

Residential smart meter

E120LiME



Enermet E120LiME is the most advanced PLC meter for the residential metering segment. It offers several ways to read, manage and control energy information. Easy installation and system set-up, reliable operation and communication and care-free maintenance create the perfect solution for different metering needs.

Leading technology

The Enermet E120LiME has active (class B) and reactive (class 2) measurement and an integrated PLC communication module. Its PLC technology is reliable and proven in use. E120LiME provides a cost efficient solution. The meter also has a wireless local communication interface for local reading and configuration.

Easy deployment

The Enermet E120LiME is easy and fast to install. The meter guides the installation and informs clearly if something is incorrect. With Enermet Site Manager application you can automate and organise the installation process and minimise human error both in the system and out in the field.

Reliable operation

After the meter has been installed, the Enermet E120LiME is easy to connect to an AMR system. E120LiME provides real-time power cut information to the system for better customer service and statistics. The meter's versatile registers and logs record metering data and events, like configuration, voltage levels and relay status changes etc. are available from the system. E120LiME does not only gather electricity metering information. The M-Bus interface can be used to gather metering values to the system from other sources, like gas, water or district heating meters. E120LiME meter's several relay options also suit many installation locations and serve many different control purposes.

E120LiME Technical specifications

Accuracy Class

- Class B for active energy (kWh, according to MID)
- Class 2 for reactive energy (kvarh)

Method of Measurement

- VLSI-ASIC (A/D-conversion and digital signal processing) four quadrant measurement (A+, A-, R+, R-)

Standards and Requirements

- In accordance with EN62052-11, EN62053-21, EN62053-23, EN62054-21, EN50065-1 and DIN43857
- MID EN50470-1 and EN50470-3

Voltage

- $U_n = 3 \times 230/400 \text{ V}$
- Measuring range: -20 % to +15 % U_n

Power consumption in voltage circuit

- $\leq 2.0 \text{ VA}$, $\leq 0.4 \text{ W}$ (including metering and application modules)

Current

- Starting current $I_{st} \leq 20 \text{ mA}$
- Reference currents $I_{ref} = 5 \text{ A}$ or 10 A
- Maximum current $I_{max} = 85 \text{ A}$
- Thermal current $I_{th} = 100 \text{ A}$

Power consumption in current circuit

- $0,05 \text{ VA}$

Frequency

- $50 \text{ Hz} \pm 1 \text{ Hz}$

S0 inputs (2 pcs. option)

- In accordance with IEC62053-31, Class A and B
- Isolation voltage test 4 kV rms
- Impulse voltage test 6 kV

Load control relay output (option)

- Mechanical relay output, 230 V , 6 A

Service relay output (option)

- Semiconductor (230 V , 100 mA) or mechanical (230 V , 5 A) relay output

Real-time Clock

- Clock accuracy: $\pm 0,5 \text{ s/24 h}$ (in $+23 \text{ }^\circ\text{C}$)
- Power back-up: super capacitor 2 weeks

Overvoltage protection

- 12 kV (metering core)

Meter constant (red LED indicator)

- $10\,000 \text{ imp/kWh}$

Temperature ranges

- Operating $-40 \dots +70 \text{ }^\circ\text{C}$
- LCD operating $-20 \dots +55 \text{ }^\circ\text{C}$

Case

- According to DIN 43857
- IP51
- IP20 (terminal block and terminal cover)

Weight

- 1.4 kg

Communication

- integrated PLC module (LonTalk®)
- wireless local communication for local reading and configuration

LCD display

- 8 digits
- Cumulative values alternate on display

Register structure

- 2 configurable cumulative profiles for electricity
- 4 configurable tariff registers
- 2 registers for S0 reading data
- Power cut log, power quality log and alarm & event log
- lifetime cumulative values for A+, A-, R+ and R- (verification purposes)
- 6 registers for M-Bus data

Self-diagnostics

- Internal alarms
- Memory
- Phase failure
- Watchdog

M-Bus master

- According to EN13757-2
- can handle 4 M-Bus devices
- Max. distance between master and slave 350 m

Accuracy Class

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