

**EM111-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-phase mains, 45 A, direct measurement, pulse output, Modbus RTU
Order No.	<a href="#">7760051001</a>
Type	EM111-RTU-2P
GTIN (EAN)	6944 1698 18172
Qty.	1 pc(s).

Creation date March 10, 2023 8:50:07 AM CET

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

## EM111-RTU-2P

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## 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	90 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	1 removable 3-pin terminal block	Current-measuring channels	1
Max. current	45 A	Measuring accuracy for current	0.5 %
Rated current	5 A		

## 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

Stop bits	1, 2	Interface	RS485
Protocol	Modbus RTU		

## Inputs/outputs

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

## Measurement data recording

Software	EM configuration tools
----------	------------------------

## EM111-RTU-2P

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Technical data

## Technical data

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	Input frequency	
Max. current	45 A	Measurement accuracy	AC: 50 Hz (arithmetic average) 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: IP5 1	Rated current	5 A
Type of mounting	DIN rail	Version	Power measurement/display for 1-phase mains, 45 A, direct measurement, pulse output,, Modbus RTU
Measurement range, voltage L-N, AC	176...276 V	Surge voltage category	II
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	4 kV <sub>eff</sub> / 1 min.
Pollution severity	2	Surge voltage category	II

## Connection data

Stripping length	8 mm	Type of connection	Screw connection
Wire connection cross section, finely stranded, min.	2.5 mm <sup>2</sup>	Wire connection cross section, finely stranded, max.	10 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.	10 mm <sup>2</sup>

## 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

## EM111-RTU-2P

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 26  
D-32758 Detmold  
Germany

[www.weidmueller.com](http://www.weidmueller.com)

# Technical data

## Downloads

Approval/Certificate/Document of Conformity	<a href="#">Declaration of Conformity</a>
Engineering Data	<a href="#">CAD data – STEP</a>
Software	<a href="#">Runtime Software – EM configuration tools</a> <a href="#">Device description – Device description – MODBUS address list</a>
User Documentation	<a href="#">Manual EM configuration tools Chinese</a> <a href="#">Manual EM configuration tools English</a> <a href="#">Manual EM111 Chinese</a> <a href="#">Manual EM111 English</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>

**Data sheet**

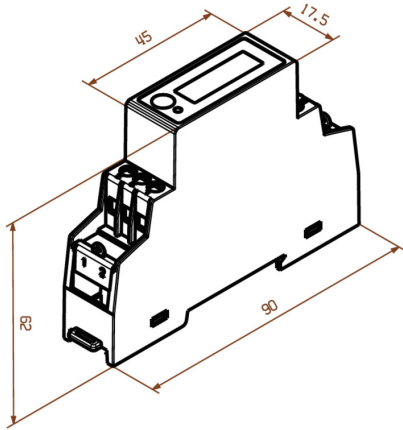
**EM111-RTU-2P**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 26  
 D-32758 Detmold  
 Germany

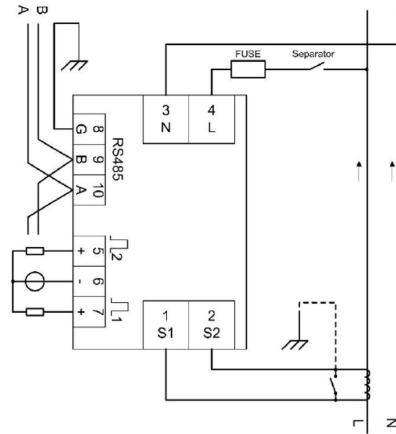
www.weidmueller.com

**Drawings**

**Dimensioned drawing**



**Wiring**



**Layout**



Full screen