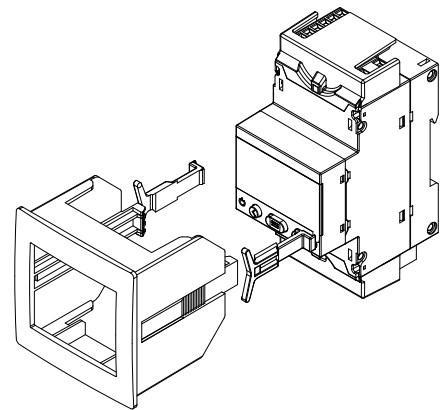
(\*) Requires efficient transformers of the **MC series**

(\*\*) Requires flexible FLEX-MAG clamps

### Dimensions



### Accessories



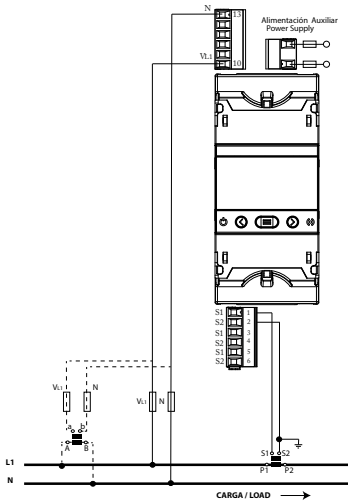
Mounting of the CVM-E3-MINI 72x72 mm adapter

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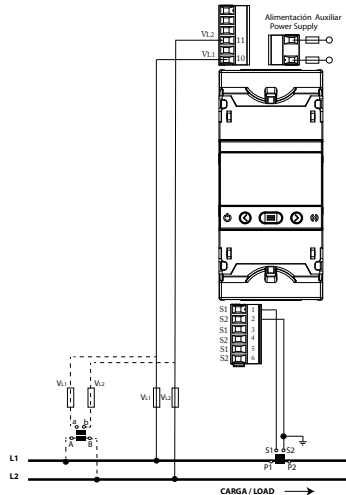
## Three-phase electrical grid analyser for DIN rails

### Connections

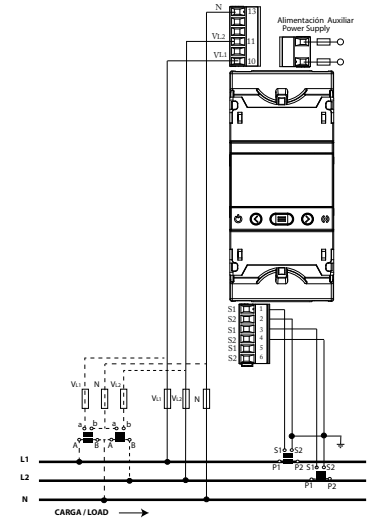
Phase-Neutral Network - 2 wires



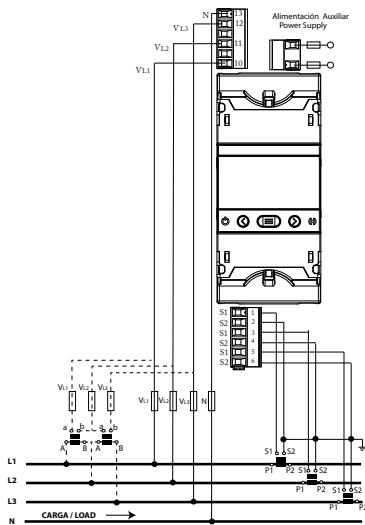
Phase-Phase Network - 2 wires



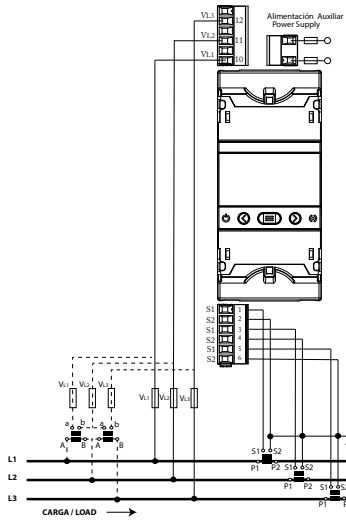
Two-phase Network - 3 wires



Three-phase Network - 4 wires



Three-phase Network - 3 wires



Three-phase Network - 3 wires - ARON

