

EEM-MA600 - Measuring device



2901366

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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

Your advantages

- Can be extended with special function and communication modules
- Remote access via web server, integrated in Ethernet communication module
- Trend calculation for real and reactive power
- Acquisition of individual harmonics up to 63rd harmonic

Commercial data

Item number	2901366
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C446
Product key	CMMC11
GTIN	4046356584258
Weight per piece (including packing)	821.5 g
Weight per piece (excluding packing)	821.5 g
Customs tariff number	90303100
Country of origin	TN

Technical data

Notes

Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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Product properties

Product type	Energy measuring device
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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.)
Maximum power dissipation for nominal condition	10 VA
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	230 V AC
	400 V AC
Supply voltage range	110 V AC ... 400 V AC $\pm 10\%$
	120 V DC ... 350 V DC ($\pm 20\%$)
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)

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Precision	0.2 %
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Measurement: Current

Input name	Current measurement 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)
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 function module
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Output data

Output description	Via function module
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Connection data

Connection method	COMBICON plug-in screw terminal block
Note	Connections for current, voltage, and supply
Conductor cross-section rigid	0.2 mm ² ... 6 mm ²
Conductor cross-section flexible	0.2 mm ² ... 4 mm ²
Connection method	Screw connection
Note	Connections for digital I/O and communication
Conductor cross-section rigid	0.14 mm ² ... 2.5 mm ²
Conductor cross-section flexible	0.14 mm ² ... 1.5 mm ²

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)
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Environmental and real-life conditions

Ambient conditions

Degree of protection	IP52 (Front)
	IP30 (On the rear)
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
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UL, USA/Canada

Identification	UL 61010-1
	CSA-C22.2 No. 61010-1
	cULus

UL data

Nominal supply voltage range	110 V AC ... 240 V AC ±10 %
	120 V DC ... 250 V DC ±10 %
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)

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Mounting

Mounting position

Front panel installation, horizontal

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Classifications

ETIM

ETIM 9.0

EC002301

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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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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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