UEM45-2 ‹UEM45-2A R, UEM45-2A M›

45A single phase energy meter with built-in communication

- UEM45-2A R with RS485 Modbus RTU communication
- UEM45-2A M with M-Bus communication
- Direct connection up to 45 A
- Fully bi-directional 4-quadrant measurements for all energies and powers
- 2 S0 outputs for pulse emission:
  -S01 is fully programmable by HMI or at a distance by COM
  -S02 is always fixed to 1000 imp/kWh
- 4 tariffs
- Class B according to EN 50470-3 (MID)
- Certified for maximum operating temperature of 70°C
- 1 DIN module compact size
- LCD display with 6 main digits
- Quick installation



»General features

1 DIN module energy meter for the energy measurement in industrial and civilian application, with the following built-in communications according to the model: RS485 Modbus RTU or M-Bus.
The device comes with MID Certification, making it suitable for billing purposes.
The active energy is compliant to EN 50470-3 class B (MID).
The reactive energy is compliant to IEC/EN 62053-23 class 2.
Besides the energy, the meter can measure the main electrical parameters and makes them available on the display and on the built-in COM port. The COM port allows to manage the connected meter by a remote station and data is transmitted on a RS485 or M-Bus line according to the device model. Moreover, a dedicated application for remote management is provided:

- *Modbus Master software* > for energy meter management by PC in RS485 Modbus network.
- *M-Bus Master software* > for energy meter management by PC in M-Bus network.

Backlighted LCD display with clear graphic symbols comprehensible at a glance.
Metrological LED on front panel and sealable terminal covers. The analysis of the MTBF values, the accurate selection of components and the reduction of the internal working temperatures together with strict production and control standards guarantee a product with an excellent quality and a long lasting reliability.

» Applications

- Totalization of the electric energy in the industry for each single line or machine.
- Measurement of energy generated by renewable sources such as solar, eolic, etc.
- Accounting and billing of consumptions in camp sites, malls, residential areas, naval ports, etc.
- Totalization of the electric consumption in hotels, congress centers, exhibition fairs.
- Accounting of the consumptions in buildings with executive office services.
- Allocation of the consumptions in civilian and industrial buildings.
- Realization of energy monitoring systems.
  Remote survey of the consumptions and compute
- of the costs.

» Benefits

- Up to 12 instantaneous measurements, complete set of
- real time values, total counters and partial counters.
- Remote management through optional application
- according to the device model (RS485 Modbus, M-Bus).
- 4 tariffs remotely monitorable via COM port.
  MID certified.
  Operating temperture up to 70°C.

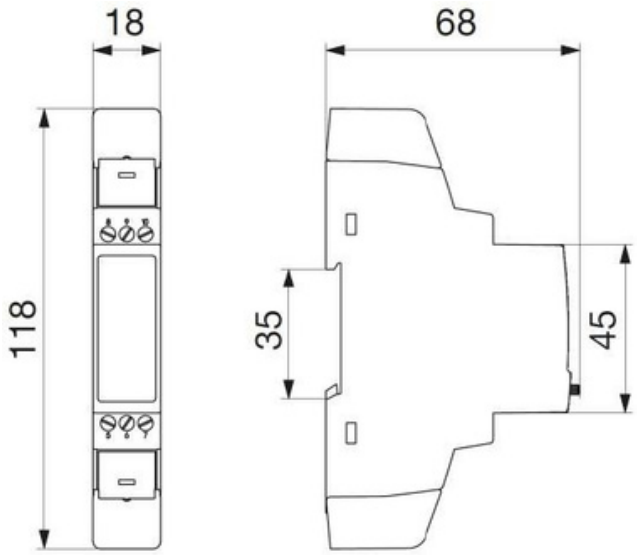
»Related products

- Modbus Master software (for Windows OS)
- M-Bus Master software (for Windows OS)

»Measurements on display

	REAL TIME VALUES	TOTAL COUNTERS	PARTIAL COUNTERS
PARAMETERS			
Voltage (U)	□		
Current (I)	□		
Frequency (F)	□		
Power Factor (PF)	□		
Active Power (P)	□		
Apparent Power (S)	□		
Reactive Power (Q)	□		
Imported Active Energy (+kWh)	□	□	□
Exported Active Energy (-kWh)	□	□	□
Apparent Energy (kVAh)	□	□	□
Imported Reactive Energy (+kvarh)	□	□	
Exported Reactive Energy (-kvarh)	□	□	

»Technical drawing (mm)



»Technical features

GENERAL	
Housing in compliance with	DIN 43880

POWER SUPPLY	
Power supply	from the voltage
Range	nominal voltage ±20%
Max consumption	UEM45-2A R: 0.5 W, 1.5 VA UEM45-2A M: 1 W, 10 VA

NOMINAL VOLTAGE & FREQUENCY	
Nominal value	230 V 50/60 Hz

CURRENT	
Starting current I_{st}	0.02 A
Minimum current I_{min}	0.25 A
Transitional current I_{tr}	0.5 A
Nominal current I_n	5 A
Maximum current I_{max}	45 A

ACCURACY	
Active energy class B in compliance with	EN 50470-3
Reactive energy class 2 in compliance with	EN 62053-23

COMMUNICATION for RS485 MODBUS model	
Isolated port	RS485
Unit load	1/2
Protocol	MODBUS RTU
Communication speed	2.4 / 4.8 / 9.6 / 19.2 / 38.4 kbps

COMMUNICATION for M-BUS model	
Isolated port	M-BUS
Unit load	1
Protocol	M-BUS
Communication speed	600 / 1.2k / 2.4k / 4.8k / 9.6 kbps

S0 OUTPUTS	
Passives optoisolated in compliance with	IEC 62053-31
Type	S01 programmable S02 fixed to 1000 imp/kWh
Pulse rate selectable for S01	0.001/ 0.01/ 0.1/ 1 En/imp

TARIFF MANAGEMENT	
Through serial command (COM)	4

METROLOGICAL LED	
Meter constant	1000 imp/kWh

SAFETY	
In compliance with	IEC 62052-11, IEC
Pollution degree	62052-31 2
Protective class	II
Pulse voltage withstand	6 kV-1.2 µs
AC voltage withstand	4 kV for 1 min
Housing material flame resistance	UL 94 class V0

ENVIRONMENTAL CONDITIONS	
Mechanical environmental	M1
Electromagnetic environmental	E2
Operating temperature	-40°C ... +70°C
Storage temperature	-40°C ... +75°C
Humidity (without condensation)	max 95%
Protection degree of frontal panel / terminals	IP51 / IP20
Installation	internal use

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ORDER CODE	MODEL	NOMINAL VOLTAGE AND FREQUENCY	POWER SUPPLY	CURRENT INPUT	COM PORT	TARIFFS	S0 OUTPUTS
1123.0001.0001	UEM45-2A R	230V 50/60Hz	Self-powered	Direct up to 45A	RS485	4	2
1123.0002.0001	UEM45-2A M	230V 50/60Hz	Self-powered	Direct up to 45A	M-BUS	4	2

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NOTE: Subject to change without notice