

Qoltec[®]



User Manual

Three-phase electronic energy meter for DIN
rail, 400V 100A

Model: 50900

Introduction

Thank you for purchasing the Qoltec three-phase energy meter. The meter is designed for DIN rail mounting and offers a wide range of functions for integration into electrical installations, providing significant benefits to the user. The device ensures high performance, safety and ease of installation. It forms part of a comprehensive range of DIN rail-mounted energy meters with various communication options.

About the product

The DIN 35 rail-mounted energy consumption meter is used for real-time monitoring of electricity consumption by three-phase loads. It allows for real-time monitoring of energy consumption. The device features an LED indicator that signals energy consumption; the LED flashes at a frequency dependent on the energy being consumed, with a fixed pulse rate of 400 pulses per kWh.

Functions and features

- Standard mounting on a 35 mm DIN rail
- Compliant with DIN EN 50022 and IEC 62053-21
- 6+1 LCD display
- Type: Three-phase, unidirectional, four-wire
- Rated voltage: 3 x 230/400V
- Accuracy class 1.0
- Rated current: 3 x 10(100) A
- Base current is 10 A, maximum current 100 A
- Starting current: 0.4% I_b (which, at a base current of 10 A, corresponds to approximately 0.04 A, or 40 mA)
- Pulse constant: 400 pulses/kWh
- Insulation withstand voltage:
4 kV AC for 1 minute,
6 kV surge voltage with a 1.2/50 μ s waveform
- Phase and pulse status indication via LEDs
- Active energy consumption measurement displayed in kWh

Safety instructions

1. Installation and removal of the meter should only be carried out by a qualified electrician.
2. Always disconnect the power supply before carrying out any installation, maintenance or repair work.
3. Ensure that the meter is connected to a suitably protected electrical circuit, in accordance with local regulations and electrical standards.
4. The meter should be installed in a dry location, protected from damp and direct contact with water.
5. Ensure that the meter is installed in a location that allows for adequate ventilation to prevent overheating.
6. Check the condition of the meter periodically, including the electrical connections, to ensure that they are functioning correctly and that there is no visible damage.
7. The device should be installed out of reach of children and unauthorised persons.
8. Do not exceed the maximum current and rated voltage specified in the device's technical specifications.
9. It is recommended that surge protectors be installed in the electrical circuits to protect the meter from sudden voltage surges.

Installation instructions

1. Install the device on a 35 mm wide DIN rail, choosing a location that allows the meter to be read easily.
2. Ensure that the meter is installed in a well-ventilated and dry location.
3. If the meter is exposed to dust or other contaminants, it should be installed in a protective enclosure.
4. In areas prone to frequent power surges (e.g. due to storms), we recommend protecting the meter with a surge protection device (SPD).
5. Install in accordance with the diagram provided on the device.

Wiring diagram

Connection diagram on the device: *Figure 1 in the appendix.*

Device dimensions: *Figure 2 in the appendix.*

Technical specifications

Type:	single-phase, unidirectional, four-wire
Rated voltage:	3 x 230/400V
Rated current:	3 x 10(100)A
Base current Ib:	10 A
Maximum current I _{max} :	100 A
Accuracy:	Class 1
Pulse constant:	400 pulses/kWh
Starting current:	0.4 Ib
Frequency:	50 Hz–60 Hz

Maintenance

1. Disconnect the meter from the mains before cleaning.
2. Use a dry, soft cloth to remove dust and dirt from the surface of the meter.
3. Do not use water, detergents or other chemicals to avoid damaging the electronics.
4. Periodically check the physical condition of the meter, paying attention to any damage to the casing, terminals or cables. Ensure that all electrical connections are securely tightened and that there are no loose cables.

Disposal

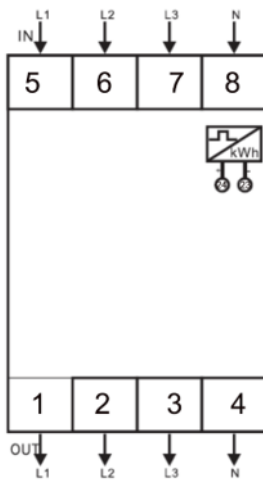
This product is subject to the regulations on the disposal of electrical and electronic equipment (WEEE). It must not be disposed of with household waste. If you have any questions regarding disposal, please contact the manufacturer or an authorised service centre.

Warranty and servicing information

The product is covered by a 24-month manufacturer's warranty, effective from the date of purchase. The warranty covers all material and manufacturing defects. Please contact our after-sales service in the event of any problems with the device to ensure prompt and professional assistance. The warranty does not cover damage resulting from misuse, drops, mechanical damage, unauthorised repairs or attempts at disassembly.

Attachment

1



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