# Three phase power sensor, CT

**3-phase power-sensor, current transformer**

pm3-e-d_ct

| | |
|---|---|
| Model number: | **PM3-E-D-CT** |
| Connect to: | MC-230 |
| | RS485 power sensor bus A - B |
| Mounting: | DIN rail, 1M, 18 mm |
| Dimensions: | 65 × 72 × 94,5 mm |
| **Used for measuring power and energy of** | |
| ✔ | single/three-phase energy sources |
| ✔ | single/three-phase energy consumers |

## Applications

- Digital multi-function power sensor for single/three phase networks

## Features

- DIN rail mounting with 3x 50A (or 1x 50A) current transformer
- Line voltage and THD% (total harmonic distortion) of all phases
- Line Frequency
- Currents, Current demands and current THD% of all phases
- Power, maximum power demand and power factor
- Active energy imported and exported
- Reactive energy imported and exported

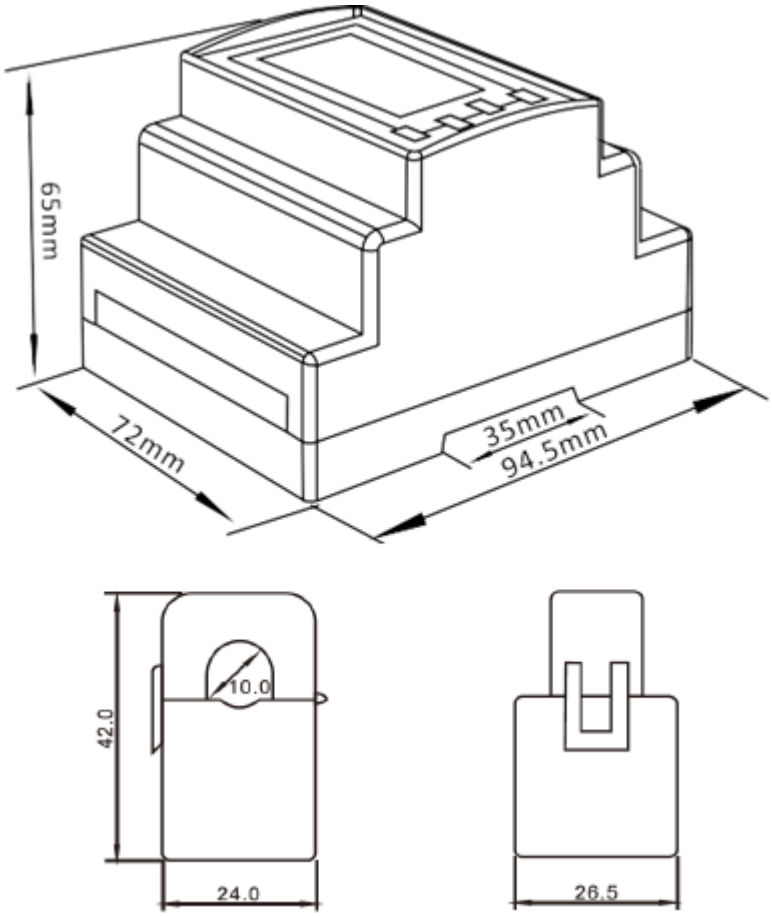
## General description

The unit measures and displays the characteristics of three phase four wires(3p4w) supplies, including voltage, frequency, current, power, active and reactive energy, imported or exported. Energy is measured in terms of kWh, kVArh. Maximum demand current can be measured over preset periods of up to 60minutes. In order to measure energy, the unit requires voltage and current inputs in addition to the supply required to power the product. The requisite current input(s) are obtained via current transformers (CT). This power sensor can be configured to work with a wide range of CTs with 0.33V output, giving the unit a wide range of operation. Built-in interfaces provide pulse and RS485 Modbus RTU outputs. Configuration is password protected. This power sensor can be powered from a separate auxiliary (AC or DC) supply. Alternatively, it can be powered from the monitored supply, where appropriate.

# Technical specifications

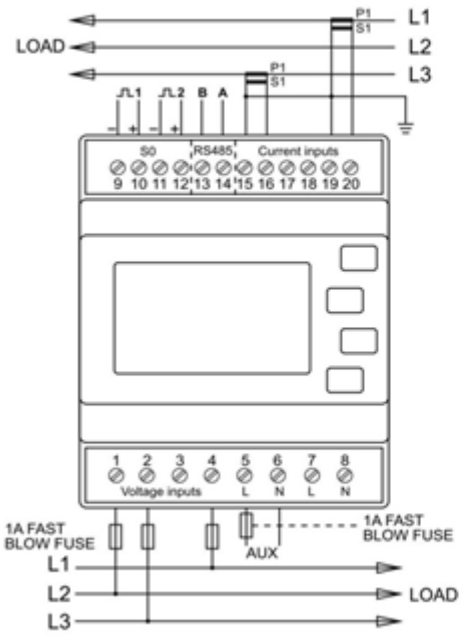
| **Technical Data** | |
|---|---|
| Operating Humidity | ≤ 75% |
| Storage Humidity | ≤ 95% |
| Operating Temperature | -25°C - +50°C |
| Storage Temperature | -40°C - +70°C |
| Mounting | DIN rail (DIN 43880) |
| Sealing | IP51 Indoor |
| Auxiliary supply voltage | Nominal ± 1% |
| Auxiliary supply frequency | Nominal ± 1% |
| Frequency | 50Hz or 60Hz(±2%) |
| Power Consumption | ≤ 10W |
| **Accuracy** | |
| Voltage, Current | 0.5% |
| Frequency | 0.2% of Mid-Frequency |
| Power Factor | 1% of Unity (0.01) |
| Active Power, Apparent Power | ± 1% of Range Maximum |
| Reactive Power | ± 1% of Range Maximum |
| Reactive Energy (Varh) | ± 1% of Range Maximum |
| Active Energy (Wh) | Class 1 IEC 62053-21 |
| **Current transformer** | |
| Frequency | 50-60 Hz |
| Rated current | 50 A |
| Accuracy | from 20% to 120% of rated current |
| Phase angle | less than 2 degrees at 50% of rated current |
| Insulation voltage | 600 VAC |
| Maximum primary voltage | 5000 VAC (insulated conductor) |
| Dielectric strength | 2.5 kV/1mA/1min |
| Operating temperature | -15 to 60°C |
| Operating humidity | < 85 % |
| Case material | PC/UL94-V0 |
| Bobin | PBT |
| Core | Permalloy |
| Internal structure | Epoxy |
| Leads | UL 1015, Twisted pair, 22 AWG |
| **Modbus** | |
| Bus Type | RS485 (Semi-Duplex) |
| Protocol | Modbus RTU |
| Baud Rate | 1200/2400/4800/9600bps |
| Address Range | 1-247 |
| Max. Bus Loading | 64pcs |
| Communication Distance | 1000 Meters |
| Parity | EVEN/ODD/NONE |
| Data Bit | 8 |
| Stop Bit | 1 |

# Dimensions

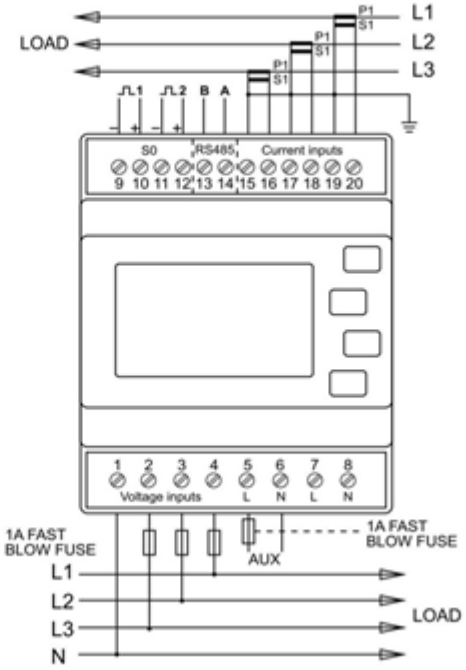



# Installation

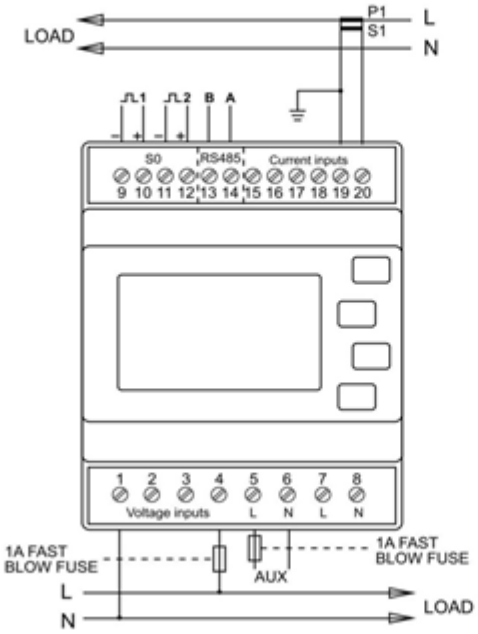
Three phase three wires




Three phase four wires




Single phase two wires




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