

Qoltec[®]



USER MANUAL

SINGLE-PHASE ELECTRONIC METER
FOR DIN RAIL 230V 30A LCD

MODEL: 50993

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 for 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

The electricity meter is designed to measure active energy in single-phase AC installations. The device is designed for DIN rail mounting and can be used in domestic and industrial installations, as well as in energy consumption monitoring systems. The meter is characterised by high measurement accuracy, stable operation and low power consumption. The meter measures electricity consumption and displays the result in kWh. The LED flashes in proportion to energy consumption (the faster it flashes, the higher the consumption).

The meter consists of a measuring circuit, an LCD display and a pulse output circuit.

The LED indicates energy consumption – the number of pulses corresponds to the amount of energy consumed (1600 pulses = 1 kWh).

The S0 pulse output enables remote data reading by monitoring systems.

Product features

- The meter has an S0 pulse output for monitoring systems
- An LED indicates energy consumption
- Single-phase
- Unidirectional
- The device is designed for use in a single-phase network
- Energy measurement takes place in real time
- The meter starts measuring from very low currents (below 5A)
- It is most accurate around 5A
- It can operate up to 30A, but at extreme values the accuracy may be slightly lower

Choosing an installation location

1. The device should be installed in a dry and clean location

2. Avoid moisture, dust and direct contact with water
3. Do not install in areas exposed to high temperatures
4. Ensure adequate ventilation
5. Mount only on a standard DIN rail

Installation and wiring

Warning: Installation must be carried out by a qualified electrician.

During installation, you must:

1. ensure that the wires are correctly connected
2. tighten the terminals securely
3. do not mix up the input and output

Connection in accordance with the diagram

- ✓ Terminal 1 – mains phase input (L)
- ✓ Terminal 3 – phase output to the load (L)
- ✓ Terminal 4 – mains neutral input (N)
- ✓ Terminal 6 – neutral wire output to the device (N)
- ✓ Terminals 20 (+) and 21 (–) – S0 pulse output

When a pulse is generated, the meter short-circuits terminals 20 and 21, closing the circuit; it does not generate voltage

The pulse output is used to connect monitoring systems (e.g. BMS, PLC, energy loggers)

1600 pulses = 1 kWh

Note: The connection diagram is located on the device housing

Technical specifications

- Rated voltage: 230V AC
- Frequency: 50 Hz
- Measurement type: active energy (kWh)
- Single-phase
- Unidirectional

- Class: 1.0
- Number of poles: 1P
- 5A – base current (I_b)
- 30A – maximum current (I_{max})
- Power consumption: ≤ 2 W
- Display: LCD
- Pulse output: S0
- Pulse constant: 1600 pulses/kWh
- Mounting: DIN rail
- Complies with DIN EN5002

Safety information

1. Disconnect the power supply before starting 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, dust or direct sunlight.
6. The operating temperature range is from -20°C to +55°C (check the manufacturer's documentation).
7. Do not exceed the permissible current load.
8. Do not open the device housing – 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. If the device is not working properly, disconnect it and contact the service department.

Maintenance

1. Keep the device clean by using a soft, dry cloth to remove dust and dirt. Do not use chemicals.
2. Regularly check the power cables and connectors 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 the nearest e-waste collection points are located. 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 service department 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.