

EEM-MA600-24DC - Measuring device



2902352

<https://www.phoenixcontact.com/us/products/2902352>

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Energy measurement device to measure electrical parameters in low voltage installations up to 700 V, acquisition of individual harmonic oscillations - can be extended with communication and special functional modules

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 2902352 |
| Packing unit | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | C446 |
| Product key | CMMC11 |
| GTIN | 4046356657136 |
| Weight per piece (including packing) | 813.1 g |
| Weight per piece (excluding packing) | 813.1 g |
| Customs tariff number | 90303100 |
| Country of origin | TN |

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Technical data

Product properties

| | |
|--------------|-------------------------|
| Product type | Energy measuring device |
|--------------|-------------------------|

Electrical properties

| | |
|----------------------|-----------------------------------------------------------------------------------|
| Electrical isolation | EN 61010-1 (Safe isolation) |
| | See extension module |
| | See extension module |
| Test voltage | 3.5 kV AC (50 Hz, 1 min.) |
| Mains type | 3-phase (3 or 4-conductor), 2-phase (2-conductor), and single-phase (1-conductor) |

Electrical isolation

| | |
|----------------------|-----------------------------------------------------|
| Overvoltage category | III (For mains voltage <300 V AC (L/N)) |
| | II (for mains voltage >300 V AC ... 600 V AC (L/N)) |
| Pollution degree | 2 |

Supply

| | |
|---------------------------|-----------------------------------------------|
| Supply voltage | 24 V DC |
| Supply voltage range | 12 V DC ... 48 V DC -6 % ... +20 % |
| Nominal power consumption | 10 VA |
| Power consumption | 20 VA (with max. number of extension modules) |

Input data

Measuring data acquisition

| | |
|--------------------------|-------------------------------|
| Measuring principle | True r.m.s. value measurement |
| Measured value | AC sine (50 Hz/60 Hz) |
| Acquisition of harmonics | up to 63rd harmonic |

Measurement: Voltage

| | |
|---------------------|--------------------------------------------------------|
| Input name | Voltage measuring input V1, V2, V3 |
| Input voltage | 500 kV AC (Primary (via external voltage transducers)) |
| | Secondary: 60, 100, 110, 115, 120, 173, 190 V AC |
| Input voltage range | 18 V AC ... 700 V AC (Phase/Phase) |
| | 11 V AC ... 404 V AC (Phase/neutral conductor) |
| Precision | 0.2 % |

Measurement: Current

| | |
|---------------------|------------------------------------|
| Input name | Current measuring input I1, I2, I3 |
| Input current range | via external transformers |
| Input current | 9999 A (primary) |
| | 1 A and 5 A, secondary |
| Measuring range | 0 A ... 9999 A |
| Overload capacity | 6 A (Permanent) |

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| | |
|-------------------------------------------------------|-----------------------------|
| Response threshold from measuring range nominal value | 10 mA |
| Precision | 0.2 % |
| Current overload | 10 x I _N for 1 s |

Measurement: Power

| | |
|-------------------------------|----------------------|
| Messbereich_Leistung | 0 MW ... 8000 MW |
| | 0 Mvar ... 8000 Mvar |
| | 0 MVA ... 8000 MVA |
| Precision | 0.5 % |
| Active energy (IEC 62053-22) | Class 0.5 S |
| Reactive power (IEC 62053-23) | Class 2 |

Digital

| | |
|----------------------|----------------------|
| Voltage input signal | Via extension module |
|----------------------|----------------------|

Output data

| | |
|--------------------|----------------------|
| Output description | via extension module |
|--------------------|----------------------|

Connection data

| | |
|----------------------------------|---------------------------------------------|
| Connection method | COMBICON plug-in screw terminal block |
| Stripping length | 6 mm |
| Note | Voltage and other connections |
| Conductor cross-section rigid | 0.5 mm ² ... 2.5 mm ² |
| Conductor cross-section flexible | 0.5 mm ² ... 2.5 mm ² |
| Conductor cross-section AWG | 20 ... 14 |
| Tightening torque | 0.4 Nm ... 0.4 Nm |
| Connection method | Screw connection |
| Stripping length | 7 mm |
| Note | Current connection |
| Conductor cross-section rigid | 0.5 mm ² ... 6 mm ² |
| Conductor cross-section flexible | 0.5 mm ² ... 6 mm ² |
| Conductor cross-section AWG | 20 ... 8 |

Dimensions

| | |
|--------|-----------------------------------------------------|
| Width | 96 mm |
| Height | 96 mm |
| Depth | 82 mm |
| | 80 mm (Installation depth with extension module) |
| | 60 mm (Installation depth without extension module) |

Material specifications

| | |
|-------|------------------|
| Color | black (RAL 9005) |
|-------|------------------|

Environmental and real-life conditions

Ambient conditions

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| | |
|------------------------------------------------|-------------------------------------|
| Degree of protection | IP52 (Front) IP30 (Back side) |
| Ambient temperature (operation) | -10 °C ... 55 °C (14 °F ... 131 °F) |
| Ambient temperature (storage/transport) | -20 °C ... 85 °C (-4 °F ... 185 °F) |
| Max. permissible relative humidity (operation) | ≤ 95 % |
| Max. salt spray content | ≤ 2.5 % |

Approvals

CE

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

UL data

| | |
|------------------------------------------------|---------------------------------------------------------|
| Nominal supply voltage range | 12 V DC ... 48 V DC -6 % ... +20 % |
| Power consumption | 10 VA |
| Altitude | ≤ 2000 m |
| Operating mode | Indoor use |
| Surge voltages | transient overvoltage according to installation classes |
| Overvoltage category | I, II, III |
| Overvoltage category of the supply | Min. II |
| Ambient temperature (operation) | 0 °C ... 40 °C |
| Max. permissible relative humidity (operation) | 80 % (up to 31 °C) 50 % (at 40 °C) |

UL data

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Mounting

| | |
|-------------------|--------------------------------------|
| Mounting position | Front panel installation, horizontal |
|-------------------|--------------------------------------|

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Environmental product compliance

EU RoHS

| | |
|-----------------------------------------|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|-----------------------------------------|--------------------|

China RoHS

| | |
|----------------------------------------|------------------------------------------|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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