

EM220-RTU-4DI2DO-GW

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-, 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 items

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Technical data

Approvals

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ROHS Conform

Dimensions and weights

Depth	74 mm	Depth (inches)	2.9134 inch
Height	96 mm	Height (inches)	3.7795 inch
Width	96 mm	Width (inches)	3.7795 inch
Net weight	380 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)	7a, 7cl
REACH SVHC	Lead 7439-92-1

Measuring current input

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

Measuring voltage input

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)	Voltage type	AC
Frequency range, max.	65 Hz	Frequency range, min.	45 Hz
Measuring accuracy for voltage	0.5 %	Three-wire system	Yes
Quadrants	4	Measurement range, voltage L-L, AC	50...600 V
Measurement range, voltage L-N, AC	50...345 V	Four-wire system	Yes

Communication

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

Inputs/outputs

Input type	3 phase AC (3P, 3P +N), Secondary side of a	Digital output configurable	Yes
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	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
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Technical data

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-, 3-phase mains, use of CT, pulse output,, digital input/output,, Modbus RTU, Modbus TCP/IP, Gateway
Type of mounting	Frontpanel mounting	Protection degree	Front panel: IP51, IP20
Pollution severity	2	Rated current	via current transformer 1 A/5 A
Power factor input	± 0.01	Max. current	5000 A
Display monitoring (monitor)	LCD	Measurement range, voltage L-N, AC	50...345 V
Measurement range, voltage L-L, AC	50...600 V	Surge voltage category	III
Supply voltage	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

Surge voltage category	III	Pollution severity	2
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Connection data

Stripping length	8 mm	Type of connection	Screw connection
Wire cross-section, solid, min.	0.5 mm ²	Wire cross-section, solid, max.	2.5 mm ²
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 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		

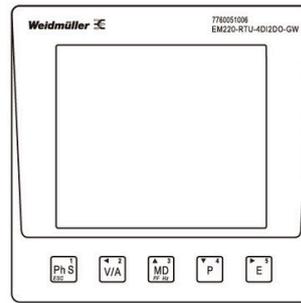
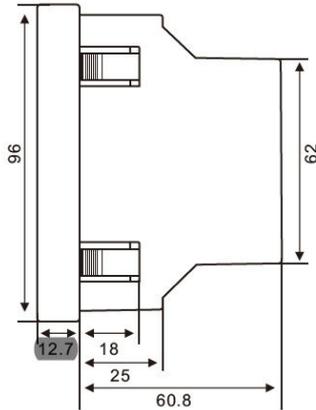
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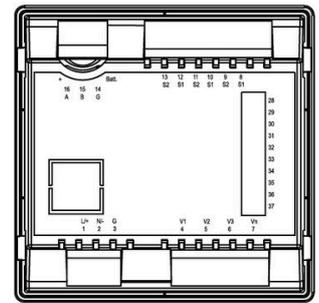
Drawings

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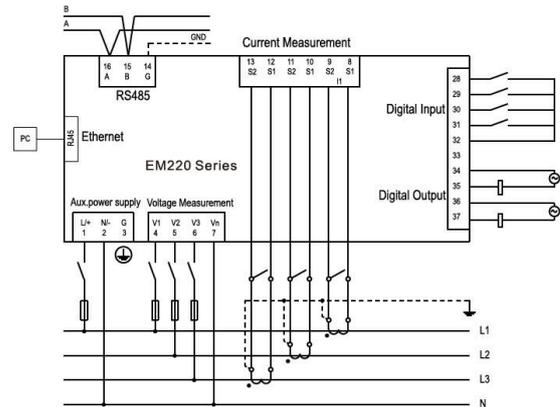
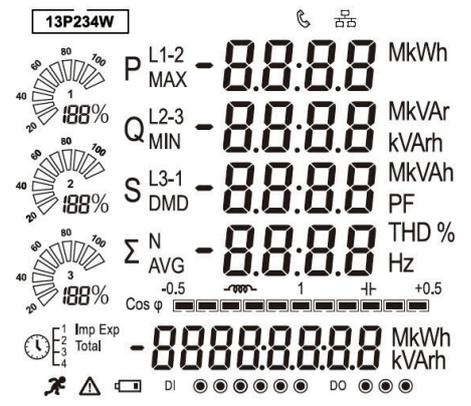
Dimensioned drawing



Front view



Rear view



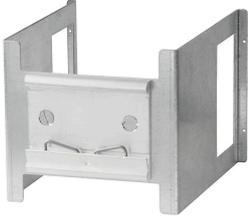
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Accessories

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General ordering data

Type	EM220 BRACKET	Version	
Order No.	3068970000		
GTIN (EAN)	4099987062862		
Qty.	1 ST		