OMX 100PM

OMLINK

2003 - 3 - en

- **0...2/5/10 V**
- **4...20 mA**
- **Output: 0/4...20 mA/0...5 mA/ 0...2/5/10 V/0...2 kHz**
- **To DIN rail 35 mm**
- **Power supply 230 VAC**

Options

Excitation • Dual comparator • Data output • Real time • Power supply: 24 VAC, 110 VAC, 10...30 VDC

Description

The OMX 100PM model is a programmable transmitter of direct-current voltage or current to isolated analog output.

The instrument is based on an 8-bit controller with precise A/D converter, that secures high accuracy, stability and easy operation of the instrument. For projection of measured data and easier setting it is, as a standard, equipped with illuminated LCD display.

The transmitter is in a plastic DIN box with a terminal board for mounting to rail of 35 mm width.

Transmitter power supply (230 VAC), Input and output signal have galvanic separation with isolation voltage of 500 V.

Standard functions

nput

Setting	input range is selectable in the menu 0...5/-/4...20 mA, 0...2/5/10 V

Digital filter

Radius of insensitiv.	band of suppressed change of measured value
Exponen. average	from 2...100 measurements

External control

Hold	display/instrument blocking
Lock	control keys blocking or blocking access into menu

Output

Analog	programmable 0...5/0/4...20 mA 0...2/5/10 V 0,2... 2 200 Hz

Operation

The transmitter is set by control keys on the front panel or via data line RS 232/485.

A standard equipment is the OM link interface, by means of which it is possible to adjust and file all settings of the equipment as well as perform firmware update. The OM link program is freely accessible on the web.

All programmable parameters are stored in the EEPROM memory (they hold even after the instrument is switched off).

Options

Excitation is suitable for feeding of sensors and transmitters. It is isolated, with continuously adjustable value in the range of 12...24 VDC.

Dual comparator serves to monitor two limit values with relay output. The limits have adjustable hysteresis as well as selectable delay of the switch-on. Reaching the preset limits is signalled by LED and simultaneously by the switch-on of the relevant relay.

Data outputs are for their rate and accuracy suitable for transmission of the measured data for further projection or directly into the control systems. We offer an isolated RS232 and RS485 with the ASCII protocol.

Real time is an internal time control of data collection. It is suitable everywhere where it is necessary to register measured data in a given time segment. Up to 65 000 values may be stored in the instrument's memory. Data transmission into PC via serial interface RS232/485.

Technical data

MEASURING RANGE Impedance/Max. drop

0...20 mA	< 400 mV	Input 1
4...20 mA	< 400 mV	Input 1
0...2 V	0,5 MOhm	Input 2
0...5 V	0,5 MOhm	Input 3
0...10 V	0,5 MOhm	Input 3

PROJECTION

Display:	LCD with illumination, 2x 3 signs + 2x description (3 signs)
Decimal point:	adjustable - menu

INSTRUMENT ACCURACY

Tempco:	100 ppm/°C
Accuracy:	±0,2 % of range (applies for 10 measurements/s)
Rate:	0,5 - 1,2 - 2,5 - 5 - 10 - 20 - 40 - 80 measurements/s
Overload capacity:	10x (t < 30 ms) , 2x (long-term)
Watch-dog:	reset after 20 ms
Calibration:	at 25°C and 40 % r.h.

OUTPUTS

Analog:	isolated, programmable with resolution max. 12 bit
Non-linearity:	0,1 % of range
Tempco:	100 ppm/°C
Rate:	response to change of value < 100 ms
Voltage:	0...2 V/5 V/10 V , upon request ±5 V/±10 V
Current:	0...5 mA/0/4...20 mA (compensation of conduct up to 600 Ohm) upon request ±20 mA
Corrugation:	5 mV residual corrugation at output voltage 10 V
Frequency:	isolated, programmable, open colector 0,2...2 200 Hz

COMPARATOR

Type:	digital, adjustable in programming mode, contact switch-on < 30 ms
Limit 1 and 2	-99...999
Hysteresis:	0...999
Delay:	0...99,9 s
Outputs:	2 relays with switch-on (switch-off) contact (250 VAC/30 VDC, 3 A) - the relay function is adjustable in menu

DATA OUTPUTS

Data format:	rate 1 200...38 400 Baud, 8 bit + no parity + 1 stop bit (ASCII)
RS 232	isolated
RS 485	isolated, addressing (max. 99 instruments)

EXCITATION

Adjustable:	12....24 VDC/20 mA, with galvanic isolation

POWER SUPPLY

24; 110; 230 VAC, 50/60 Hz, ±10 %, 5 VA
10...30 VDC/max. 150 mA, (24 VDC/80 mA), isolated
- power supply is protected by a fuse inside the instrument

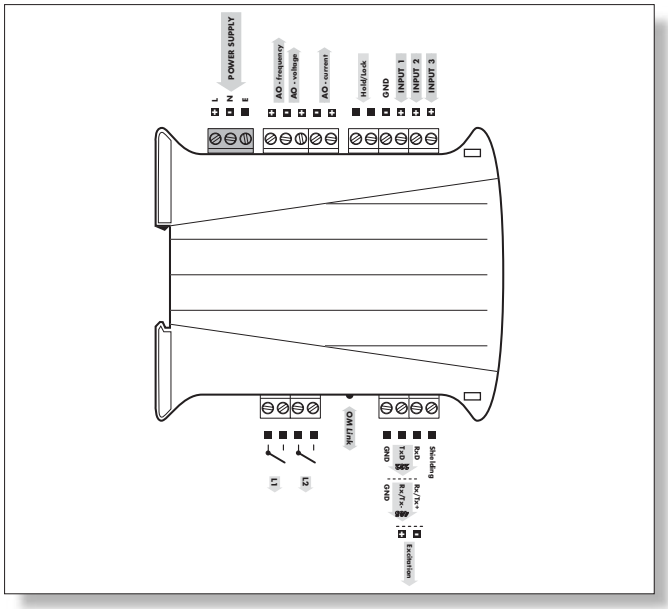
MECHANIC PROPERTIES

Material:	ABS (UL 94-V0), green
Dimensions:	120 x 101 x 35 mm
Installation:	to DIN rail, width of 35 mm

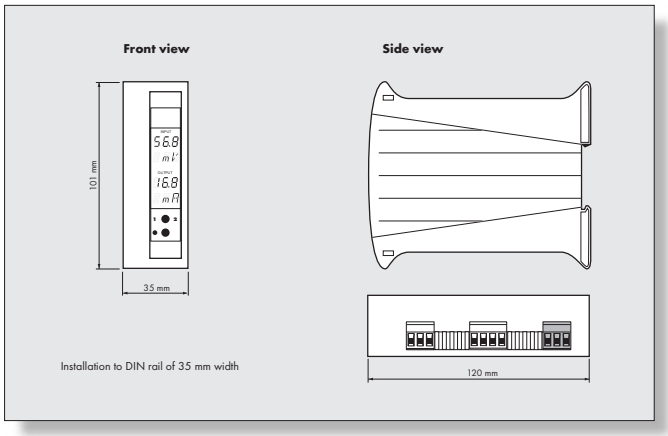
OPERATING CONDITIONS

Connection:	terminal board, conductor section up to 2,5 mm^2
Stabilization period:	within 15 minutes after switch-on
Working temperature:	0°...60°C
Storage temperature:	-10°...85°C
Covering:	IP20
Construction:	safety class I
Elektrical safety:	EN 61010-1, A2
Overvoltage category:	for pollution degree II III. - instrument power supply, relay outputs (500 V) II. - input, output (500 V)
EMC:	EN 61000-3-2+A12; EN 61000-4-2, 3, 4, 5, 8, 11; EN 550222, A1, A2

Connection



Dimensions



Order code

OMX 100PM - xxxx

Power supply
0: 24 VAC/50 Hz
1: 230 VAC/50 Hz
3: 110 VAC/50 Hz
4: 10...30 VDC, isolated

Comparators
0: no
1: yes

Real time
0: no
1: yes

Output
0: no
1: RS 232
2: RS 485
3: Excitation

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