

EM122-RTU-2P**Weidmüller Interface GmbH & Co. KG**Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

**Energy meters - BasicLine****Core functions of energy data acquisition**

The BasicLine devices measure power characteristics of single-phase or three-phase loads.

For this purpose, basic values are provided to make the energy demand of a system transparent.

The essential values are displayed directly on the unit and communicated via a network.

Our devices are suitable either for mounting on top hat rails or in the front panel.

By focusing on core functions, the BasicLine devices have a very good cost-benefit ratio.

General ordering data

Version	Power measurement/display for 1-, 3-phase mains, 100 A, direct measurement, pulse output, Modbus RTU
Order No.	7760051003
Type	EM122-RTU-2P
GTIN (EAN)	6944169818196
Qty.	1 ST

Technical data

Approvals

Approvals



ROHS

Conform

Dimensions and weights

Depth	66 mm	Depth (inches)	2.5984 inch
Height	100 mm	Height (inches)	3.937 inch
Width	72 mm	Width (inches)	2.8346 inch
Net weight	350 g		

Temperatures

Storage temperature	-40 °C...80 °C	Operating temperature	-25 °C...55 °C
Humidity	0...90 % (no condensation)		

Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption
REACH SVHC	No SVHC above 0.1 wt%

Measuring current input

Housing main material	Plastic	Rated current	10 A
AC input cable connection	Screw connection	Current-measuring channels	3
Measuring accuracy for current	0.5 %	Max. current	100 A

Measuring voltage input

Low voltage network	1 phase 2 wire (L + N), 3 phase 3 wire (L1 + L2 + L3), 3 phase 4 wire (L1 + L2 + L3 + N)	Voltage type	AC
Frequency range, max.	60 Hz	Frequency range, min.	50 Hz
Measuring accuracy for voltage	0.5 %	Three-wire system	Yes
Measurement range, voltage L-L, AC	240...480 V	Measurement range, voltage L-N, AC	176...276 V
Four-wire system	Yes		

Communication

Baud rate	9600/19200/38400 bit/s	Communication	Bi-directional
Parity	none, even, odd	Stop bits	1, 2
Addressing	1 - 247	Interface	RS485
Protocol	Modbus RTU		

Inputs/outputs

Digital output configurable	Yes	Number of digital inputs	0
Number of digital outputs	0	Number of pulse outputs	2

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Technical data

Measurement data recording

Update interval register	100 ms	Software	EM configuration tools
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Technical data

Display value	Voltage, current measured value, Apparent power, Reactive power, Power factor, Frequency, Import / export active power demand, Total import / export active energy, Total import / export reactive energy, Total system power demand	Version	Power measurement/display for 1-, 3-phase mains, 100 A, direct measurement, pulse output,, Modbus RTU
Display	LCD	Type of mounting	DIN rail
Protection degree	IP51	Pollution severity	2
Rated current	10 A	Power factor input	1 %
Max. current	100 A	Display monitoring (monitor)	LCD
Measurement range, voltage L-N, AC	176...276 V	Measurement range, voltage L-L, AC	240...480 V
Surge voltage category	III	Three-wire system	Yes
Four-wire system	Yes	Sampling frequency 50/60 Hz	4.1 kHz
Continuous measurements	Yes	Measurement result per second	100 ms
Current-measuring channels	3	Measuring accuracy for voltage	0.5 %
Measuring accuracy for current	0.5 %	Measurement accuracy for active energy Class 0.5 (kWh, .../5 A)	

Insulation coordination

Impulse withstand voltage	6 kV (1.2/50 µs)	Surge voltage category	III
Pollution severity	2	Insulation voltage input or output/supply	4 kVeff / 1 min.

Connection data

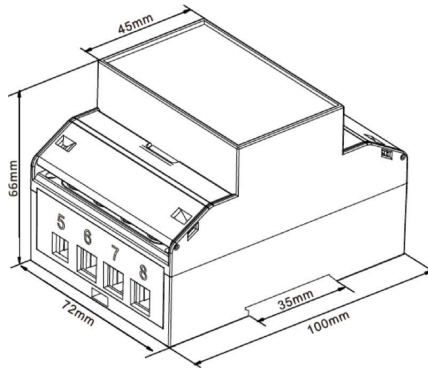
Stripping length	8 mm	Type of connection	Screw connection
Wire cross-section, solid, min.	2.5 mm ²	Wire cross-section, solid, max.	25 mm ²
Wire connection cross section, finely stranded, min.	0.5 mm ²	Wire connection cross section, finely stranded, max.	2 mm ²
Wire connection cross section, finely stranded, two clampable wires, min.	2.5 mm ²	Wire cross-section, finely stranded, two clampable wires, max.	25 mm ²

Classifications

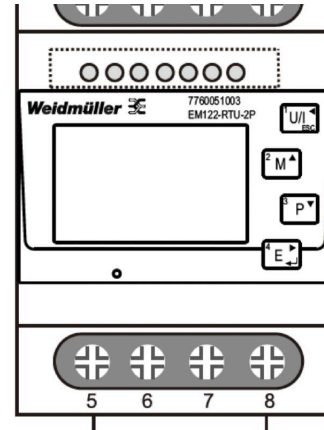
ETIM 6.0	EC002301	ETIM 7.0	EC002301
ETIM 8.0	EC002301	ETIM 9.0	EC002301
ETIM 10.0	EC002301	ECLASS 9.0	27-14-23-30
ECLASS 9.1	27-21-03-01	ECLASS 10.0	27-14-23-30
ECLASS 11.0	27-14-23-30	ECLASS 12.0	27-14-23-30
ECLASS 13.0	27-14-23-30	ECLASS 14.0	27-14-23-30
ECLASS 15.0	27-14-23-30		

Drawings

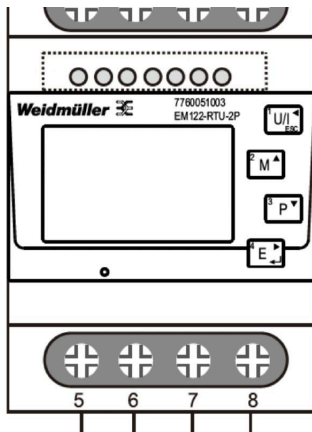
Dimensioned drawing



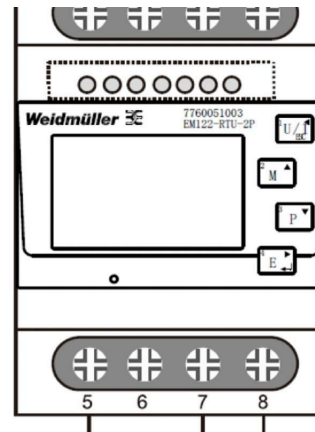
Wiring example



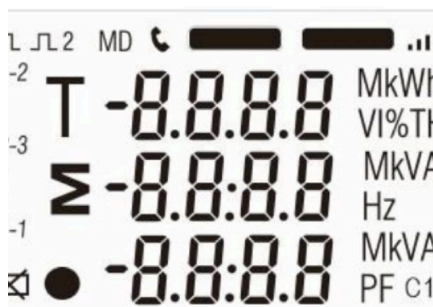
Wiring example



Wiring example



Layout



Full screen