

EM120-RTU-2P

Weidmüller Interfaces GmbH & Co. KG

Postfach 3030

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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-, 3-phase mains, use of CT, pulse output, Modbus RTU
Order No.	7760051004
Type	EM120-RTU-2P
GTIN (EAN)	6944 1698 18202
Qty.	1 pc(s).

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Technical data

Dimensions and weights

Depth	65 mm	Depth (inches)	2.559 inch
Height	94.5 mm	Height (inches)	3.72 inch
Width	72 mm	Width (inches)	2.835 inch
Net weight	240 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...95 % (no condensation)		

Measuring current input

Current-measuring channels	3	Max. current	5000 A
Measuring accuracy for current	0.5 %	Rated current	via current transformer 1 A/5 A

Measuring voltage input

Four-wire system	Yes	Frequency range, max.	65 Hz
Frequency range, min.	45 Hz	Low voltage network	1 phase 2 wire (L + N), 3 phase 3 wire (L1 + L2 + L3), 3 phase 4 wire (L1 + L2 + L3 + N)
Measurement range, voltage L-L, AC	240...480 V	Measurement range, voltage L-N, AC	138...276 V
Measuring accuracy for voltage	0.5 %	Quadrants	4
Three-wire system	Yes	Voltage type	AC

Communication

Interface	RS485	Protocol	Modbus RTU
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Inputs/outputs

Digital output configurable	Yes	Input type	3 phase AC (3P, 3P +N), Secondary side of a current transformer 0-1 A or 0-5 A
Number of pulse outputs	2	Temperature input	No

Measurement data recording

Software	EM configuration tools
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Technical data

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Display monitoring (monitor)	Display value	www.weidmueller.com	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
	LCD digital		
Max. current	5000 A	Pollution severity	2
Power factor input	1 %	Protection degree	IP20, Front panel: IP51
Rated current	via current transformer 1 A/5 A	Type of mounting	DIN rail
Version	Power measurement/display for 1-, 3-phase mains, use of CT, pulse output,, Modbus RTU	Measurement range, voltage L-N, AC	138...276 V
Measurement range, voltage L-L, AC	240...480 V	Surge voltage category	III
Voltage supply	85...275 V AC	Three-wire system	Yes
Four-wire system	Yes	Quadrants	4
Current-measuring channels	3	Measuring accuracy for voltage	0.5 %
Measuring accuracy for current	0.5 %	Measurement accuracy for active energy (kWh, .../5 A)	Class 0.5

Insulation coordination

Pollution severity	2	Surge voltage category	III
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Connection data

Stripping length	8 mm	Type of connection	Screw connection
Wire connection cross section, finely stranded, min.	0.5 mm ²	Wire connection cross section, finely stranded, max.	1.5 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.	1.5 mm ²

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

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Technical data

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 EM120 Chinese Manual EM120 English	
Catalogues	Catalogues in PDF-format	

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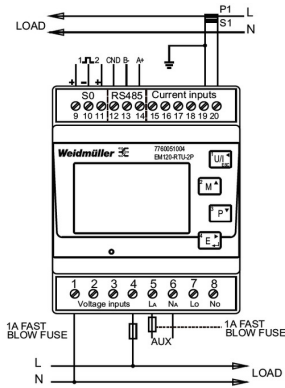
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Drawings

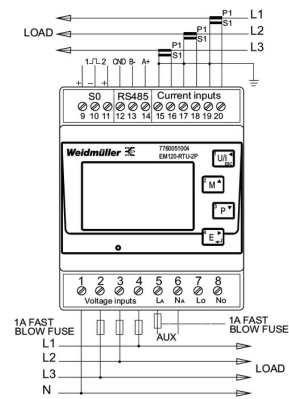
Wiring example



1P2W

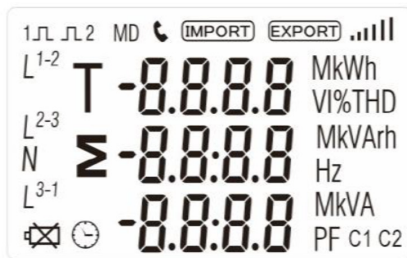
Wiring example

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3P4W

Layout



Full screen