

# RMM-683-02

## multifunction network parameter meters



NEW

- **Multifunction meters** - for monitoring network parameters
- True RMS suitable for EMS, SCADA, ERP applications

- Site programmable for CT/VT ratio
- Site programmable for network selection
- User selectable energy measurement on DO and INT LED
- 33 built-in types of configurable alarms with user-selected priorities
- User configurable multi-tariff and datalogging
- External I/O expansion modules available:  
2DI+4RO, 2DI+2DO+1AI+1AO
- RS-485 Modbus RTU and Ethernet communication
- Analog domain functionality
- 41 harmonic THD%
- Recognitions, certifications, directives: RoHS,

### Input circuit

Type of measurement networks	3P4W, 3P3W, 1P2W (L-N), 1P2W (L-L)
Measurement method	True RMS see Table 1
Measurement accuracy	Class 0.2S as per IEC 62053-22
Auxiliary input	40...300 V AC/DC
Power consumption	< 6 VA
Frequency range	45...65 Hz

### Output/measuring circuit ❶

Measurement input	20...277 V AC (L-N) 35...480 V AC (L-L) Cat. III 20...347 V AC (L-N) 35...600 V AC (L-L) Cat. II
Voltage transformer VT	• primary 100...999999 V (programmable) • secondary 100,110,115,120 V (programmable)
Frequency	45...65 Hz
Measurement method	True RMS
Rated load	0,5 VA
Input current	• rated 5 A AC • min., max. 5 mA, 6 A
Voltage transformer CT	• primary 1 A / 5...32767 A (programmable) • secondary 1 A / 5 A (programmable)

### General data

Material	polycarbonate
Mounting type	panel mount
Dimensions (L x W x H)	96 x 96 x 46 mm
Panel cutout	92 x 92 mm
Weight	350 g
Cover protection category	front: IP 65 back: IP 20
Accessories	panel mount clamp, terminal cover

❶ Common measure with CT and VT - look at data sheet.

### Measurements accuracy

Table 1

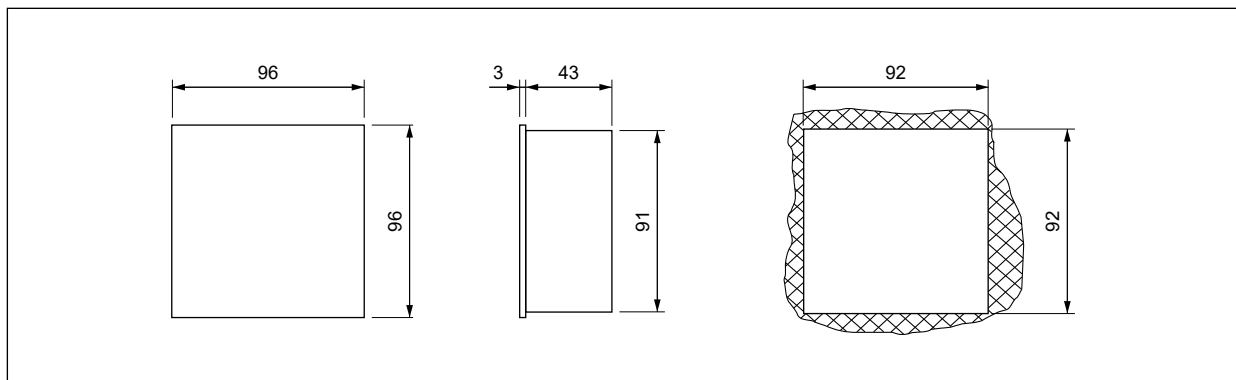
Measurement type	Compliance with the standard	Deviation
Accuracy	Class as per IEC 61557-12 (In = 5 A, rated CT)	0,2%
Active energy	Class 0.2S as per IEC 62053-22 (In = 5 A, rated CT)	±0,2%
Reactive energy	Class 1 as per IEC 62053-24 (In = 5 A, rated CT)	±1%
Apparent energy	Class 0.5S (In = 5 A, rated CT)	±0,5%
Active power	Class 0.2	±0,2%
Reactive power	Class 1	±1%
Apparent power	Class 0.5	±0,5%
Current	Class 0.2	±0,2%
Voltage (L-N), (L-L)	Class 0.2	±0,2%
Frequency	Class 0.05	±0,05%

## Description

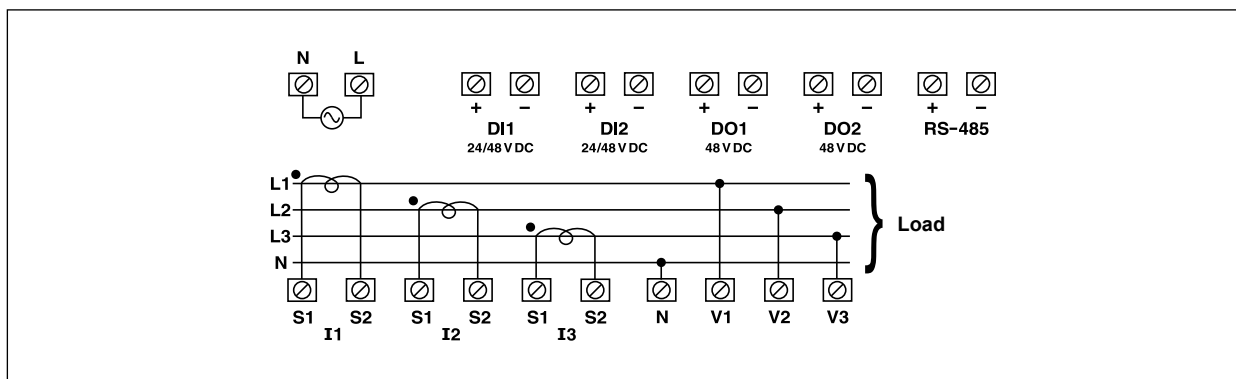
Features of meters **RMM-683-02**:

- power factor sign convention (IEC/IEEE standards),
- four quadrant measurements of power factor & power,
- supports data logging up to 30 user-selectable parameters from a total of 105, with a retention period of 90 days at a 5-minute sampling interval,
- 3-phase import, export, import + export, import - export (active, reactive, apparent) energies,
- demand parameters with various methods (peak, present, last, predictive),
- time-stamping for the occurrence of peak demand, min./max. parameter values (voltage, current, power factor, power, frequency) and reset of energies and tariff parameters,
- measurements of true, displacement and distortion power factor,
- digital input (DI1) for dual energy measurement - mains and DG,
- configurable Digital Input(DI2) of 24/48V for external input and demand sync application.

## Dimensions, opening on panel mounting



## Connection diagram



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### Mounting

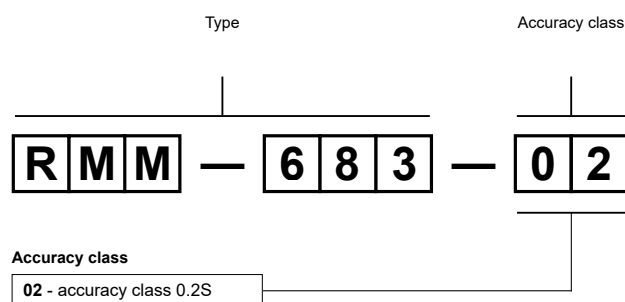
Meters **RMM-683-02** are designed for direct mounting on panel. Operational position - vertical. **Connections:** max. cross section of the cables (at 75 °C): 0,2...0,75 mm<sup>2</sup> (24...18 AWG), max. tightening moment for the terminal: 0,68...0,79 Nm.

### Expansion modules

For meters **RMM-683-02** are available external I/O expansion modules which shall be ordered as a separate product:

- 2DI+4RO: 2 digital inputs + 4 relay outputs,
- 2DI+2DO+1AI+1AO: 2 digital inputs + 2 digital outputs + 1 analogue input + 1 analogue output.

### Ordering codes



Example of ordering codes:

**RMM-683-02** meter **RMM-683-02**, on panel mounting, multifunction (electric parameters measurement in network AC), accuracy class 0.2S

### 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.