

EM110-RTU-2P

Weidmüller Interfaces GmbH & Co. KG

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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-phase mains, use of CT, pulse output, Modbus RTU
Order No.	7760051002
Type	EM110-RTU-2P
GTIN (EAN)	6944169818189
Qty.	1 pc(s).

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Technical data

Dimensions and weights

Depth	62 mm	Depth (inches)	2.441 inch
Height	90 mm	Height (inches)	3.543 inch
Width	17.5 mm	Width (inches)	0.689 inch
Net weight	80 g		

Temperatures

Storage temperature	-40 °C...70 °C	Operating temperature	-25 °C...55 °C
Operating temperature, min.	-25 °C	Operating temperature, max.	55 °C
Humidity	0...90 % (no condensation)		

Measuring current input

AC input cable connection	Screw connection	Current-measuring channels	1
Max. current	9999 A	Measuring accuracy for current	0.5 %

Measuring voltage input

Frequency range, max.	60 Hz	Frequency range, min.	50 Hz
Low voltage network	1 phase 2 wire (L + N)	Measurement range, voltage L-N, AC	176...276 V
Measuring accuracy for voltage	0.5 %	Voltage type	AC

Communication

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

Inputs/outputs

Input type	1 phase AC (L1, N), Secondary side of a current transformer 0-1 A or 0-5 A	Number of pulse outputs	2
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Display	LCD	Display monitoring (monitor)	LCD digital
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	Max. current	9999 A
Measurement accuracy	Class 1 (IEC 62053-21), Class B (EN 50470-3), 0.5% in relation to final value (U / I)	Pollution severity	2
Power factor input	1 %	Protection degree	IP20, Front panel: IP51
Type of mounting	DIN rail	Version	Power measurement/ display for 1-phase mains, use of CT, pulse output,, Modbus RTU
Measurement range, voltage L-N, AC	176...276 V	Surge voltage category	II
Continuous measurements	Yes	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)	Insulation voltage input or output/supply	4 kV _{eff} / 1 min.
Pollution severity	2	Surge voltage category	II

Connection data

Stripping length	7 mm	Type of connection	Screw connection
Tightening torque	1.3 Nm	Wire connection cross section, finely stranded, min.	0.5 mm ²
Wire connection cross section, finely stranded, max.	2.5 mm ²	Wire connection cross section, finely stranded, two clampable wires, min.	0.5 mm ²
Wire cross-section, finely stranded, two clampable wires, max.	2.5 mm ²	Wire connection	Pin-type cable connector with insulation

Classifications

ETIM 6.0	EC002301	ETIM 7.0	EC002301
ETIM 8.0	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

Approvals

Approvals



ROHS Conform

Creation date March 10, 2023 8:50:16 AM CET

Catalogue status 03.03.2023 / We reserve the right to make technical changes.

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Downloads

Approval/Certificate/Document of Conformity	Declaration of Conformity	www.weidmueller.com
Software	Runtime Software – EM configuration tools Device description – Device description – MODBUS address list	
User Documentation	Manual EM configuration tools Chinese Manual EM configuration tools English Manual EM110 Chinese Manual EM110 English	
Catalogues	Catalogues in PDF-format	

Data sheet

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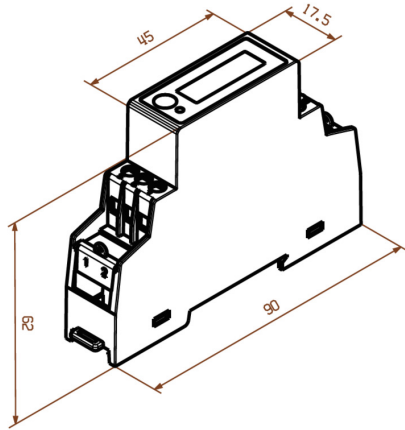
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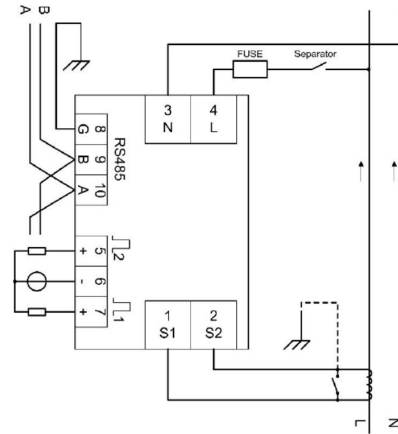
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Drawings

Dimensioned drawing



Wiring



Layout



Full screen