Qoltec®

User Manual

3-phase, 4-wire, 100A energy meter for DIN rail mounting with reset function

Model: 50980

Introduction

Thank you for your trust and for choosing our product. We are confident that the product will meet your expectations. This manual contains instructions on the installation and use of the product, including important safety instructions regarding correct operation and installation. If you have any questions after reading this manual, please contact our Customer Service Department.

About the product

A three-phase, four-wire electronic electricity meter mounted on a DIN rail. The device utilises imported, specialised high-integration integrated circuits, digital signal processing and advanced surface-mount technology (SMT).

The electricity meter meets all the technical requirements of the following standards:

GB/T17215.321-2008 – 'Class 1 and 2 static three-phase active energy meters',

IEC 62053-21 – the international standard for Class 1 active energy meters.

Product features:

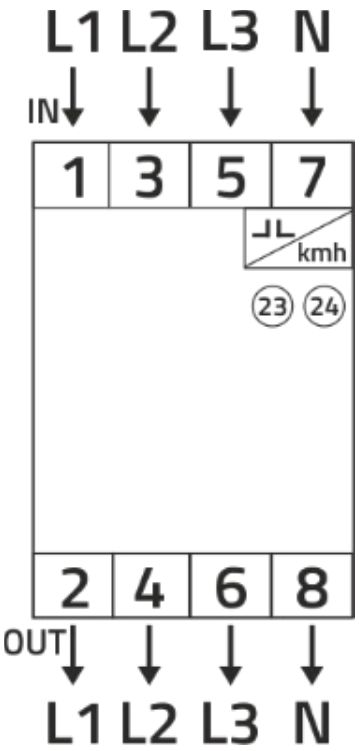
- It is equipped with a 7-digit LCD display showing current electricity consumption.
- The energy meter is designed to measure active energy in three-phase AC networks (L1, L2, L3, N).
- Reset button (restore factory settings)
- Mounting on a DIN35 rail

Connection method

The load range of the electricity meter should be between 0.05 Ib and 1.0 Imax (direct measurement).

Exceeding this range may cause measurement errors or overheating of the current transformer. When the three LEDs labelled A, B and C are lit, this indicates that the three-phase power supply is correct. If the voltage in one of the phases drops out, the corresponding LED goes out. When the PULSE LED flashes, this indicates that the meter is recording an electricity measurement pulse. The pulse duration is approx. 80 ms.

Figure 1 in the appendix



The connection must be made in accordance with the markings on the housing and the description below.

Inputs (IN):

1 – L1 IN → first-phase input (L1),

3 – L2 IN → second-phase input (L2),

5 – L3 IN → third-phase input (L3),

7 – N IN → neutral (N) input.

Outputs (OUT):

2 – L1 OUT → first phase output (L1),

4 – L2 OUT → second-phase output (L2),

6 – L3 OUT → third-phase output (L3),

8 – N OUT → neutral conductor (N) output.

Pulse output (energy measurement):

23 – P+ (Pulse Output Positive)

24 – P− (Pulse Output Negative)

Safety information

1. Disconnect the power supply before carrying out any installation work.
2. Installation must only be carried out by a qualified electrician.
3. Ensure that the voltage and current in the circuit comply with the device's permissible parameters.
4. Connect the wires to the appropriate terminals
5. Do not use the device in environments with high humidity, high dust levels or in direct sunlight.
6. The operating temperature range is from -25°C to +55°C (check the manufacturer's documentation).
7. Do not exceed the permissible current load.
8. Do not open the device housing – there is a risk of electric shock.
9. Do not attempt to repair the device yourself – it contains no user-serviceable parts.
10. Always use residual current devices (RCDs) and overcurrent protection (fuses) in the installation.
11. Check the condition of the cables and connections regularly.
12. In the event of erratic operation, disconnect the appliance and consult the service department.

Maintenance

1. Keep it clean by using a soft, dry cloth to remove dust and dirt. Do not use chemical cleaning products.
2. Check the power cables and connectors regularly for damage, such as fraying, cracks or loose connections.

Disposal

This product is subject to the regulations on the disposal of electrical and electronic equipment (WEEE). Take it to an e-waste collection point that ensures safe recycling in accordance with GPSR standards. Check where your nearest e-waste collection points are. 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 to dismantle the device.