

RMM-483-10-U

multifunction network parameter meters



NEW

- **Multifunction meters** - with LCD for monitoring True RMS parameters, suitable for EMS applications

- Compatible with systems: 1-phase 2-wire, 2-phase 3-wire, 3-phase 3-wire, 3-phase 4-wire
- Voltage measurement: 11...300 V AC (L-N), 19...519 V AC (L-L)
- Measurement of max./min. power demand, imported/exported energy
- % THD up to level 31 • **Accuracy class 1**
- RS-485 communication Modbus RTU protocol
- Recognitions, certifications, directives: RoHS,  

Input circuit

Type of measurement	True RMS
Sampling rate	64 samples/cycle
Electrical connections	1Ø - 2 wire (L-N), 2Ø - 3 wire 3Ø - 3 wire (delta), 3Ø - 4 wire (wye)
Data update rate	1 s
Input voltage	• PT primary • PT secondary • rated voltage • measured voltage • impedance • frequency range • VA burden 100 V...500 kV programmable for any value 100...500 V AC (L-L) programmable for any value 240 V AC (L-N), 415 V AC (L-L) 11...300 V AC (L-N), 19...519 V AC (L-L) with full range ≥ 0,8 MΩ 45...65 Hz < 0,2 VA at 300 V AC (L-N) / phase
Input current	• CT ratings primary • CT ratings secondary • rated current • measured current • short circuit withstand capacity • frequency range • VA burden 1/5 A...10 kA programmable for any value 1/5 A programmable for any value 5 A 11 mA...6 A with over range & crest factor 120 A for 1 s 45...65 Hz 0,5 VA at 5 A / phase
Auxiliary supply voltage	85...300 V AC -15...25%, 50/60 Hz (±5%)
Output/measuring circuit	
Pulse output	• voltage range • current capacity • pulse width • pulse weight external: ≤ 24 V DC ≤ 100 mA 100 ms ±5 ms configurable: 0,01...99,99 pulses/kWh
Device ID & parity	1...255 & none, odd, even
Communication interface & protocol	RS-485 port & Modbus RTU
Data types	float & integer
Transmission	• mode • distance • speed half duplex ≤ 500 m 300,600,1200,2400,4800,9600,19200 bps
Stop bits	1 or 2
Accuracy	• voltage (L-N, L-L), current • frequency • power • power factor • energy • max./min. kW, max. kVA • max./min. kVAr ± 0,5% of full scale ± 0,1% for > 20 V (L-N), > 35 V (L-L) active, reactive, apparent: ± 1% ± 0,01 active, reactive, apparent: class 1 ± 1% ± 1%
Response time	≤ 100 ms independent of baud rate
Isolation	2 kV RMS
Display data	
Display type	LCD with backlight
Digits	• electrical parameters • energy display 4 lines / 4 digits + symbol per line 1 line (lowest) / 8 digits per line for energy measurement
Digit height	11,43 mm
Bargraph	current representation
Resolution	• energy • power, voltage, current • power factor 0,01k, 0,1k, 1k, 0,01M, 0,1M, 1M depending upon CT ratio x PT ratio auto resolution 0,001

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General data

Dimensions (L x W x H)	99 x 99 x 55 mm
Weight	318 g (with packaging approx. 329 g)
Ambient temperature (non-condensation and/or icing)	• storage -20...+75 °C • operating -10...+55 °C
Protection category	panel: IP 54 cover: IP 20 EN 60529
Relative humidity (non-condensation)	up to 85%
Operating altitude	0...2 000 m
Overvoltage category	III
Insulation pollution degree	2
Auxiliary supply • supply voltage	85...300 V AC -15...25%, 50/60 Hz (±5%)
EMC according to Directive 2014/30/EU	
EMC (emissions)	CISPR 22, CISPR 11
Immunity to:	IEC 61326-1, IEC 61010 edition 3.0 cat. III, protection class II
• electrostatic discharge (IEC 61000-4-2)	class A
• radiated field (IEC 61000-4-3)	class A
• electrical fast transient / burst (IEC 61000-4-4)	class A
• surge (IEC 61000-4-5)	class A
• conducted (IEC 61000-4-6)	class A
• power frequency magnetic fields (IEC 61000-4-8)	class A
• voltage dips (IEC 61000-4-11)	class B

Description

Features of meters **RMM-483-10-U**:

- 3Ø True RMS (voltage, current),
- 3Ø power (active, reactive, apparent),
- energy (active, reactive, apparent),
- programmable CT/PT (primary/secondary),
- CT polarity error detection,
- variable pulse width selection,
- single phase network with phase selection,
- Modbus RTU communication (RS-485),
- baragraph representation for current,
- % THD up to level 31,
- max. demand for power,
- single pulse output/demand,
- phase sequence detection.

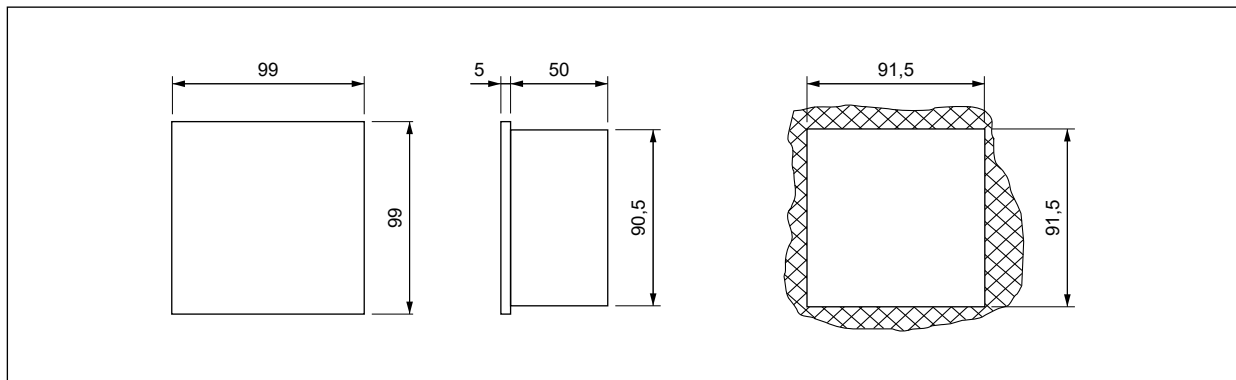
Mounting

Meters **RMM-483-10-U** are designed for direct mounting on panel. Operational position - vertical. **Connections:** max. cross section of the cables (at 75 °C): 0,5...2,5 mm² (20...14 AWG), max. tightening moment for the terminal: 0,68...0,79 Nm.

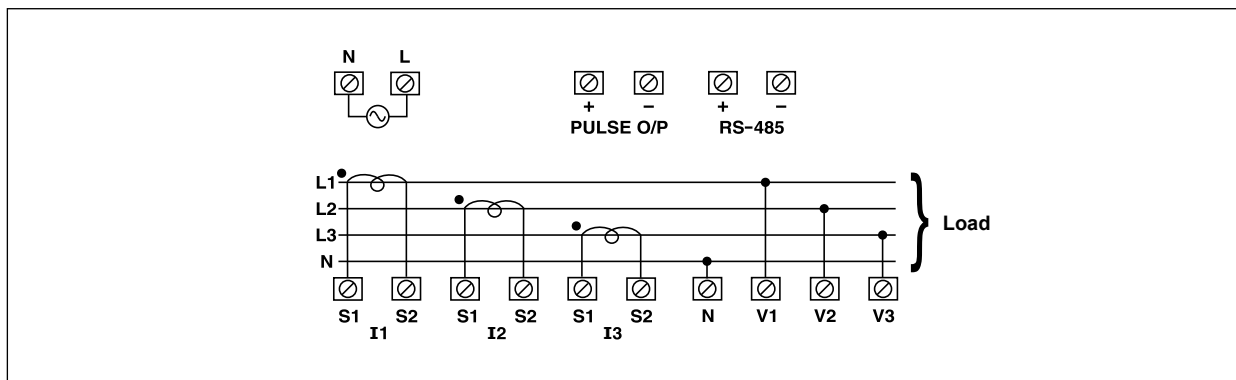
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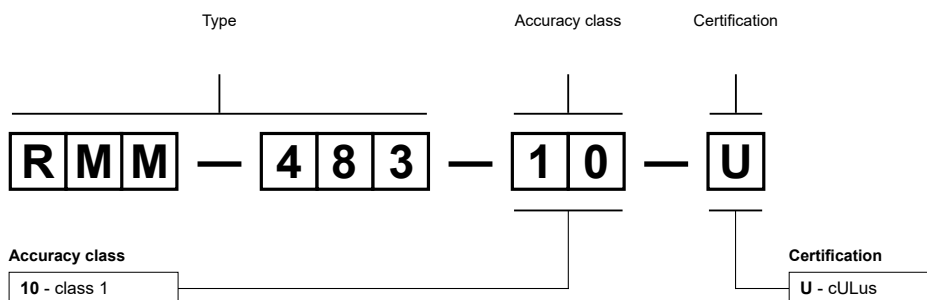
Dimensions, opening on panel mounting



Connection diagram



Ordering codes



Example of ordering codes:

RMM-483-10-U meter **RMM-483-10-U**, on panel mounting, multifunction (electric parameters measurement in network AC), accuracy class 1, cULus certificate

PRECAUTIONS:

1. Ensure that the parameters of the product described in its specification provide a safety margin for the appropriate operation of the device or system and never use the product in circumstances which exceed the parameters of the product. 2. Never touch any live parts of the device. 3. Ensure that the product has been connected correctly. An incorrect connection may cause malfunction, excessive heating or risk of fire. 4. In case of any risk of any serious material loss or death or injuries of humans or animals, the devices or systems shall be designed so to equip them with double safety system to guarantee their reliable operation.