# EEM-PM157-SLP - Measuring device

1269236

https://www.phoenixcontact.com/us/products/1269236

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Direct current energy meter with direct measurement up to 1000 V/650 A, with RS-485 interfaces for the programming software and the DC charging controller, correction of charging cable losses, operating temperature up to +80°C, certified for billing purposes. Product is being prepared for compliance with the Cyber Resilience Act (CRA).

## Product description

The space-saving EMpro DC energy meters enable direct measurement of currents and voltages up to 650 A/1000 V DC for billing purposes. The tamper-proof design with data in OCMF format and the calibration log are ideal for use in charging infrastructure.

## Your advantages

- Space-saving, accurate DC direct measurement up to 650 kW
- Tamper-proof electromechanics and firmware
- High reliability with an extended temperature range
- Effortless integration with simplified point-to-point protocol
- Ideal for e-mobility charging processes

## Commercial data

| | |
|---|---|
| Item number | 1269236 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | C446 |
| Product key | CMMC31 |
| GTIN | 4063151421748 |
| Weight per piece (including packing) | 505.5 g |
| Weight per piece (excluding packing) | 500 g |
| Customs tariff number | 90303100 |
| Country of origin | DE |

# Technical data

## Notes

Note on application

| | |
|---|---|
| Note on application | As things stand now, we are preparing the product so that, as of December 11, 2027, it will comply with the requirements of the EU Cyber Resilience Act (CRA) based on the information currently available regarding the CRA. |

## Product properties

| | |
|---|---|
| Product type | Energy meter |
| Product family | EMpro |
| Number (Charging processes) | > 225000 (Start- and stop-charge records) |
| Number (Capacity of calibration log) | > 2500 |

Insulation characteristics

| | |
|---|---|
| Overvoltage category | III |
| Degree of pollution | 2 |

Display

| | |
|---|---|
| Display type | Dot Matrix LCD |

## Electrical properties

| | |
|---|---|
| Accuracy class | B (EN 50470-3) |
| | 1 (IEC 62053-41) |
| Compensation parameters | 0 Ω ... 0.1 Ω |
| Electric strength | 3521 V (IEC 61851-23, EN 62052-31) |

Supply

| | |
|---|---|
| Supply voltage range | 19.2 V DC ... 36 V DC |

## Input data

Measurement

| | |
|---|---|
| Input voltage range | 150 V DC ... 1000 V DC |
| Input current range | 6.5 A ... 650 A (Direct measurement) |
| Power consumption | < 5 W |
| | < 0.5 W ($U_N$) |
| | < 0.12 W ($I_{max}$) |
| Startup current $I_{st}$ | 0.52 A |
| Minimum current $I_{min}$ | 6.5 A |
| Limiting current $I_{max}$ | 650 A |
| Transient current $I_{tr}$ | 13 A |
| Reference current $I_{ref}$ | 130 A |
| Surge voltage capacity | 1100 V |

## Output data

| | |
|---|---|
| Pulse LED | 1000 imp/kWh (Metrological LED) |

## Connection data

### Voltage

| | |
|---|---|
| Designation | Voltage |

### Conductor connection

| | |
|---|---|
| Connection method | Screw connection |
| rigid | 0.75 mm² ... 1.5 mm² |
| flexible | 0.75 mm² ... 1.5 mm² |
| AWG | 20 ... 16 |
| Tightening torque | 0.5 Nm ... 0.6 Nm |

### Current

| | |
|---|---|
| Designation | Current |

### Conductor connection

| | |
|---|---|
| Connection method | Screw connection |
| Tightening torque | 17.5 Nm ... 20 Nm |
| Screw thread | M8 |
| | M10 |

## Interfaces

### Communication

| | |
|---|---|
| Communication protocol | Serial Line Internet Protocol (SLIP) |
| Communication standard | RS-485 |
| Connection method | RJ12 |
| Transmission speed range | 9600 bps ... 115200 bps (adjustable) |

## Dimensions

### Item dimensions

| | |
|---|---|
| Width | 107.2 mm |
| Height | 115.6 mm |
| Depth | 66.75 mm |

## Environmental and real-life conditions

### Ambient conditions

| | |
|---|---|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -40 °C ... 80 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Altitude | ≤ 2000 m |
| Max. permissible relative humidity (operation) | 97.5 % (non-condensing) |

| | |
|---|---|
| Mechanical environment | M1 |
| EMC environment | E2 |

## Approvals

CE

| | |
|---|---|
| Certificate | CE-compliant |

Calibration law

| | |
|---|---|
| Certificate | Conforms to calibration law |

UL data

| | |
|---|---|
| Operating mode | Indoor use |

## Standards and regulations

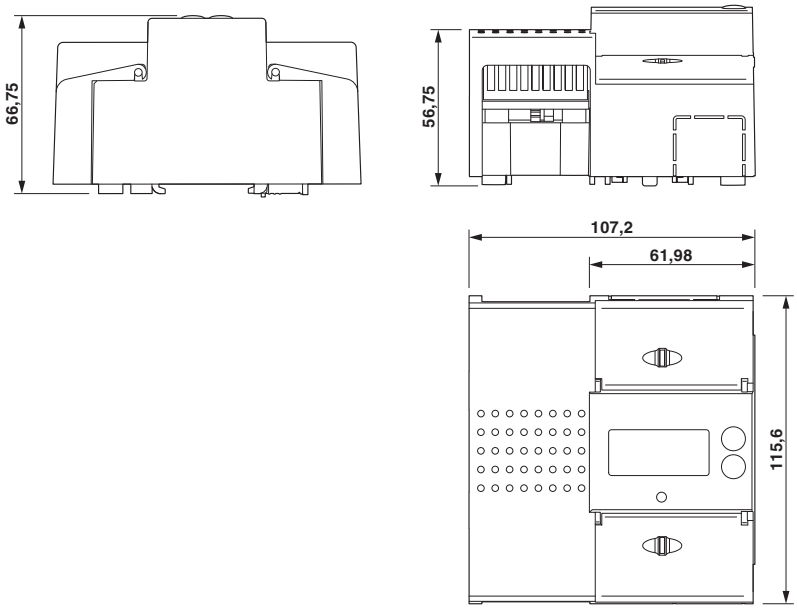
| | |
|---|---|
| Standards/specifications | EN 50470-1 |
| | EN 50470-3 |
| Standards/specifications | IEC 62052-41 |
| Standards/specifications | DIN EN 62052-11 |
| Standards/specifications | VDE-AR-E 2418-3-100 |
| Standards/specifications | EN 62053-41 |
| Standards/specifications | OCMF 1.0 |
| Standards/specifications | PTB-A 20.1 |
| Standards/specifications | PTB-A 50.7 |

## Mounting

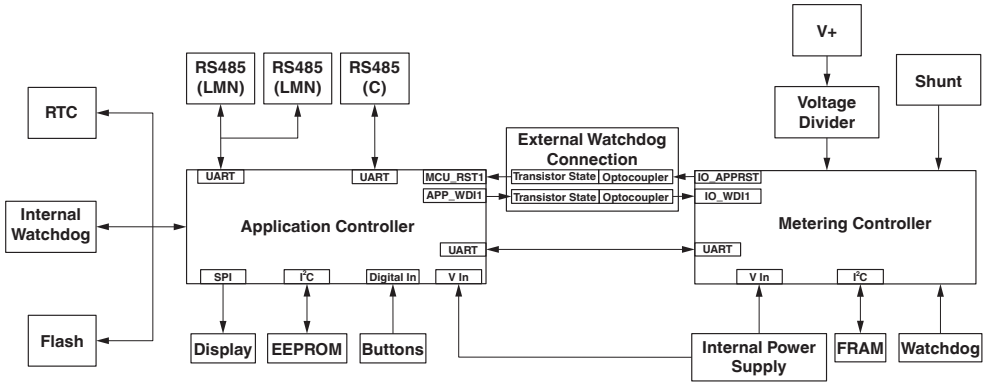
| | |
|---|---|
| Mounting type | NS 35 ... |
| Mounting position | Horizontal DIN rail |

## Drawings

Dimensional drawing




Block diagram




Block diagram

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1269236

**PTB-BG**
Approval ID: DE-23-M-PTB-0021

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27142330 |
| ECLASS-15.0 | 27142330 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC002301 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 41113600 |

## Environmental product compliance

EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 6(c), 7(c)-I |

China RoHS

| | |
|---|---|
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

EU REACH SVHC

| | |
|---|---|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| SCIP | 1957fd60-0c59-4233-a22e-74f113e41f68 |


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