

## EM122-RTU-2P

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



## 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.	<a href="#">7760051003</a>
Type	EM122-RTU-2P
GTIN (EAN)	6944169818196
Qty.	1 items

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## 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 with exemption
RoHS Exemption (if applicable/known)	6c, 7a, 7cl
REACH SVHC	Lead 7439-92-1
SCIP	90d4d0d0-bf40-4da4-b1ec-9cc14a358c13

## 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
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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

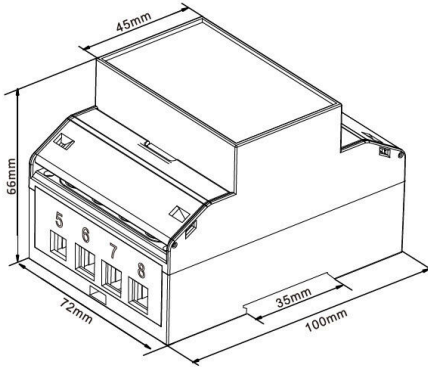
Stripping length	8 mm	Type of connection	Screw connection
Wire cross-section, solid, min.	2.5 mm <sup>2</sup>	Wire cross-section, solid, max.	25 mm <sup>2</sup>
Wire connection cross section, finely stranded, min.	0.5 mm <sup>2</sup>	Wire connection cross section, finely stranded, max.	2 mm <sup>2</sup>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

### Classifications

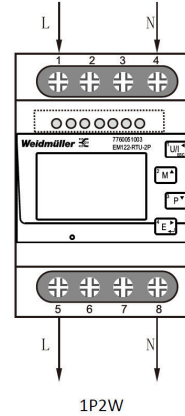
ETIM 8.0	EC002301	ETIM 9.0	EC002301
ETIM 10.0	EC002301	ECLASS 14.0	27-14-23-30
ECLASS 15.0	27-14-23-30		

Drawings

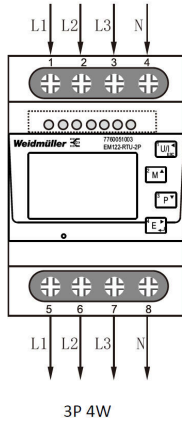
Dimensioned drawing



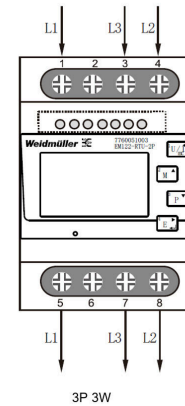
Wiring example



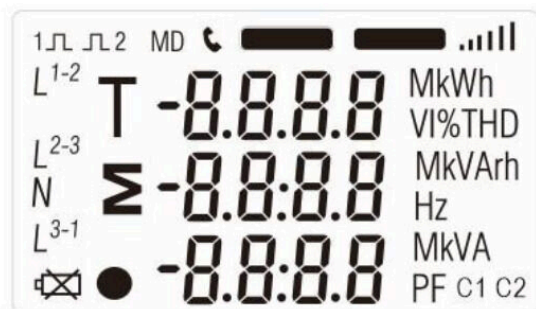
Wiring example



Wiring example



Layout



Full screen