

Measuring instrument - EEM-MA770-PN - 2907946


Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Multifunctional energy measuring device with integrated Modbus/TCP and PROFINET interface for measuring electrical parameters in low-voltage installations up to 690 V.



Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 260372
GTIN	4055626260372
Weight per Piece (excluding packing)	560.000 g
Custom tariff number	90303100
Country of origin	Germany

Technical data

Dimensions

Width	96 mm
Height	96 mm
Depth	75 mm

Ambient conditions

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

Input data

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

Measuring instrument - EEM-MA770-PN - 2907946

Technical data

Input data

Input name	Voltage measuring input V1, V2, V3
Input voltage range	35 V AC ... 690 V AC (Phase/Phase)
	20 V AC ... 400 V AC (Phase/neutral conductor)
	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 %
Input name	Current measurement I1, I2, I3
Input current	1 A (secondary)
	5 A (secondary)
Current measuring range	1 A ... 20000 A (primary)
Overload capacity	6 A (I_{max})
Response threshold from measuring range nominal value	10 mA (1 A)
Precision	0.2 %
Current overload	50 A for 1 s
Precision	0.5 %
Active energy (IEC 62053-22)	Class 0.5 S
Reactive power (IEC 62053-23)	Class 2
Description of the input	Digital input in accordance with IEC/EN 61131-2 (type 3)
Number	1
Voltage input signal	0 V DC ... 30 V DC
Current input signal	2 mA ... 15 mA

Output data

Output description	Digital output in accordance with IEC/EN 61131-2 (type 3)
Number	1
Current output signal	≤ 100 mA

Device interface

Designation	Network interface
Communication protocol	Modbus/TCP
	REST
Connection method	RJ45
Designation	Network interface
Communication protocol	PROFINET RT
Connection method	RJ45
Number of connections	2
Note	CC-B

General

Display	LCD display, two-color backlit
Supply voltage range	100 V AC ... 400 V AC (± 20 %)

Measuring instrument - EEM-MA770-PN - 2907946

Technical data

General

	150 V DC ... 250 V DC (±20 %)
Power consumption	≤ 4 W
Mains type	3-phase (3 or 4-wire), 2-phase (2-wire), and single-phase (1-wire)
Color	gray
Conformance	CE-compliant
Test voltage	4 kV AC (50 Hz, 1 min.)
Product family	EMpro

Connection data

Connection name	Current / voltage / supply
Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	0.2 mm ² ... 6 mm ²
Conductor cross section flexible	0.2 mm ² ... 4 mm ²
Conductor cross section AWG	24 ... 10
Torque	0.5 Nm ... 0.6 Nm

Connection data 2

Connection name	Digital I/O / communication
Connection method	Screw connection
Stripping length	7 mm
Screw thread	M3
Conductor cross section solid	0.14 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.14 mm ² ... 1.5 mm ²
Conductor cross section AWG	26 ... 14
Torque	0.5 Nm ... 0.6 Nm

UL data

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

Standards and Regulations

Conformance	CE-compliant
-------------	--------------

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Classifications

eCl@ss

eCl@ss 5.0	27200301
------------	----------

Measuring instrument - EEM-MA770-PN - 2907946

Classifications

eCl@ss

eCl@ss 5.1	27200301
eCl@ss 6.0	27142300
eCl@ss 7.0	27142330
eCl@ss 8.0	27142330
eCl@ss 9.0	27142330

ETIM

ETIM 4.0	EC002301
ETIM 5.0	EC002301
ETIM 6.0	EC002301
ETIM 7.0	EC002301

Approvals

Approvals

Approvals

EAC / PROFINET / UL Listed / cUL Listed / cULus Listed

Ex Approvals

Approval details

EAC		RU*DE*08.B.00734/19
-----	--	---------------------

PROFINET	Z12426
----------	--------

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 357804
-----------	--	---	---------------

cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 357804
------------	--	---	---------------

cULus Listed	
--------------	--

Measuring instrument - EEM-MA770-PN - 2907946

Accessories

Accessories

Assembly adapter

DIN rail adapter - EEM-MKT-DRA - 2902078



DIN rail adapter for EEM-MA600 and EEM-MA400 energy meters

Current transformer

Current transformer - PACT MCR-V2-3015-60-PT - 2907413



Window-type current transformer with screw and Push-in connection technology, conductor connection for Push-in: from directly above, no tools required. The following can be selected: primary current (50 ... 750) A AC, secondary current (1 or 5) A AC, accuracy class 0.5 or 1, VA power

Current transformer - PACT MCR-V2-4012-70-PT - 2907414



Window-type current transformer with screw and Push-in connection technology, conductor connection for Push-in: from directly above, no tools required. The following can be selected: primary current (100 ... 1000) A AC, secondary current (1 or 5) A AC, accuracy class 0.5 or 1, VA power

Current transformer - PACT MCR-V2-5012-85-PT - 2907416



Window-type current transformer with screw and Push-in connection technology, conductor connection for Push-in: from directly above, no tools required. The following can be selected: primary current (100 ... 1500) A AC, secondary current (1 or 5) A AC, accuracy class 0.5 or 1, VA power

Current transformer - PACT MCR-V2-6015-85-PT - 2907417



Window-type current transformer with screw and Push-in connection technology, conductor connection for Push-in: from directly above, no tools required. The following can be selected: primary current (200 ... 1600) A AC, secondary current (1 or 5) A AC, accuracy class 0.5 or 1, VA power

Measuring instrument - EEM-MA770-PN - 2907946

Accessories

Current transformer - PACT MCR-V1-21-44 - 2277268



Bus-bar current transformer, primary current can be selected between 50...500 A AC; secondary current can be selected as 1 A AC or 5 A AC; accuracy class can be selected as 0.5 or 1; rated power can be selected

Current transformer - PACT MCR-V2- 3015- 60 - 2277271



Window-type current transformer, primary current can be selected between 50...750 A AC; secondary current can be selected as 1 A AC or 5 A AC; accuracy class can be selected as 0.5 or 1; rated power can be selected

Current transformer - PACT MCR-V2- 4012- 70 - 2277284



Window-type current transformer, primary current can be selected between 75...1000 A AC; secondary current can be selected as 1 A AC or 5 A AC; accuracy class can be selected as 0.5 or 1; rated power can be selected

Current transformer - PACT MCR-V2- 5012- 85 - 2277297



Window-type current transformer, primary current can be selected between 100...1500 A AC; secondary current can be selected as 1 A AC or 5 A AC; accuracy class can be selected as 0.5 or 1; rated power can be selected

Current transformer - PACT MCR-V2- 6015- 85 - 2277336



Window-type current transformer, primary current can be selected between 200...1600 A AC; secondary current can be selected as 1 A AC or 5 A AC; accuracy class can be selected as 0.5 or 1; rated power can be selected

Measuring instrument - EEM-MA770-PN - 2907946

Accessories

Current transformer - PACT MCR-V2-10020-129 - 2277378



Window-type current transformer, primary current can be selected between 800 and 4,000 A AC, secondary current can be selected 1 A AC or 5 A AC, accuracy class can be selected 0.5 or 1, rated power can be selected

Current transformer - PACT MCR-V3-60 - 2277417



Winding current transformer, primary current can be selected between 1...40 A AC; secondary current can be selected as 1 A AC or 5 A AC; accuracy class can be selected as 0.5 or 1; rated power can be selected