

Classical.  
Versatile.  
Different.



**PM10 SMART METER**

Multi-channel  
16 000 variations  
Multicolor and divisible display  
Mathematical functions

# PM10 SMART METER

## PM10 - MULTI-CHANNEL PANEL DISPLAY

PM10 smart meter series is the pre-eminent display on the market. It is the result of multiple years of development and customer feedback.

It combines many new innovations and good technical implementations of previous Nokeval products. There are already 16 000 variations how to use PM10 and more to come.



### HIGHLIGHTS

#### Features:

- Two input channels (with option cards 4-8 channels), Pt100, thermocouples, 4-20 mA, 0-10V/mV
- Two output channels for 4-20 mA or 0-10V outputs
- Two alarm relays
- I/O-lines
- Multi-color six-character alphanumeric display
- A wide range of mathematical functions
- MicroUSB connector for MekuWin configuration
- The ability to lock the cards with screws very tightly for vibration sensitive conditions
- Serial output RS485, Modbus protocol
- Power supply 24 VDC

#### Features of optional cards:

- Two channel output card
- Two alarm relay card
- Pulse input card (ask for delivery time)
- Wireless radio card (ask for delivery time)
- Power supply card for 90..240 VAC (ask for delivery time)



Slots of the motherboard are freely selectable for input and output cards.

ITEM			
PM10A	Case + Display		
POW24SA	Power with Serial Bus		
UNI2A	Universal Input x2		
OUT2A	Process Output x2		
REL2A	Relay Output x2		
COMBINATION EXAMPLES		INPUT OUTPUT RELAY	
PM10A - UNI2A - POW24SA		2	0 0
PM10A - UNI2A - REL2A - POW24SA		2	0 2
PM10A - UNI2A - UNI2A - UNI2A - POW24SA		8	0 0
PM10A - UNI2A - UNI2A - OUT2A - OUT2A - POW24SA		4	4 0
PM10A - UNI2A - UNI2A - REL2A - REL2A - POW24SA		4	0 4
PM10A - UNI2A - OUT2A - REL2A - POW24SA		2	2 2
PM10A - POW24SA		0	0 0
PM10A - OUT2A - POW24SA		0	2 0
PM20A-4xUNI2A-4xOUT2A-... [PM20 coming out 2015]		8	8 2

# PM10

## DETAILS:

Inputs	mA, mV, Ohm, Pt100, Pt1000, Thermocouples, V
Input channels	1-8
Galvanic isolation	Input galvanically isolated from power supply and other cards
Output channels	1-8
Connector model	MicroUSB
Bus protocol	Modbus RTU (Nokeval SCL)
Bus interface	RS-485
Baud rates	300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 and 230400
Programming	Mekuwin
Display color	red, green and orange simultaneously
Number of digits	6
Digit size	14.5 mm
Display	12 segment LED
Supply voltage	24 VDC: 21...27 VDC
Dimensions	96 x 48 x115 mm (WHD)
Max. ambient temp.	60°C
Min. ambient temp.	-10°C
Case material	plastic, black
Installation	Panel
Protection class	IP65 (front panel with a rubber gasket provided)
Weight	290 g (with the maximum number of cards)

### PM10UNI2A

#### INPUTS

mA, mV, Ni, Cu, KTY83, NTCLE3977, NPN, ohm, Pt100, Pt1000, Thermocouples B, C, D, E, G, J, K, L, N, R, S, T, V

#### INPUT CHANNELS 2

#### GALVANIC ISOLATION

Input galvanically isolated from processor and power supply

### PM10OUT2A

#### OUTPUTS

2 x 0-10V or 4-20 mA or 0-20 mA or other ranges between 0...10 V and 0...20 mA outputs

+15VDC output  
digital output or input

### PM10REL2A

#### OUTPUT

2 x alarm relays  
relay information  
SPDT, 5 A, 250 VAC

Connection, connector  
model 2.5mm<sup>2</sup>, detachable

### PM10POW24SA

#### CONNECTION

connector model 1.5 mm<sup>2</sup>, 2.5 mm<sup>2</sup>, detachable

#### BUS PROTOCOL

Modbus RTU, Nokeval SCL  
Bus interface digital output or input RS-485

Baud rates 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 and 230400

Programming Mekuwin

Supply voltage  
24 VDC: 21...27 VDC

