

RMM-483-05

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, 3-phase 3-wire, 3-phase 4-wire
- Voltage measurement: 35...600 V AC (L-L)
- Measurement of max./min. power demand, imported/exported energy
- % THD up to level 31 • **Accuracy class 0.5S**
- RS-485 communication Modbus RTU protocol
- Recognitions, certifications, directives: RoHS,

Input circuit

Type of measurement		True RMS
Sampling rate		121 samples/cycle
Electrical connections		1Ø - 2 wire (L-N), 1Ø - 2 wire (L-L) 3Ø - 3 wire (delta), 3Ø - 4 wire (wye)
Data update rate		instantaneous: 1 s, demand: 15 s, harmonics: 5 s
Input voltage	• PT primary • PT secondary • rated voltage • measured voltage • permanent overload • impedance • frequency range • VA burden	100 V...999 kV programmable for any value 100, 110, 115, 120 V AC programmable 277 V AC (L-N), 480 V AC (L-L) 35...600 V AC (L-L) with full range 720 V AC (L-L) ≥ 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...32,76 kA programmable for any value 1/5 A programmable for any value 5 A 5 mA...6 A with over range 120 A for 1 s 45...65 Hz 0,5 VA at 5 A / phase

Output/measuring circuit

Pulse output	• voltage range • current capacity • pulse width • pulse weight	24/48 V DC ≤ 100 mA 50 ms configurable: 1...9999000 pulses/k_h (kWh, kVAh, kVARh)
Device ID & parity		1...247 & none, odd, even
Communication interface & protocol		RS-485 port & Modbus RTU
Data types		float & integer
Transmission	• mode • distance • speed	half duplex ≤ 500 m 4800, 9600,19200, 38400 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 • THD voltage, current	± 0,5% of full scale ± 0,05% for > 20 V (L-N), > 35 V (L-L) active, apparent: ± 0,5%, reactive: ± 1% ± 0,01 active: class 0.5S, reactive: class 1, apparent: class 0.5 ± 0,5% ± 1% class 5
Response time		≤ 100 ms independent of baud rate
Isolation		2,5 kV RMS
Display data		
Display type		LCD with backlight
Digits	• electrical parameters • energy display	4 lines / 4 digits + symbol per line 1 line (lowest) / 9 digits per line for energy measurement
Digit height		12,446 mm
Bargraph		current representation
Resolution	• energy • power, voltage, current • power factor	0,001k auto resolution auto resolution 0,001
Protection features		password protected for set-up & clearing energy and min./max. data

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General data

Dimensions (L x W x H)	96 x 96 x 46 mm
Weight	approx. 303 g
Ambient temperature (non-condensation and/or icing)	• storage -25...+75 °C • operating -10...+60 °C
Protection category	panel: IP 65 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
Product life	> 5 years
Auxiliary supply	
• supply voltage	40...300 V AC/DC
• power consumption	< 6 VA
• rated frequency	50/60 Hz
• ride-through time (typical)	100 ms at 120, 277 V AC & maximum burden
EMC according to Directive 2014/30/EU	
EMC (emissions)	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-483-05**:

- 3Ø True RMS (voltage, current),
- 3Ø power (active, reactive, apparent),
- energy (active, reactive, apparent) (import/export),
- max./min. demand current & power,
- 3Ø power factor (average, individual, displacement & True PF),
- cybersecurity: supports the disabling of the RS-485,
- RPM (monitors generator speed),
- on site firmware update through communication,
- % unbalance for voltage and current,
- self-test mode,
- Modbus RTU communication (RS-485),
- suppression current,
- in-built real-time clock (RTC),
- % THD up to level 31,
- neutral current,
- DG sensing.

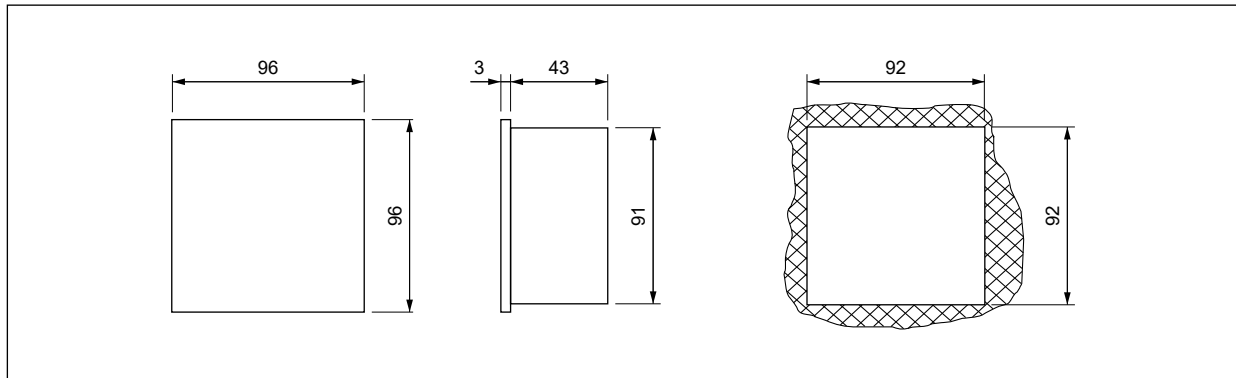
Mounting

Meters **RMM-483-05** 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.

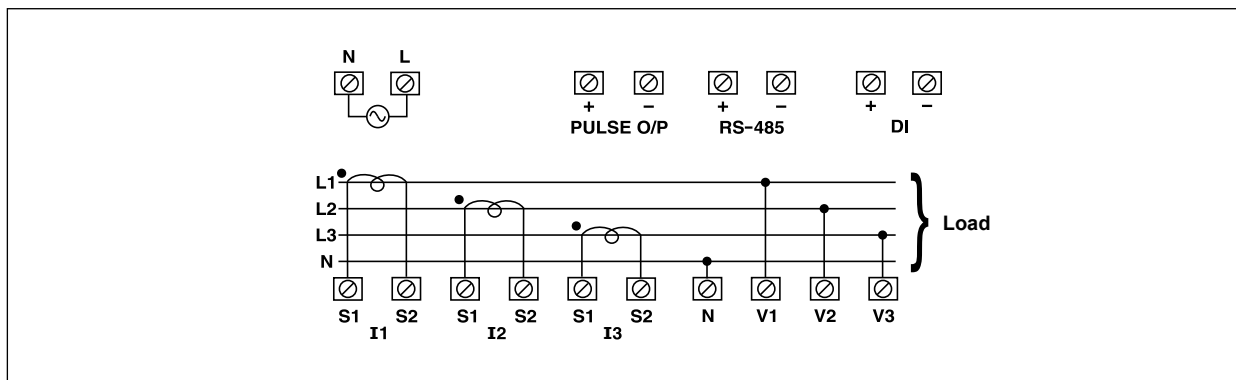
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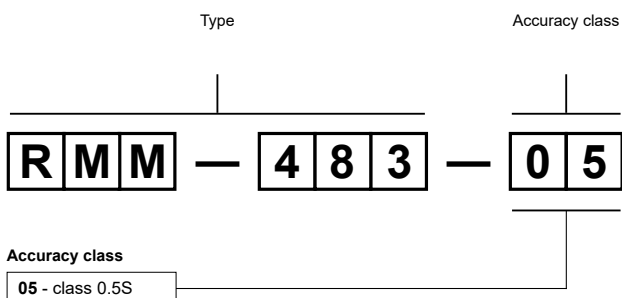
Dimensions, opening on panel mounting



Connection diagram



Ordering codes



Example of ordering codes:

RMM-483-05 meter **RMM-483-05**, on panel mounting, multifunction (electric parameters measurement in network AC), accuracy class 0.5S

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.