Panel-mounted meters PMA02

Panel-mounted measuring devices PMA02 are designed for measuring and indication of electric quantities values (voltage, current, and resistance) depending on configuration. Measured value is displayed on the 3 1/2 digit LED display with 14 mm height of character and possibility of bright regulation. The range of display is ±1999 with selectable position of decimal point. The device may be calibrated in accordance with requirements of customer. Meters are designed for installation into the cut-out in panel. The supply and measured signal are connected by means of plug-in terminal boxes at the back part of device.

Technical data

Supply voltage:

N:	**230V/50Hz±10%**,	current consumption max. 20mA,	isolating voltage 3000VAC
A:	**18÷36VDC, 24VAC±10%**,	current consumption max. 60mA,	isolating voltage 1000VDC
B:	**36÷75VDC, 48VAC±10%**,	current consumption max. 40mA,	isolating voltage 1000VDC
C:	**50÷300VDC, 36÷265VAC**,	current consumption max. 40mA,	isolating voltage 3000VAC
D:	**12÷30VDC, 24VAC±10%**,	current consumption max. 100mA,	not isolated galvanically from input

Measured quantities:

VDC: **unidirectional voltage**, range/impedance: 200mV/100k , 2V/1M , 20V/1M , 200V/1M , 750V/10M
ADC: **unidirectional current**, range/impedance: 20mA/10 , 200mA/1 , 2A/0,1 , 10A/0,01
VAC: **alternating voltage TRMS**, range/impedance: 200mV/100k , 2V/1M , 20V/1M , 200V/1M , 750V/10M
frequency range: 40 ÷ 1000Hz
AAC: **alternating current TRMS**,range/impedance: 20mA/10 , 200mA/1 , 2A/0,1 , 10A/0,01
frequency range: 40 ÷ 1000Hz
PT2, **PT3**: **temperature with sensor PT100**, range -50°C÷200°C, -100°C÷500°C, only with "N" and "D" supplies, two-lead and three-lead connection
RV2, **RV3**: **resistance**, range: 0÷200 , 0÷2k , only with "N" and "D" supplies

Display:	±1999	with possibility of settable position of decimal point LED display, red color, 14mm height of character	
Measurement accuracy:	0,2% of range ±1 digit 1% of range ±1 digit temperature coefficient 150 ppm/°C settling time - within 15 min after switching on	- unidirectional quantities, temperature, resistance - alternating quantities	
Type of construction:	safety class II		
Connection:	plug-in terminal boxes, cross-section of conductor 0.13 to 1.5mm^2		
Protection:	IP42 - front panel IP65 - with additional cover		
Mechanical properties:	material of package (case) dimensions [W x H x D] mounting cut-out in panel weight	Noryl SE1 GFN1, fireproof, UL94 V-1 96 x 48 x 72 mm 43.5 x 90.5 mm (holes 3 in corners) max. 300g	

Operating conditions

Atmospheric pressure:	84 ÷ 107 kPa
Ambient operating temperature:	0°C ÷ 40°C
Environment:	basic
Dust nuisance:	max. 5mg/m^3 non-conducting, inexplosive, non-combustible dust
Relative humidity of air:	max. 80% at 20°C
Chemical influences:	non-aggressive environment

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Designation of PMA02 meters:

PMA02 XXX.X 999XX ZN

1 2 3 4

1. Type of input signal

VDC	Unidirectional voltmeter
VAC	Alternating voltmeter
ADC	Unidirectional ammeter
AAC	Alternating ammeter
PT2	Thermometer with PT100, two-lead connection
PT3	Thermometer with PT100, three-lead connection
RV2	Ohmmeter, two-lead connection
RV3	Ohmmeter, three-lead connection

2. Typ napájania

N	230V/50Hz ±10%
A	18÷36VDC, 24VAC ±10%
B	36÷75VDC, 48VAC ±10%
C	50÷300VDC, 36÷265VAC
D	12÷30VDC, 24VAC ±10%

3. Merací rozsah

200mV, 2V, 20V, 200V, 750V	voltmeter (VDC, VAC)
20mA, 200mA, 2A, 10A	ammeter (ADC, AAC)
-50°C ÷ 200°C, -100°C ÷ 500°C	thermometer (PT2, PT3)
0÷200 , 0÷2k	ohmmeter (RV2, RV3)

4. Custom setting ZN

It is necessary to enter:
min. value of input quantity - value on display
max. value of input quantity - value on display

Example of designation: **PMA02.VDC.C 750V**

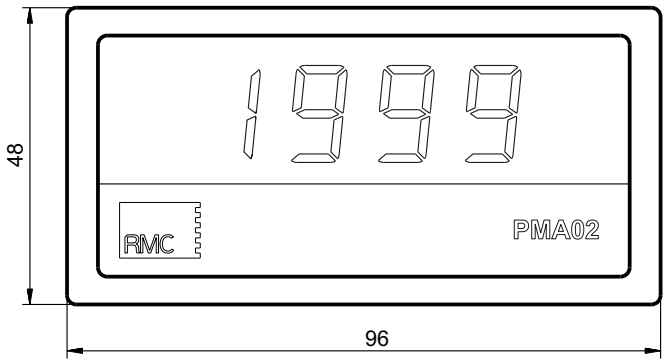
Standard device:
Unidirectional voltmeter (VDC) supply 36÷265V 50Hz, 50÷300V= (C),range 750V (measured input voltage ±750V=).

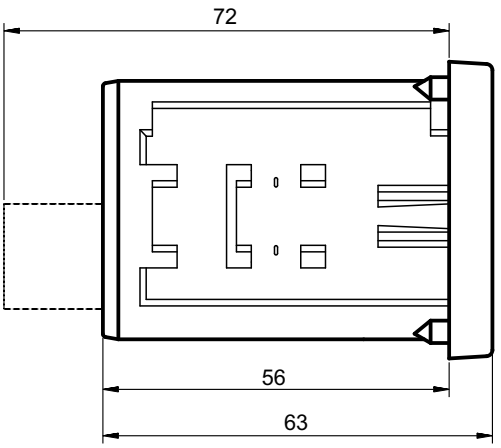
PMA02.ADC.N 20mA ZN

Custom-tailored device:
supply 230V/50Hz±10% (N), input signal 4÷20mA=.
Value on the display in accordance with customer setting, e.g.:
at 4mA ... displayed value: 0
at 20mA ... displayed value: 650

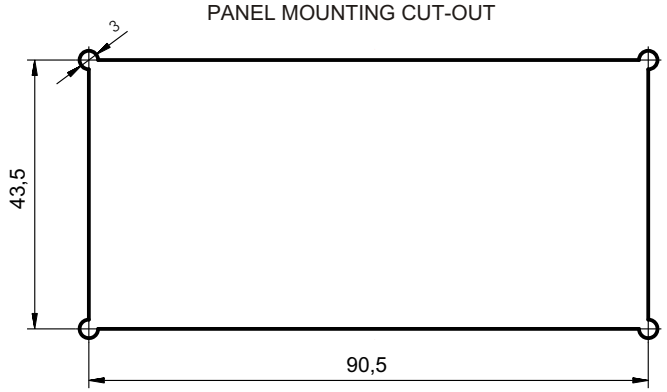
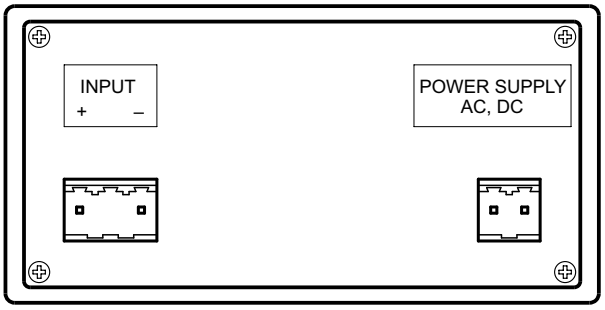
Produced models:

	Input	Supply	Range	Custom setting
Unidirectional voltmeter	VDC	N, A, B, C, D	200mV, 2V, 20V, 200V, 750V	yes
Alternating voltmeter	VAC	N, A, B, C, D	200mV, 2V, 20V, 200V, 750V	yes
Unidirectional ammeter	ADC	N, A, B, C, D	20mA, 200mA, 2A, 10A	yes
Alternating ammeter	AAC	N, A, B, C, D	20mA, 200mA, 2A, 10A	yes
Thermometer with PT100, 2-leads	PT2	N, D	-50°C ÷ 200°C, -100°C ÷ 500°C	no
Thermometer with PT100, 3-leads	PT3	N, D	-50°C ÷ 200°C, -100°C ÷ 500°C	no
Ohmmeter 2-leads	RV2	N, D	0 ÷ 200 , 0 ÷ 2k	yes
Ohmmeter 3-leads	RV3	N, D	0 ÷ 200 , 0 ÷ 2k	yes





PANEL MOUNTING CUT-OUT



VIEW ON REAR SIDE WITH TERMINALS