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Monitored Analyzed Networked

# Smart Meter

## MR3-D4-WRE&MR3-D4-WE


Multi-function smat meter is a new miniature device with open-type CT access for easy installation, suitable for monitoring the energy consumption of the electrical system. It can also be used for real-time metering of power parameters such as voltage, current, active power, power factor, frequency, and active energy in the line. Finally, it can send the data to the local or remote software platform through WiFi/Ethernet to realize detailed monitoring and analysis of power usage.

## Applicable Scenarios

- Suitable for European household, small-scale businesses and industrial environments seeking bi-directional metering
- Remote 24-hours real-time monitoring of electricity consumption data, to master the power consumption
- Need to realize local API equipment linkage control and efficient access to HEMS
- Local access to the inverter through the 485 interface to obtain detailed operating parameters, to achieve equipment status monitoring
- Utilizing LoRa technology (configurable) for long-distance data relay transmission to ensure the stability of data transmission
- Need to remotely control the heat pump, with the help of the software platform to regulate its on and off state

## Features

- LoRa is configurable to realize low power consumption, long-distance data uploading
- Open type transformer, easy to install and maintain
- Compact size, size 2P
- Measurement accuracy active power level 1, reactive power level 2
- Bi-directional metering of electricity consumption or generation data
- It supports data and fault acquisition in millisecond
- Equipped with Bluetooth as standard, supporting local network distribution
- Provides local API interface for efficient access to HEMS
- Conforms to EN 18031 IoT network security standard

# Parameters

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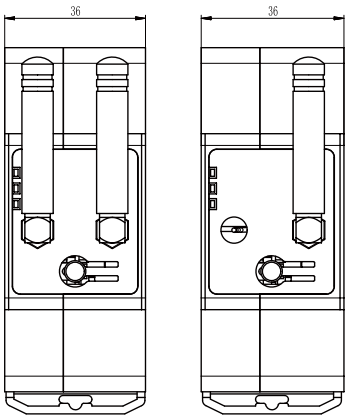
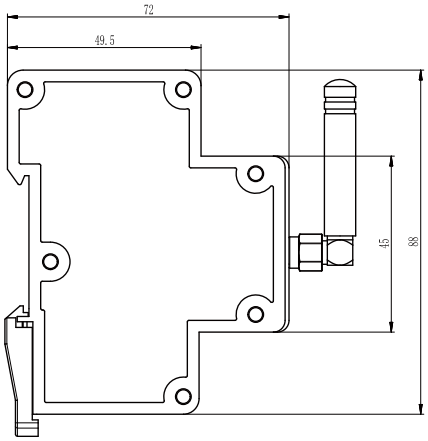
| Communication Parameters | |
|---|---|
| Communication Method | WiFi 6, Ethernet, LoRa (Configurable) |
| WiFi Standard | IEEE 802.11 b/g/n/ax |
| WiFi Frequency Range | 2.412 GHz-2.482 GHz (CH1~CH13) |
| WiFi Transmit Power | 11ax mode HE40:16dBm； 11ax mode HE20:17dBm<br>11n mode HT40:17dBm； 11n mode HT20:17dBm<br>11g mode:18dBm<br>11b mode:18dBm |
| WiFi Receive Sensitivity | 11b,1 Mbps:98dBm； 11b,11 Mbps:90dBm<br>11g,6 Mbps:93dBm； 11g,54 Mbps:76dBm<br>11n,HT20 (MCS7):73dBm<br>11ax,HE20 (MCS9):70dBm； 11ax,HE40 (MCS9):67dBm |
| Ethernet | 1 channel 10/100 Mbps Adaptive |
| LoRa Operating Frequency (Optional) | 863-870 MHz |
| BLE Wireless Standard | BLE 5.3 |
| BLE Frequency Range | 2400 ~ 2483.5MHz |
| Antenna Type | LoRa external antenna (Configurable), WiFi external antenna |
| **Electrical Characteristics** | |
| Wiring Method | Single-phase 2-wire, 3-phase 4-wire |
| CT | Default 100A*3 Optional 400A*3 |
| Rated Voltage | 230V/400V (±20%) |
| Input Current | 10 (100)A |
| Rated Frequency | 50Hz/60Hz |
| Operating Power | ＜4W |
| Measurement Accuracy | Active power level 1, reactive power level 2 |
| **Hardware Parameters** | |
| Communications Interface | RS485*1 (ModbusRTU2400bps~115200bps) |
| Mounting | DIN Rail 35mm |
| Operating Temperature | -20°C～+50°C |
| Operating Humidity | 10~70% RH, no condensation |
| Altitude | Below 2000 meters |
| Storage Temperature | -20°C～60°C |
| Storage Humidity | ≤40% RH, no condensation |
| IP Grade | IP20 |
| Flame Retardant Rating | UL 94 V0 |
| Certifications | CE, REACH, RoHS |
| **Software Parameters** | |
| Ethernet Access | ≤5 units |
| Number of Connected LoRa Sub-devices (optional) | Default setting 1 unit (1~10 units optional) |
| Data Upload Frequency | Default 5 minutes |
| User Configuration | Local/Remote configuration |
| Firmware Upgrade | Remote upgrade |




Unit: mm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