



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



## Measuring instrument - EEM-MA250 - 2901363

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>)



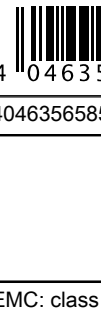
Energy measurement device to measure electrical parameters in low voltage installations up to 500 V, acquisition of total harmonic oscillations - can be expanded with RS-485 interface

### Why buy this product

- RS-485 interface (JBUS/MODBUS)
- Pulse output
- Two-tariff measurement via pulse input



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 585811
GTIN	4046356585811

### Technical data

#### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
-------------------------	---

#### Dimensions

Width	72 mm
Height	90 mm
Depth	64 mm

#### Ambient conditions

Ambient temperature (operation)	-10 °C ... 55 °C (14 °F to 131 °F)
Ambient temperature (storage/transport)	-20 °C ... 70 °C (-4 °F ... 158 °F)
Max. permissible relative humidity (operation)	≤ 95 %
Max. salt spray content	≤ 2.5 %

#### Input data

# Measuring instrument - EEM-MA250 - 2901363

## Technical data

### Input data

Measuring principle	True r.m.s. value measurement
Acquisition of harmonics	up to 51st harmonic
Measured value	AC sine (50/60 Hz)
Input name	Voltage measuring input V1, V2, V3
Input voltage range	50 V AC ... 519 V AC (Phase/Phase) 28 V AC ... 300 V AC (Phase/neutral conductor)
Precision	0.2 %
Input current range	via external transformers
Input current	9999 A (primary) 5 A (secondary)
Overload capacity	6 A (Permanent)
Response threshold from measuring range nominal value	5 mA
Precision	0.2 %
Messbereich_Leistung	0 kW ... 9999 kW 0 kvar ... 9999 kvar 0 kVA ... 9999 kVA
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
Number	1
Voltage input signal	230 V AC $\pm 10$ % (Tariff switchover: e.g., day/nighttime tariff)

### Output data

Output description	Transistor output, active
Number	1
Maximum switching voltage	30 V DC
Current carrying capacity	27 mA

### Interfaces

Designation	Modbus RTU/JBUS
Interface	RS-485
Connection method	Screw terminal blocks
Serial transmission speed	2,4 ... 38.4 kbps

### General

Display	LCD display, backlighting
Measuring rate	approximately
Supply voltage range	110 V AC ... 277 V AC -10 % ... +15 %
Nominal power consumption	5 VA
Mains type	3-phase (3 or 4-wire), 2-phase (2-wire), and single-phase (1-wire)
Color	black

# Measuring instrument - EEM-MA250 - 2901363

## Technical data

### General

Conformance	CE-compliant
Rated insulation voltage	300 V AC (EN 61010-1)
Overvoltage category	III
Test voltage	3.5 kV AC (50 Hz, 1 min.)
	2.2 kV AC (50 Hz, 1 min.)

### Connection data

Conductor cross section flexible min.	0.5 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section solid min.	0.5 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	20
Conductor cross section AWG max.	14
Connection method	Screw connection
Stripping length	6 mm
Tightening torque	0.6 Nm
Note	other connections
Conductor cross section flexible min.	0.5 mm <sup>2</sup>
Conductor cross section flexible max.	4 mm <sup>2</sup>
Conductor cross section solid min.	0.5 mm <sup>2</sup>
Conductor cross section solid max.	4 mm <sup>2</sup>
Conductor cross section AWG min.	20
Conductor cross section AWG max.	10
Stripping length	6 mm
Note	Current and voltage connection

### UL data

Nominal supply voltage range	110 V AC ... 277 V AC -10 % ... +15 %
Operating mode	Indoor use
Surge voltages	Transient overvoltage according to installation classes
Overvoltage category	I, II, III
Overvoltage category of the supply	Min. II
Altitude	≤ 2000 m
Ambient temperature (operation)	5 °C ... 40 °C
Max. permissible relative humidity (operation)	80 % (up to 31 °C)
	50 % (at 40 °C)

### Standards and Regulations

Conformance	CE-compliant
UL, USA/Canada	UL 61010-1
	CSA-C22.2 No. 61010-1
	cULus

# Measuring instrument - EEM-MA250 - 2901363

## Technical data

### Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Approvals

### Approvals

#### Approvals

UL Listed / cUL Listed / EAC / cULus Listed


#### Ex Approvals

### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 357804
-----------	---	---	---------------

cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 357804
------------	---	---	---------------

EAC			RU *- DE.A*30.B.01628
-----	---	--	--------------------------

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

Phoenix Contact 2018 © - all rights reserved  
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG  
 Flachsmarktstr. 8  
 32825 Blomberg  
 Germany  
 Tel. +49 5235 300  
 Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>