

QSM31-1 Three Phase Smart Meter



Overview

QSM31-1 is a three phase smart energy meter designed for industrial and commercial applications. The QSM31-1 is able to monitor and measure active/reactive energy with extended functionality and high accuracy. It support optional RF and GPRS communication module for different field application (such as dual-source control), and the system remote configuration is available for smart grid. It complies with DLMS Suite standards and multiple technical solutions for AMI or AMR.

DLMS

DLMS Suite 0 and Suite 1, provide high security and stability to communication.

Remote Control

Meter is with build-in relay latch relay, support remote control and switch on and off operation.

Communication

Support various communication methods. GPRS/4G, PLC, RF, RS485, Ethernet.

Highlights

- Support open protocol: DLMS/COSEM(E-Mode), IEC 62052-11, IEC62053-21, IEC 62055-41, IEC 62056-21.
- Prepayment/Post-payment mode switch and comply with the Dual Source function. Local and remote firmware upgrade.
- Extended RS485 and interface communication port comply with E-Mode. Remote communication module GPRS, RF, PLC-G3 or G4, and NB-IoT for AMR/AMI system.
- Relay control for load demand by remote communication or local configuration.

Main Function

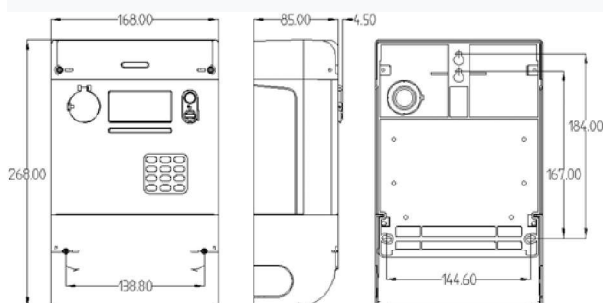
- Measure active (kWh), reactive (Kvarh) for total/separately energy resisters for import and export, instantaneous value, maximum demand value, billing data, event records, historical data and consumption profile.
- High performance LCD display with backlight (up to 8 digits).

- Standard or extended load profile data recording (up to 8 data channels)
- Standardized OBIS display. Real time clock(RTC): clock with calendar, timing, year change function.
- Display readable without main power (RWP) by a switchable battery.
- Configurable display with manual and auto-scroll features.
- Multiple event detections and records with categories of operation, power grid and tampering. Channel quantity customized before leaving the factory; up to 8 channels.
- Open meter cover and terminal cover detection.
- Support 2 load profiles and with configurable mechanism.
- DLMS/COSEM protocol compliance.
- Power quality monitoring and event indication.
- External and replaceable battery supply.
- LED alarm/buzzer alarm reminding, when event, overload, and tamper.
- Meter is with multi-functional tool software for configuration and meter reading.

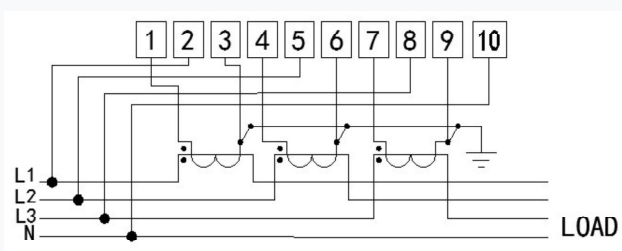
Technical Specification

Accuracy	Active	0.2S, 0.5S, 1.0, 2.0
	Reactive	1.0, 2.0
Voltage	Rated current	3×57.7/100V, 3×220/380V, 3×230/400V, 3×240/415V
	Range	0.8Un-1.2Un
	Limit	0.7Un-1.3Un
Frequency		50Hz/60Hz
Basic Current (Ib)	Range	3×1.5A, 3×5A, 3×10A
Maximum current (Imax)	Range	3×6A, 3×10A
Starting current		0.4%Ib, 0.001In(CT), 0.001In(CT)
Display	Type	LCD
	Digit	6+2
Power	Voltage circuit	≤2.0W,10VA
Consumption	Current circuit	≤4VA
Communication	Interface	Optical/RS485/PLC/RF/GPRS/3G/4G
Temperature	Working	-25°C to +65°C
	Storage	-35°C to +75°C
Humidity		≤85%
Ingress Protection		IP54
Dimension		96mm*170mm*288mm
Weight	Net weight	1.8kg
	Weight	2.2kg

Dimension diagram



Connection diagram



3 Phase 4 Wire Connection