EM210 L | EM210 LR

Record. Decode. Optimize

The compact way of acquiring, storing and visualizing data related to your electricity purchases and feeds.

SCOPE OF EM210:

- measures electricity purchases and feeds for each phase
- on-board storage of metering data
- integrated web server
- visualization through web interface, IOS App, Android App
- brings up measured values of electricity purchases and feeds, both as an aggregate value and for each phase in kWh
- manual and automated export of measured data through email, FTP
- LAN interface (EM210 L), LAN/RS485 interface (EM210 LR)
- Optionally available: B-control Smart Heater through RS485

MAIN FEATURES:

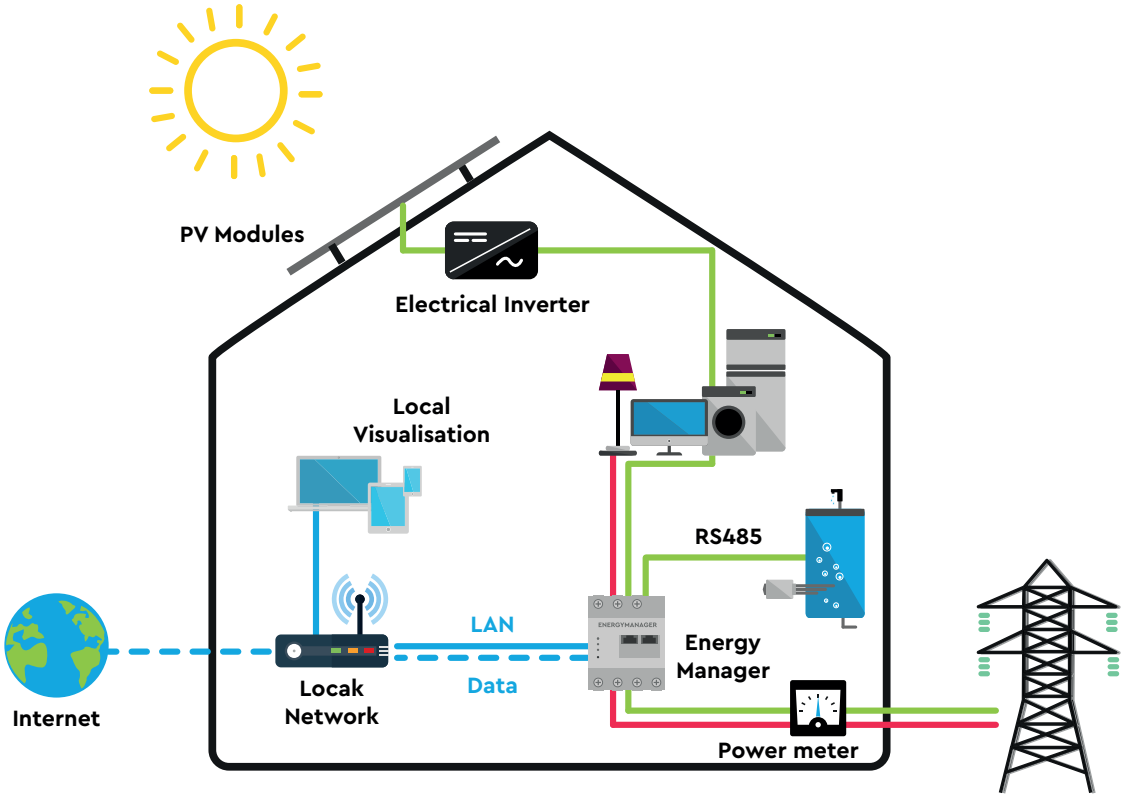
- fully integrated Smart Meter *
- real-time data acquisition
- 3-phase real-power current measurement for purchases and feeds
- direct connection up to 63 A resp. – when using external transducers – from 100 A to 600 A (Example; higher currents also possible)
- DIN rail installation (4 PU)

* not certified for generation of data for invoicing

TECHNICAL SPECIFICATION EM210

Prozessing Unit	450 MHz ARM9 CPU, 128 MByte RAM DDR2 eMMC Flash 4 GByte (2 GB dedicated to permanent data storage)
Operating System	Embedded Linux c/w integrated TCP/IP stack and SQL database
Interfaces (Standard)	LAN (10/100 Mbit) RS485 (half-duplex, 115200 baud max.) for optional connection of B-control Smart Heaters, no galvanic isolation
Produkt Standards	EN 61010, EN 50428, EN 60950
Voltage and current Inputs	Rated voltage: 230/400 V AC Operating voltage: 230 V ± 10% Frequency: 50 Hz ± 5%, 110 V 60 Hz upon request
Meter Losses	Voltage path: ‹ 0.01 VA each phase Current path: ‹ 2 VA each phase Complete device: ‹ 5 W Amperage: rated current 5 A, limiting current 63 A Starting current: ‹ 25 mA
Assembly	Connection cross section: 10–25 mm² * Screw terminal clamping torque: 2,0 Nm *mechanically: 1,5–25 mm2
Measuring Accuracy	Accuracy class according IEC 61557-12 Referred to the Energy Manager measured value Voltage: ± 0,5 % Current: ± 0,5% Real power: ± 1,0 % Apparent power: ± 1,0 %
Measuring Accuracy	Reactive power: ± 1,0 % Power factor: ± 1,0 % According to IEC 62053-22 and -23 (typically) Real energy: Class 1 Reactive energy: Class 1 If external sensores are used the measurement accuracy should be kept in mind.
Mechanical Specifications	Housing material: Fiberglass-reinforced polyamide Glow-wire test: Acc. to IEC 695-2-1 Protection class / rating: II / IP2X Weight: 0.3 kg Dimensions: 88×70×65 mm
Operating Conditions	Ambient temperature: -25°C ... +45°C Storage temperature: -25°C ... +70°C Relative humidity: 75 % max on an annual average 95 % max on up to 30 days a year

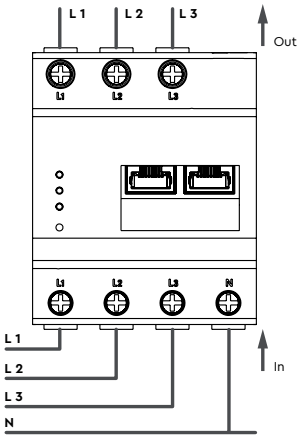
HOUSE INSTALLATION



EMV

ESD (IEC 61000-4-2)	4 kV contact discharge, 8 kV air discharge
Radio-Frequency Exposure (IEC 61000-4-3)	3 Vm, 10 Vm with increased measuring accurancy deviation
Burst (IEC 61000-4-4)	Power distribution: ± 4 kV, Ethernet: ± 2 kV
Surge (IEC 61000-4-5)	phase-phase: 1 kV, phase-ground: 2 kV, Ethernet: ± 2 kV
Conducted Disturbances (IEC 61000-4-6)	150 kHz-80 MHz, 3 V (rms value)
Radio-Frequency Emissons (EN55022)	Class B

CONNECTION DIAGRAM



The device operates on phase L1

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