

Emlite MC11 GPRS Smart Meter

Single phase electricity meter with GPRS communications for remote monitoring

The emlite modular meter range provides total flexibility for smart metering deployments. The modular capabilities allow the meter to be expanded with functional and communication modules either at manufacture or after installation

Accuracy Class 1 or 2
GPRS/GSM Communications
EC Directive 2004/22/EC (MID)
Product design life 20 years
Modular construction
Network roaming SIM
IR optical port
Internal clock with battery backup
IP53 in accordance with IEC
60529:1989
30 minute profiling
Gas profiling with pulse sender
Prepayment / Credit operation



Single phase 100A electricity meter
Fully MiD approved
Bi-directional energy flow measurement
Half-hour profiling and event logging
Large backlit LCD display
Tamper detections

AMR Communication
GPRS communication modules accommodates a network roaming SIM card for robust and future-proof data collection services.
2G GPRS comms frequencies supported with high-performance internal antenna.

100A internal breaker for prepayment
The meter can operate in credit or prepayment mode by using an integrated breaker to disconnect the supply where prepayment customers have used up available credit.

Wiring diagram for single phase meter

The emlite modular metering system has been designed to meet the many challenges of AMR and Smart Metering deployments. Through the versatility of modularity, the emlite system caters for 'hot-swappable' communication and functionality upgrades without the need to switch-off, remove or replace the MID approved metering device from the installation.

Emlite modular meters are available in several variants that suit a wide range of tariff options, including:

EMA1 – standard residential, available with or without disconnect breaker
EMB1 – Residential with integral 100A load control breaker
EMC1 – Twin element meter for measurement of two circuits (residential and heating), integral 100A load control breaker

Anti-tamper features
Magnetic fraud detection, terminal cover removal detection, neutral disconnect fraud prevention.

Hot-swappable module connection
Modules connect to the top of the meter using the integral data and 230V supply ports.

Low power radio channel pulse logging devices
The Emlite smart meter has an 868Mz home area network for communication with pulse logging devices on gas or water meters.

- Pulses are logged to the gas load profile channel. Cumulative pulse count total logged for secondary devices.
- 6 digit pairing code for binding pulse devices to the meter.

Power quality parameters
Power downs/ups and voltage events (swell/sag) logged to timestamped events

Customer Interfaces

Large backlit liquid crystal display (LCD) for a clear and bright display of billing registers and communication status. Programmable display objects using management tools to set sequencing and auto-scroll time.

Buttons for user operation

Cycle display button 'A' for manual scroll of the display serves a dual purpose for binding pulse devices. Emergency

LCD Display modes

Auto-scroll or manual using button press 'A'

Tariff rate switching

50 time of use rate switching. Set operational days, seasons, start hour and minute for multi-rate tariffs.

4 quadrant power measurement

Active and reactive readings for import and export energy. Instantaneous active (kW) and reactive power (kvar).

Secure SIM card access

The SIM card is located within the GSM communications module for security and protection from interference.

Metrological LED

Provides visual indication of energy flow.

2 Channel load profiling

Timestamped profile objects for import and export energy with status registers for energy events. Channel 2 profile includes reactive power, voltage and status register.
- 30 minute load profiling interval

Gas profiling

Load profile objects for gas usage based on data received from pulse sender device.

Installation

Quick and easy installation by accredited NICEIC electrician using on-screen information for communications verification and power flow.

Real time clock

Accuracy according to IEC 62052-21. Remote time sync set from data collector.

Enclosure

Self-extinguishable polycarbonate
Protection against water and dust IP52

Accessories

- IEC USB optical probe for local programming
- SMC-View diagnostic tool for local/remote reprogramming.

Utility seals

Wire and crimp utility seals secure the terminal cover, smart module and communications module.

Technical Data

Manufacturer	Em-lite Ltd
Meter Types	EMA1, EMB1, EMC1
Voltage Rating	220-240V
Current Rating (Imin-Iref-Imax)	1-20(100)A
Frequency	50Hz
Active Accuracy Class	A or B (kWh)
Type of circuit	1p 2w
Temperature Range	-40°C to +70°C
IP Rating	52
Insulation Protective Class	Class II
LED Pulse Constant	1000imp/kWh
Impulse Voltage Rating	8kV
AC Voltage Rating	4kV
Main cover sealing type	Wire & Crimp 1
Intended location of meter	Indoor

Physical	
Terminal Arrangement	BS 7856
Main terminal size	8.2mm diameter with brass double screw clamp
Overall Dimensions (mm)	180 x 120 x 77 H x W x D

