SENSE IT
TECHNOLOGIES
MONITORING AND CONTROL SOLUTIONS



LoRaWAN Digital Energy Meter - 3-Phase - 100A - Direct Connection

SKU: SI-LRW-ENMT-002

Monitor and control three-phase electrical systems remotely with a LoRaWAN® multifunction energy meter featuring an integrated relay. Measure energy consumption, voltage, current, power and power quality while remotely switching electrical loads on or off via the Sense It cloud platform.

OVERVIEW

This industrial three-phase LoRaWAN® multifunction energy meter combines comprehensive electrical monitoring with remote load control in a single DIN rail-mounted device. Designed for commercial, industrial and infrastructure applications, it continuously measures electrical parameters while allowing authorised users to remotely switch connected loads using the integrated relay.

The meter measures voltage, current, active power, reactive power, apparent power, frequency, power factor, demand and imported or exported energy. Built-in LoRaWAN® communication enables reliable long-range wireless transmission to the Sense It platform without requiring RS485 communication wiring.

An integrated remote-control relay allows electrical circuits to be switched on or off remotely, making the meter ideal for demand management, remote site control, equipment isolation and automated load shedding. The relay can also be configured to disconnect power automatically when alarm conditions such as over-current or over-voltage occur, providing additional equipment protection. Each phase can be controlled individually or together depending on the application.

Integrated with the Sense It monitoring platform, the meter provides live dashboards, historical energy analysis, automated reporting, alarm notifications and remote switching from anywhere. It is ideal for factories, commercial buildings, utilities, solar installations, pump stations and remote electrical infrastructure requiring both monitoring and control.

KEY FEATURES

- Three-phase multifunction energy meter
- Built-in LoRaWAN® connectivity
- Integrated remote-control relay
- Remote switching via the cloud
- Measures energy, voltage, current and power
- Measures power factor, frequency and demand
- Import and export energy measurement
- Automatic relay operation on alarm conditions
- Individual or combined phase switching
- High accuracy Class 0.5S energy measurement
- Password-protected configuration
- DIN rail mounting
- Pulse output for external integration
- Suitable for commercial and industrial energy management

TECHNICAL SPECIFICATIONS

General

- Measurement type: Three-phase multifunction energy meter with remote control
- Wireless technology: LoRaWAN®
- Integrated remote-control relay
- DIN rail mounting
- Supports 3P+N AC systems
- Password-protected configuration

Measurements

- Voltage
- Current
- Frequency
- Active power (kW)
- Reactive power (kVAr)
- Apparent power (kVA)
- Power factor
- Maximum demand
- Active energy (kWh)
- Reactive energy (kVArh)
- Import and export energy

Relay Control

- Remote ON/OFF switching
- Individual or combined phase control
- Automatic disconnection on alarm conditions
- Supports over-voltage and over-current protection logic

Accuracy

- Voltage accuracy: ±0.5%
- Current accuracy: ±0.5%
- Frequency accuracy: ±0.2%
- Power accuracy: ±0.5%
- Power factor accuracy: ±1%
- Active energy: IEC Class 0.5S
- Reactive energy: IEC Class 2

Electrical

- Rated voltage: 230 VAC
- Operating voltage: 80–120% of rated voltage
- Direct connected current: Up to 100 A
- Starting current: 40 mA
- Frequency: 50/60 Hz

LoRaWAN

- Frequency bands: EU868, AS923, AU915, US915 and regional variants
- Supports OTAA and ABP activation
- Automatic data upload
- Configurable reporting interval
- Automatic communication recovery

Outputs

- Energy pulse output
- LoRaWAN wireless communication

Environmental

- Operating temperature: -25°C to 55°C
- Storage temperature: -40°C to 70°C
- Operating humidity: Up to 95% RH (non-condensing)

Installation

- 35 mm DIN rail mounting
- Direct connection up to 100 A

Applications

- Commercial buildings
- Industrial facilities
- Remote power control
- Energy management
- Load shedding
- Pump stations
- Utilities
- Solar energy monitoring
- Building management systems

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info@senseit.co.za

+27 21 300 3026

Unit 11, First Floor
Bellfour Office Park
3 Edmar St
Bellville, 7550

Visit our website for more info
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