



M-CVM-K2-ITF-402, Power analyzer

Code: M54412. DESCATALOGADO

> Protocol: Modbus/RTU > Communications: RS-485 > Class in power: 0.2

Description

Three-phase power analyzer (balanced and unbalanced networks), assembly on panels or DIN rails, with a graphical display, with 4-quadrant measurement.

Other features include:

- Class 0.2 or 0.5 power and energy
- \circ Measurement of power quality events (guaranteeing the power supply of the unit by means of a UPS system, battery, etc.)
- O Current measurement .../5 or .../1 A
- o Measurement of the neutral current with a transformer
- o Rating of consumed and generated energy (up to 9 tariffs)
- o RS-485 Modbus/RTU communication
- Possibility of expansion (up to 3 modules)
- o Backlit VGA graphic screen
- \circ Instantly shows electrical parameters, maximum and minimum values with date and time
- o Consumed and generated energy meter up to 100 GW·h
- O Universal power supply as standard
- o With ITF technology: galvanic insulation protection

Application

- o Control application for general distribution switchboards and low-, medium- and high-voltage connection
- o Alarm station, featuring voltage-free digital inputs
- \circ Submetering station: impulse meter for other services (gas, water, steam etc.) via the digital inputs
- Measurement transducer: possibility of associating instantaneous parameters with one of the available analogue outputs (0 to 20 mA / 4 to 20 mA)
- o Unit for recording the instantaneous, maximum and minimum parameters, with date and time, via the memory expansion card
- o Power quality analyzer: Harmonic decomposition, up to the 50th order harmonic, asymmetries, flicker, unbalances, overvoltages, gaps, interruptions, etc.







Three-phase power analyzer, assembly on panel or DIN rail

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Specifications

AC power supply	
Installation category	CAT III 300/520 Vac (IEC 61010)
Consumption	<30 VA
Frequency	5060Hz
Nominal voltage	85265 Vc.a. (-15+10%)
DC power supply	
Consumption	<25 W
Nominal voltage	100300 Vdc
Mechanical characteristics	
Size (mm) width x height x depth	144 x 144 x 116 (mm)
Envelope	Self-extinguishing V0 plastic
Weight (kg)	0,44
Environmental characteristics	
Protection class	IP 51 (Front), IP 20 (rear)
Relative humidity (without condensation)	595%
Storage temperature	-20+65 °C
Working temperature	-10+50 °C
Standards	
Certifications	CE, UL, VDE
Electrical safety, Maximum height (m)	2000
Electrical safety, Installation category	CAT III 300V / 520V, IEC 61010
Standards	IEC 664, VDE 0110, UL 94, IEC 801, IEC 348, IEC 571-1, EN 61000-6-3, EN 61000-6-1, EN 61010-1, EN 61000-4-11, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 55011, IEC 62053-22
Current measurement circuit	
Nominal current (In)	In/5A, In/1A
Primary current measurement	Programmable < 30000 A
Phase current measuring range	1120% In (In = 5 A)
Permanent overload	1.2 ln
Maximum input current consumption	<0,45 VA (/5 ,/1)
Maximum pulse current	100 A
Minimum current measurement	40 mA







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Frequency measuring range	Installation category	CAT III 300/520 V (EN-61010)
Mominal voltage 300V Ph-Nt, 520V Ph-Ph Maximum input voltage consumption c.0,6 VA Minimum measurement voltage (Vstart) 10 V~ Communication Network Protocol ModBus / RTU, ModBus / TCP Technology / Type Ethernet Electrical safety Insulation Double-insulated electric shock protection class III (IEC 61010-1) Digital inputs Consumption (per input) < 0,5 W Minimum signal width 40 ms Operating voltage 24 Vdc ± 20 % Analogue outputs Current mode, nominal range 0-20 mA/4-20 mA Current mode, nominal range 300 Q Duct resolution 4000 points Response time < 2 s Digital transistor outputs Type 0ptocoupler Maximum resistance RON 25 Ω Maximum voltage 150 Vdc / 250 V- Measurement accuracy Power factor measurement 0,51 Phose voltage measurement ± 0,2% ± 2 (20 120% Un) Serial communication Protocol ModBus / RTU	Frequency measuring range	4565 Hz
Maximum input voltage consumption <0,6 VA Minimum measurement voltage (Vstart) 10 V~ Communication Network Protocol ModBus/RTU, ModBus/TCP Technology / Type Ethernet Electrical safety Insulation Double-insulated electric shock protection class II (IEC 61010-1) Digital inputs Consumption (per input) <0,5 W Minimum signal width 40 ms Operating voltage 24 Vdc ± 20 % Analogue outputs Current mode, nominal range 0-20 mA/4-20 mA Current mode: maximum load resistance 300 Q DAC resolution 4000 points Response time <2 s Digital transistor outputs Type Optocoupler Maximum current 100 mA Maximum current 100 mA Maximum voltage 150 Vdc / 250 V~ Measurement accuracy Power factor measurement 0,51 Phase voltage measurement ±0,2% ± 2 (20 120% Un) Serial communication Protocol ModBus/RTU	Voltage measuring range	5120% Un
Minimum measurement voltage (Vstart) 10 V-	Nominal voltage	300V Ph-N, 520V Ph-Ph
Communication Network Protocol ModBus / RTU, ModBus / TCP Technology / Type Ethernet Electrical safety Insulation Double-insulated electric shock protection class II (JEC 61010-1) Digital inputs Consumption (per input) < 0,5 W Minimum signal width 40 ms Operating voltage 24 Vdc ± 20 % Analogue outputs Current mode, nominal range 0-20 mA/4-20 mA Current mode, maximum load resistance 30 0 0 DAC resolution 4000 points Response time < 2 s Digital transistor outputs Type Optocoupler Maximum current 100 mA Maximum resistance RON 25 0 Maximum voltage 150 Vdc / 250 V- Measurement accuracy Power factor measurement 0,51 Phase voltage measurement ± 0,251 Phase voltage measurement ± 0,251 Phase voltage measurement ± 0,251 Protocol ModBus / RTU	Maximum input voltage consumption	<0,6 VA
Protocol ModBus/RTU, ModBus/RTU Technology / Type Ethernet Electrical safety Insulation Double-insulated electric shock protection class II (IEC 61010-1) Digital inputs Consumption (per input) < 0,5 W Minimum signal width 40 ms Operating voltage 24 Vdc ± 20 % Analogue outputs Current mode, nominal range 0-20 mA/4-20 mA Current mode: maximum load resistance 300 0 DAC resolution 4000 points Response time < 2 s Digital transistor outputs Type Optocoupler Maximum current 100 mA Maximum current 100 mA Maximum resistance RON 25 Q Measurement accuracy Power factor measurement 0,51 Phase voltage measurement 0.51 Protocol ModBus/RTU	Minimum measurement voltage (Vstart)	10 V~
Electrical safety Insulation Double-insulated electric shock protection class II (IEC 61010-1) Digital inputs Consumption (per input) < 0,5 W Minimum signal width 40 ms Operating voltage 24 Vide ± 20 % Analogue outputs Current mode, nominal range 0-20 mA/4-20 mA Current mode: maximum load resistance 300 Q DAC resolution 4000 points Response time < 2 s Digital transistor outputs Type 0ptocoupler Maximum current 100 mA Maximum current 100 mA Maximum voltage 150 Vide / 250 V- Measurement accuracy Power factor measurement 0,51 Phase voltage measurement ± 0.2% ± 2 (20 120% Un) Serial communication Protocol ModBus/RTU	Communication Network	
Electrical safety Insulation Double-insulated electric shock protection class II (IEC 61010-1) Digital inputs Consumption (per input) < 0,5 W Minimum signal width 40 ms Operating voltage 24 Vdc ± 20 % Analogue outputs Current mode, nominal range 0-20 mA/4-20 mA Current mode: maximum load resistance 300 Q DAC resolution 4000 points Response time < 2 s Digital transistor outputs Type Optocoupler Maximum current 100 mA Maximum eristance RON 25 Q Maximum voltage 150 Vdc / 250 V~ Measurement accuracy Power factor measurement 0,51 Phase voltage measurement ± 0.2% ± 2 (20 120% Un) Serial communication Protocol ModBus/RTU	Protocol	ModBus/RTU, ModBus/TCP
Insulation Double-insulated electric shock protection class II (IEC 61010-1) Digital inputs Consumption (per input) Analogue outputs Current mode, nominal range Current mode: maximum load resistance BOAC resolution Response time 7 ype Optocoupler Maximum current Maximum eristance RON Maximum voltage Double-insulated electric shock protection class II (IEC 61010-1) A0 ms Current mode and a maximum expert accuracy Power factor measurement Double-insulated electric shock protection class II (IEC 61010-1) A0 ms Current mode: insulated electric shock protection class II (IEC 61010-1) A0 ms Current mode: insulated electric shock protection class II (IEC 61010-1) Boat Cap Maximum load expert and a maximum expert and a	Technology / Type	Ethernet
Digital inputs Consumption (per input) <0,5 W	Electrical safety	
Consumption (per input) <0,5 W	Insulation	Double-insulated electric shock protection class II (IEC 61010-1)
Minimum signal width 40 ms Operating voltage 24 Vdc ± 20 % Analogue outputs Current mode, nominal range 0-20 mA/4-20 mA Current mode: maximum load resistance 300 Ω DAC resolution 4000 points Response time < 2 s	Digital inputs	
Operating voltage Analogue outputs Current mode, nominal range Current mode: maximum load resistance 300 Ω DAC resolution Response time Cy s Digital transistor outputs Type Optocoupler Maximum current 100 mA Maximum resistance RON 25 Ω Maximum voltage 150 Vdc / 250 V~ Measurement accuracy Power factor measurement 0,51 Phase voltage measurement ± 0,2% ± 2 (20 120% Un) Serial communication Protocol ModBus/RTU	Consumption (per input)	<0,5 W
Analogue outputs Current mode, nominal range Current mode: maximum load resistance 300 \Q DAC resolution Accordance time 4000 points Response time 42 s Digital transistor outputs Type Optocoupler Maximum current 100 mA Maximum resistance RON 25 \Q Maximum voltage 150 Vdc / 250 V~ Measurement accuracy Power factor measurement 0,51 Phase voltage measurement ± 0,2% ± 2 (20 120% Un) Serial communication Protocol ModBus/RTU	Minimum signal width	40 ms
Current mode, nominal range Current mode: maximum load resistance DAC resolution Response time 4000 points Response time 7upe Optocoupler Maximum current 100 mA Maximum resistance RON Asximum voltage 150 Vdc / 250 V~ Measurement accuracy Power factor measurement 10,51 Phase voltage measurement \$\frac{0}{2}\$ \frac{1}{2}\$ \	Operating voltage	24 Vdc ± 20 %
Current mode: maximum load resistance 300 Ω DAC resolution 4000 points Response time < 2 s	Analogue outputs	
DAC resolution 4000 points Response time <2 s Digital transistor outputs Type Optocoupler Maximum current 100 mA Maximum resistance RON 25 Ω Maximum voltage 150 Vdc / 250 V~ Measurement accuracy Power factor measurement 0,51 Phase voltage measurement ± 0,2% ± 2 (20 120% Un) Serial communication Protocol ModBus/RTU	Current mode, nominal range	0-20 mA/4-20 mA
Response time <2 s Digital transistor outputs Type Optocoupler Maximum current 100 mA Maximum resistance RON 25 \(\Omega\$ Maximum voltage 150 Vdc / 250 V~ Measurement accuracy Power factor measurement 0,51 Phase voltage measurement ±0,2% ± 2 (20 120% Un) Serial communication Protocol ModBus/RTU	Current mode: maximum load resistance	300 Ω
Digital transistor outputs Type Optocoupler Maximum current 100 mA Maximum resistance RON 25 Ω Maximum voltage 150 Vdc / 250 V~ Measurement accuracy Power factor measurement 0,51 Phase voltage measurement ± 0,2% ± 2 (20 120% Un) Serial communication Protocol ModBus/RTU	DAC resolution	4000 points
Type Optocoupler Maximum current 100 mA Maximum resistance RON 25 Ω Maximum voltage 150 Vdc / 250 V~ Measurement accuracy Power factor measurement 0,51 Phase voltage measurement \pm 0,2% \pm 2 (20 120% Un) Serial communication Protocol ModBus/RTU	Response time	< 2 s
Maximum current 100 mA Maximum resistance RON 25 Ω Maximum voltage 150 Vdc / 250 V~ Measurement accuracy Power factor measurement 0,51 Phase voltage measurement ± 0,2% ± 2 (20 120% Un) Serial communication Protocol ModBus/RTU	Digital transistor outputs	
Maximum resistance RON25 ΩMaximum voltage150 Vdc / 250 V~Measurement accuracyO,51Power factor measurement0,51Phase voltage measurement± 0,2% ± 2 (20 120% Un)Serial communicationProtocolModBus/RTU	Туре	Optocoupler
Measurement accuracy Power factor measurement 0,51 Phase voltage measurement ± 0,2% ± 2 (20 120% Un) Serial communication ModBus/RTU	Maximum current	100 mA
Measurement accuracy Power factor measurement 0,51 Phase voltage measurement ± 0,2% ± 2 (20 120% Un) Serial communication Protocol ModBus/RTU	Maximum resistance RON	25 Ω
Power factor measurement 0,51 Phase voltage measurement ± 0,2% ± 2 (20 120% Un) Serial communication Protocol ModBus/RTU	Maximum voltage	150 Vdc / 250 V~
Phase voltage measurement ± 0,2% ± 2 (20 120% Un) Serial communication Protocol ModBus/RTU	Measurement accuracy	
Serial communication Protocol ModBus/RTU	Power factor measurement	0,51
Protocol ModBus/RTU	Phase voltage measurement	± 0,2% ± 2 (20 120% Un)
	Serial communication	
Technology / Type RS-485	Protocol	ModBus/RTU
	Technology / Type	RS-485







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Connections





