



Compact Smart Meter

Metered Gateway



Product Overview

The **Compact Smart Meter (CSM)**, which combines metrology and gateway functionality, is a more compact version of the traditional smart meter. It is designed for use in non-residential applications.

The meter is primarily developed for energy measurement in uninhabited locations—such as public EV charging poles and road signs—but it can also be used for energy or grid monitoring, this submetering, in areas where a traditional meter cannot be installed due to space constraints.

The CSM is a 3-phase meter (4-unit DIN size) designed to operate in 3-phase 4-wire, 3-phase 3-wire, and single-phase configurations. Single-phase operation can be achieved by connecting only one phase.

It features an integrated LTE-M modem and eSIM for remote communication with the head-end system used by grid operators, similar to traditional smart meters and installers.

The CSM interfaces include a RS485 port, a P0 port and P3 port for WAN connectivity (no P1 or P2 ports). For user interaction, it is equipped with a display, metrological LEDs, and two front-facing buttons. To support easy installation, the meter includes spring clamp terminals for grid connection.

The meter is compatible with installations where enclosures may affect connectivity. To mitigate potential issues, an external antenna can be added if necessary.

Typical use cases

- Public EV charging poles
- Road traffic signs
- GRID management
- Remote energy monitoring (e.g. PV, submetering)

Technology (subject to modification)

General

- 100 Amp 3-Phase 4U DIN meter
- 4-wire and 3-wire net compatible
- MID certified
- Easy installation via spring clamp terminals
- 1-Phase functionality
- ESMR Smart Meter functionality
- LTE-M communication
- Last gasp functionality
- Firmware updatable
- Fraud detection

Electrical

- Ref. standards: EN 50470-1/3, IEC 62052-11
- Active and reactive measurement
- Accuracy:
 - Active: Class B
 - Reactive: Class 2
- Voltage: 3x230V(400V)
- Current: 5(100)A

AMR

- DLMS protocol compatible with ESMR 5
- Security: AES-128
- Real-time clock + calendar
- Actual meter reads: index registers in kWh
- Periodic meter reads:
 - 15-min intervals for 10 days
 - 40 daily reads / 13 monthly reads
- Definable load profile: 960 entries
- Tariff control (day/night switching)

Interface – Data ports

- LTE-M with eSIM for WAN connectivity
 - Supported freq. bands: 3, 8, 20
 - Optional 450MHz support: band 72
- Internal antenna
- MCX connector for external antenna
- Dot matrix LCD display and 2 buttons
- Optical port for local configuration
- RS485 port for optional Modbus support

Technical specification

- Power consumption: < 4 Watt
- Operating temperature range: -25°C. - 70°C
- IP rating: IP30
- Dimensions (HxWxD in mm): 159.4x72x81