

Series of single-phase energy meter EM-40-1P

April 2021 • Version 1.00

The EM-40-1P single-phase energy meter is intended for energy measurements in single-phase electrical power networks. For more information see EM-40-1P User's manual.

INSTALLATION

Warning: Installation must be carried out and inspected by a specialist or under his supervision.

When working on the meter, switch off the mains voltage!

Recommended installation

Mounting to DIN rail according to DIN EN60715.

Power contacts:

Power contacts capacity: flexible (Rigid) 1.5 mm² – 10* mm² (*Ferrule contact length should be 12 mm. Wire stripped to 14 mm)

Connection screws M3.5

Max torque 0.8 Nm

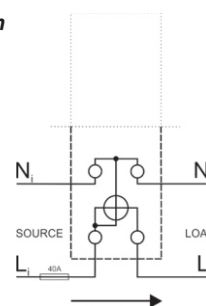
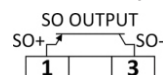
Auxiliary terminals:

Auxiliary terminals contact capacity

Flexible (Rigid) 0.05 mm² – 1 (2.5) mm²

Auxiliary terminals screws M3

Max torque 0.6 Nm

Connection**Connection of modules**

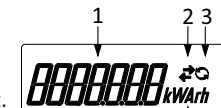
Pulse output

OPERATION

Warning: Case is sealed, do not open the meter. No warranty if case is opened.

Display description

- Actual Value.
- (→) Energy power import.
(←) Energy power export.
- The sign indicates the specified counter is currently active (real-time data).
- Unit of measurement.

**TECHNICAL DATA****Measuring input**

Type:	single-phase (1b)
Reference current (I_{ref}):	5 A
Maximum current (I_{max}):	40 A
Minimum current (I_{min}):	0.25 A
Transitional current (I_{tr}):	0.5 A
Starting current:	20 mA
Power consumption at I_{ref} :	< 0.1 VA
Nominal voltage (U_n):	230 V (-20% - +15%)
Power consumption at U_n :	< 10 VA
Nominal frequency (f_n):	50 Hz and 60 Hz
Minimum measuring time:	10 s

Accuracy

Active energy:	class 1 EN 62053-21, class B EN 50470-3
Reactive energy:	class 2 EN 62053-23

LCD

Number of digits:	7
Height of digits:	5.5 mm

LED

Colour:	red
Pulse rate:	1000 imp/Wh
LED on:	no load indication

Pulse output

Type:	Optocoupler open collector switch
Pulse rate:	1 imp/Wh (Act. Imp. E)
Pulse duration:	32 ms ± 2 ms
Rated voltage DC:	27 V max
Switched current:	27 mA max
Standard:	EN 62053-31 (A&B)

Ambient conditions and Safety

According standards for indoor active energy meters. Temperature and climatic condition according to EN 62052-11.

Dust/water protection: IP50 (For IP51 it should be installed in appropriate cabinet)

Touch by fingers protection IP20

Operating temp. range: -25 °C - +55 °C

Storage temp. Range: -30 °C - +70 °C

Enclosure material: self extinguish complying **UL94 V**

Indoor meter: yes

Degree of pollution: 2

Protection class: II

Installation Category: 300 Vrms cat. III

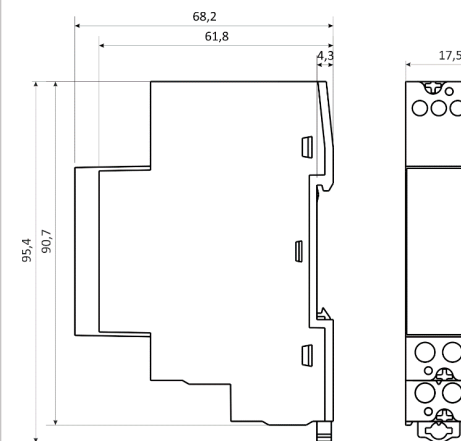
Standard: IEC 62052-31

EC Directives conformity

EU Directive on EMC 2014/30/EU

EU Directive on Low Voltage 2014/35/EU

EC Directive WEEE 2002/96/EC

DIMENSIONAL DRAWINGS**Disposal**

It is forbidden to deposit electrical and electronic equipment as municipal waste.

The manufacturer or provider shall take waste equipment free of charge.