Measuring instrument - EEM-MA771

2908286

https://www.phoenixcontact.com/pc/products/2908286

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Multi-functional energy measuring device with direct Rogowski connection and integrated Modbus/TCP interface for measuring electrical parameters in low-voltage installations up to 690 V.

Commercial Data

Item number	2908286
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	CK4C21
Catalog Page	Page 202 (C-5-2019)
GTIN	4055626471969
Weight per Piece (including packing)	500.6 g
Weight per Piece (excluding packing)	500 g
Customs tariff number	90303100
Country of origin	DE

Technical Data

Product properties

Product type	Energy meter

Insulation characteristics

Overvoltage category	III (300 V)
Pollution degree	2

Electrical properties

Electrical isolation	IEC 61010-1 (Overvoltage category III at 300 V ACOvervoltage category II at 600 V AC)
	IEC 61010-1 (Overvoltage category III at 300 V ACOvervoltage category II at 600 V AC)
	IEC 61010-1 (Measurement category III at 300 V ACMeasurement category II at 600 V AC)
Test voltage	4 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)

Supply

Supply voltage range	100 V AC ... 400 V AC (±20 %)
	150 V DC ... 250 V DC (±20 %)
Power consumption	≤ 4 W
Nominal frequency	50 Hz ... 60 Hz (AC sine)

Input data

Measuring principle	True r.m.s. value measurement
Measured value	AC sine (50/60 Hz)
Acquisition of harmonics	up to 63rd harmonic
Description of the input	Digital input in accordance with IEC/EN 61131-2 (type 3)
Number	1
Voltage input signal	24 V DC
Voltage input signal	0 V DC ... 30 V DC
Current input signal	2 mA ... 15 mA
Protection	250 mA (fast-blow)

Measurement: Voltage

Input name	Voltage measuring input V1, V2, V3
Input voltage range direct	35 V AC ... 690 V AC (Phase/Phase)
	20 V AC ... 400 V AC (Phase/neutral conductor)
Input voltage range via external transformers	60 V AC ... 2000000 V AC (primary)
	60 V AC ... 400 V AC (secondary)
Surge voltage capacity	760 V AC (Phase/Phase)
Precision	0.2 %

Power consumption	< 2 VA

Measurement: Current

Input name	Current measurement RC1, RC2, RC3
Input current	4000 A
Input measuring range voltage	500 µV ... 400 mV (1000 A)
Response threshold from measuring range nominal value	5 A
Operate threshold	500 µV (5 A)
Precision	0.5 %

Measurement: Power

Precision	1 %
Real energy (IEC 62053-21)	Class 1
Reactive power (IEC 62053-23)	Class 2

Output data

Output description	Digital output in accordance with IEC/EN 61131-2 (type 3)
Number	1
Current output signal	≤ 100 mA
Voltage output signal	24 V DC
Protection	250 mA (fast-blow)

Connection data

Current / voltage / supply

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	0.2 mm² ... 6 mm²
Conductor cross section flexible	0.2 mm² ... 4 mm²
Conductor cross section AWG	24 ... 10
Torque	0.5 Nm ... 0.6 Nm

Current / voltage / supply

Connection method	Screw connection
Stripping length	7 mm
Screw thread	M3
Conductor cross section solid	0.14 mm² ... 2.5 mm²
Conductor cross section flexible	0.14 mm² ... 1.5 mm²
Conductor cross section AWG	26 ... 14
Torque	0.5 Nm ... 0.6 Nm

Interfaces

Data: Network interface

Communication protocol	Modbus/TCP
	REST

Connection method	RJ45

Dimensions

Width	96 mm
Height	96 mm
Depth	58 mm

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP54 (Display (+ EEM-MA-IP))
	IP20 (Housing)
Ambient temperature (operation)	-10 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Altitude	≤ 2000 m
Max. permissible relative humidity (operation)	≤ 95 % (non-condensing)

Approval data

CE

Certificate	CE-compliant

CE

Certificate	UKCA-compliant

CE

Identification	UL/C-UL Listed UL 61010-1

UL data

Operating mode	Indoor use

UL data

Operating mode	Indoor use

Mounting

Mounting type	Panel mount
Mounting position	Front panel installation, horizontal

Approvals

EAC
Approval ID: RU*DE*08.B.00734/19

UL Listed
Approval ID: FILE E 357804

cUL Listed
Approval ID: FILE E 357804

cULus Listed

Classifications

ECLASS

ECLASS-9.0	27142330
ECLASS-10.0.1	27142330
ECLASS-11.0	27142330

ETIM

ETIM 8.0	EC002301

UNSPSC

UNSPSC 21.0	41113600

Environmental Product Compliance

REACh SVHC	Lead 7439-92-1

China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer’s declaration available under “Downloads”

Accessories

DIN rail adapter

DIN rail adapter - EEM-MKT-DRA - 2902078

https://www.phoenixcontact.com/pc/products/2902078

DIN rail adapter for EEM-MA770-X and EEM-MA771-X series energy measuring devices

Coil

Coil - PACT RCP-D95 - 2904890

https://www.phoenixcontact.com/pc/products/2904890

300 mm long Rogowski coil. The measuring coil diameter when installed is 95 mm. The Rogowski coil is used for AC current measurement for busbars and power lines.

Coil

Coil - PACT RCP-D140 - 2904891

https://www.phoenixcontact.com/pc/products/2904891

450 mm long Rogowski coil. The measuring coil diameter when installed is 140 mm. The Rogowski coil is used for AC current measurement for busbars and power lines.

Coil

Coil - PACT RCP-D190 - 2904892

https://www.phoenixcontact.com/pc/products/2904892

600 mm long Rogowski coil. The measuring coil diameter when installed is 190 mm. The Rogowski coil is used for AC current measurement for busbars and power lines.

Coil

Coil - PACT RCP-D95-5M - 2910322

https://www.phoenixcontact.com/pc/products/2910322

300 mm long Rogowski coil. The measuring coil diameter when installed is 95 mm. The Rogowski coil is used for AC current measurement for busbars and power lines.

Coil

Coil - PACT RCP-D95-10M - 2910323

https://www.phoenixcontact.com/pc/products/2910323

300 mm long Rogowski coil. The measuring coil diameter when installed is 95 mm. The Rogowski coil is used for AC current measurement for busbars and power lines.

Coil

Coil - PACT RCP-D190-10M - 2910324

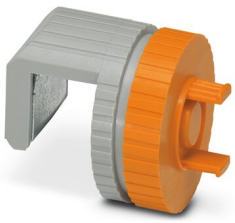
https://www.phoenixcontact.com/pc/products/2910324

600 mm long Rogowski coil. The measuring coil diameter when installed is 190 mm. The Rogowski coil is used for AC current measurement for busbars and power lines.

Holder

Holder - PACT RCP-CLAMP - 2904895

https://www.phoenixcontact.com/pc/products/2904895



The optional holding device ensures the Rogowski coil is securely seated on busbars with a thickness of 10 ... 15 mm. During installation, the coil housing is pushed onto the flange of the holding device and snaps in automatically.

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