

EM220-RTU-4DI2DO-GW**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-, 3-phase mains, use of CT, pulse output, digital input/output, Modbus RTU, Modbus TCP/IP, Gateway
Order No.	7760051006
Type	EM220-RTU-4DI2DO-GW
GTIN (EAN)	6944169818226
Qty.	1 pc(s).

EM220-RTU-4DI2DO-GW

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data

Dimensions and weights

Depth	74 mm	Depth (inches)	2.913 inch
Height	96 mm	Height (inches)	3.78 inch
Width	96 mm	Width (inches)	3.78 inch
Net weight	380 g		

Temperatures

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

Measuring current input

Current-measuring channels	3	Max. current	9999 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), 1 phase 2 wire (L1 + L2), 3 phase 3 wire (L1 + L2 + L3), 3 phase 4 wire (L1 + L2 + L3 + N)
Measurement range, voltage L-L, AC	50...600 V	Measurement range, voltage L-N, AC	50...345 V
Measuring accuracy for voltage	0.5 %	Quadrants	4
Three-wire system	Yes	Voltage type	AC

Communication

Parity	none, even, odd	Stop bits	1, 2
Interface	RS485, Ethernet	Protocol	Modbus RTU, Modbus/TCP (Port 502), Modbus-Gateway

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 digital inputs	4	Number of digital outputs	2
Temperature input	No		

Measurement data recording

Update interval register	1 s	Software	EM configuration tools
--------------------------	-----	----------	------------------------

EM220-RTU-4DI2DO-GW

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data

Technical data

Display monitoring (monitor)		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
	LCD digital		
Max. current	9999 A	Pollution severity	2
Power factor input	± 0.01	Protection degree	IP20, Front panel: IP51
Rated current	via current transformer 1 A/5 A	Type of mounting	Frontpanel mounting
Version	Power measurement/display for 1-, 3-phase mains, use of CT, pulse output, digital input/output, Modbus RTU, Modbus TCP/IP, Gateway	Measurement range, voltage L-N, AC	50...345 V
Measurement range, voltage L-L, AC	50...600 V	Surge voltage category	III
Voltage supply	75...270 V AC, 100...380 V DC	Three-wire system	Yes
Four-wire system	Yes	Quadrants	4
Sampling frequency 50/60 Hz	14.4 kHz	Measurement result per second	1 s
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 0.5S (IEC 62053-22), Class 0.5 (IEC 61557-12)

Insulation coordination

Pollution severity	2	Surge voltage category	III
--------------------	---	------------------------	-----

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.	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

Classifications

ETIM 6.0	EC002301	ETIM 7.0	EC002301
ETIM 8.0	EC002301	ETIM 9.0	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	ECLASS 13.0	27-14-23-30

Environmental Product Compliance

REACH SVHC	/
------------	---

EM220-RTU-4DI2DO-GW

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data

Approvals

Approvals



ROHS

Conform

Downloads

Approval/Certificate/Document of Conformity

[Declaration of Conformity](#)

Engineering Data

[CAD data – STEP](#)

Software

[EM configuration tools](#)[MODBUS address list](#)

User Documentation

[Manual EM220 English](#)[Manual EM configuration tools Chinese](#)[Manual EM configuration tools English](#)[Manual EM220 Chinese](#)

Catalogues

[Catalogues in PDF-format](#)

EM220-RTU-4DI2DO-GW

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

www.weidmueller.com

Drawings
Dimensioned drawing
