Vantor VM-37

Three Phase DIN Rail Smart CT Meter, WiFi/4G/LoRa

The Vantor VM-37 Three-Phase DIN Rail Smart Power Meter is a compact, high-precision CT-operated energy monitoring solution designed for industrial, commercial, and system integration applications.
It integrates advanced measurement functionality including three-phase electrical parameter monitoring, harmonic analysis up to the 31st order , demand statistics, and flexible communication options.
With expandable inputs and outputs, temperature and residual current measurement, and multiple connectivity choices, the VM-37 provides a powerful and versatile metering platform for modern energy management systems.
Designed for DIN-rail installation, the VM-37 is ideal for projects with limited or challenging installation space , retrofit upgrades, and smart building automation.

Packed and sold in boxes of 10.



Key Features

- CT-operated three-phase energy meter (external current transformers required)
- Measures:
  - Three-phase voltage and current
  - Active, reactive, apparent power
  - Four-quadrant energy
  - Power factor and frequency
  - Demand, maximum and minimum values
- Harmonic analysis from 2nd to 31st order for detailed power quality monitoring
- Running time and loading time statistics
- Max/Min demand tracking and data logging
- Programmable CT and PT transformation ratios
- Clear 7+1 digit LCD display for real-time readings

Communication Options

The VM-37 supports multiple communication methods to suit different project requirements:

- RS485 (standard) with Modbus-RTU protocol
- WiFi (optional)
- 4G LTE (optional)
- LoRa (optional)

Important: Only one wireless communication option (WiFi / 4G / LoRa) can be selected per meter.

Additional protocol support

- Modbus-RTU
- TCP/IP
- MQTT for cloud-based applications

Meters equipped with WiFi or 4G include built-in communication hardware – no external modem required .

Expandable I/O Functions (Optional Modules)

The VM-37 can be expanded with additional functionality

- 2 × Digital Inputs (DI)
- 2 × Relay Outputs (DO)
- 4 × Temperature measurement inputs
- 1 × Residual current measurement channel

These options allow integration with alarms, automation systems, and protective devices.

Smart Data Functions

- 15-minute interval energy data storage for up to 7 days
- Data continuity after network disconnection

- Remote control and monitoring via MQTT or Modbus
- Programmable logic alarms and outputs
- Real-time load and power quality analysis

Technical Specifications

Measurement Capabilities

- Phase voltage and current
- Active / reactive / apparent power
- Power factor
- Frequency
- Active and reactive energy
- Harmonic distortion (THD)
- 2–31st order harmonics

CT Input Ratings

- Rated current (external CT):
  - 5A secondary (default), measuring range 0–6A
  - 1A secondary (optional), measuring range 0–1.2A
- Compatible with external CT ratios such as:
  - 5/5A
  - 100/5A
  - 400/5A
  - 800/5A
- External CTs are required – this is a CT-operated meter

Accuracy

- Voltage: ±0.2%
- Current: ±0.2%
- Active Power: ±0.5%
- Reactive Power: ±2.0%
- Active Energy: Class 0.5S
- Frequency: ±0.02 Hz

Electrical Parameters

- Operating Voltage: 85–305VAC / 70–430VDC
- Frequency Range: 45–65 Hz
- Power Consumption:
  - Voltage circuit: <3VA
  - Current circuit: <0.75VA per phase

Environmental Specifications

- Operating Temperature: –30°C to +75°C
- Storage Temperature: –25°C to +70°C
- Relative Humidity: 5% – 95% (non-condensing)
- Altitude: ≤3000 m

Mechanical & Installation

- DIN 35mm rail mounted
- Compact modular design
- Ideal for panel boards and distribution boards
- Dimensions: 88 mm (H) × 75 mm (W) × 74 mm (D)
- LCD display with backlight

Applications

- Energy management systems
- Building automation
- Industrial power monitoring
- Retrofit upgrades

- Smart metering platforms
- Power quality monitoring
- Projects with limited installation space

Optional Configurations

Model options include

- VM-37-Wi – WiFi communication
- VM-37-4G – 4G LTE communication
- VM-37-L – LoRa communication
- VM-37-K – Digital inputs
- VM-37-R – Relay outputs
- VM-37-T – Temperature inputs
- VM-37-S – Residual current measurement

(Custom configurations available – specify options when ordering)

Key Advantages

- High accuracy and stability
- Multiple communication options
- Expandable I/O functionality
- No external modem required for WiFi or 4G versions
- Ideal for smart metering and IoT integration
- Reliable performance in harsh environments

Ordering information

Order code	Description
VM-37-4G	4G
VM-37-WiFi	Wifi
VM-37-L	LoRa