

EM111-RTU-2P**Weidmüller Interface GmbH & 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-phase mains, 45 A, direct measurement, pulse output, Modbus RTU
Order No.	7760051001
Type	EM111-RTU-2P
GTIN (EAN)	6944169818172
Qty.	1 items

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Technical data

Approvals

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ROHS Conform

Dimensions and weights

Depth	62 mm	Depth (inches)	2.4409 inch
Height	90 mm	Height (inches)	3.5433 inch
Width	17.5 mm	Width (inches)	0.689 inch
Net weight	90 g		

Temperatures

Storage temperature	-40 °C...70 °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	5 A
AC input cable connection	1 removable 3-pin terminal block	Current-measuring channels	1
Measuring accuracy for current	0.5 %	Max. current	45 A

Measuring voltage input

Low voltage network	1 phase 2 wire (L + N)	Voltage type	AC
Frequency range, max.	60 Hz	Frequency range, min.	50 Hz
Measuring accuracy for voltage	0.5 %	Three-wire system	No
Measurement range, voltage L-N, AC	176...276 V	Four-wire system	No

Communication

Baud rate	≤ 9600 Bd	Communication	Bi-directional
Parity	none, even, odd	Stop bits	1, 2
Addressing	1 - 247	Interface	RS485
Protocol	Modbus RTU		

Inputs/outputs

Input type	1 phase AC (L1, N)	Digital output configurable	Yes
Number of digital inputs	0	Number of digital outputs	0
Number of pulse outputs	2		

Measurement data recording

Update interval register	100 ms	Software	EM configuration tools
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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-phase mains, 45 A, direct measurement, pulse output,, Modbus RTU
Input frequency	AC: 50 Hz (arithmetic average)	Display	LCD
Type of mounting	DIN rail	Protection degree	Front panel: IP51, IP20
Pollution severity	2	Rated current	5 A
Power factor input	1 %	Measurement accuracy	Class 1 (IEC 62053-21), Class B (EN 50470-3), 0.5% in relation to final value (U / I)
Max. current	45 A	Display monitoring (monitor)	LCD
Measurement range, voltage L-N, AC	176...276 V	Surge voltage category	II
Three-wire system	No	Four-wire system	No
Sampling frequency 50/60 Hz	3.2 kHz	Measurement result per second	100 ms
Current-measuring channels	1	Measuring accuracy for voltage	0.5 %
Measuring accuracy for current	0.5 %	Measurement accuracy for active energy (kWh, .../5 A)	Class 1 (IEC 62053-21), Class B (EN 50470-3)

Insulation coordination

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

Connection data

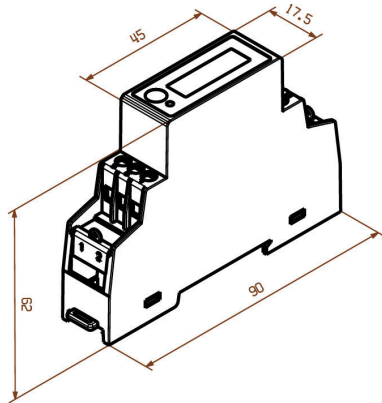
Stripping length	8 mm	Type of connection	Screw connection
Wire cross-section, solid, min.	2.5 mm ²	Wire cross-section, solid, max.	10 mm ²
Wire connection cross section, finely stranded, min.	2.5 mm ²	Wire connection cross section, finely stranded, max.	10 mm ²
Wire connection cross section, finely stranded, two clampable wires, min.	2.5 mm ²	Wire cross-section, finely stranded, two clampable wires, max.	10 mm ²

Classifications

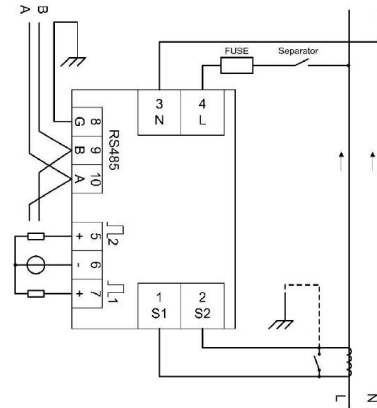
ETIM 8.0	EC002301	ETIM 9.0	EC002301
ETIM 10.0	EC002301	ECLASS 14.0	27-14-23-30
ECLASS 15.0	27-14-23-30		

Drawings

Dimensioned drawing



Wiring



Layout



Full screen