

OM 501PM



2003-3-en

- **5 digit programmable projection**
- **± 2 ; ± 5 ; ± 10 V**
- **0...20 mA; 4...20 mA**
- **Mathematic functions, Digital filters**
- **Size of DIN 96 x 48 mm**
- **Power supply 80...250 V AC/DC**

Options

Comparators • Excitation • Data output • Universal analog output • Real time

Description

The OM 501PM model is a 5 digit panel programmable process monitor designed for direct projection of analog signals in required units. The instrument is based on an 8-bit processor and a very precise A/D converter, that secures high accuracy, stability and easy operation of the instrument.

Standard functions

Programmable display projection

Setting manual or automatic
Projection ± 99999

Digital filters

Floating average from 2...30 measurements
Exponen. average from 2...100 measurements
n-th value from 2...100 measurements
Radius of insensitiv. band of suppressed change of measured value

Mathematic functions

Min/max. value registration of min./max. value reached during measurements
Tare designed to reset display upon non-zero input signal
Top value the display shows only max. (min.) value for a selected time period
Round up/down setting the projection step for display
Math. operations polynome, $1/x$, logarithm, exponential, power, root, $\sin x$

External control

Hold display/instrument blocking
Lock control keys blocking
Tare tare activation
Resetting MM resetting min/max value to zero

Operation

The instrument is set and controlled by five control keys located on the front panel. All programmable settings of the instrument are realised in two adjusting modes.

Configuration menu (hereinafter referred to as CM) is protected by an optional number code and contains complete instrument setting

User menu may contain arbitrary programming settings defined in „CM“ with another selective restriction (see, change)

All programmable parameters are stored in the EEPROM memory (they hold even after the instrument is switched off). The measured units may be projected on the display.

Options

Comparators are assigned to monitor one, two, three or four limit values with relay output. The user may select limits regime: LIMIT/DOSING/FROM-TO. The limits have adjustable hysteresis within the full range of the display as well as selectable delay of the switch-on in the range of 0...99,9 s. Reaching the preset limits is signalled by LED and simultaneously by the switch-on of the relevant relay.

Excitation is suitable for feeding of sensors and transmitters. It is isolated, with continuously adjustable value in the range of 2...24 VDC.

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 DIN MessBus/ASCII protocol.

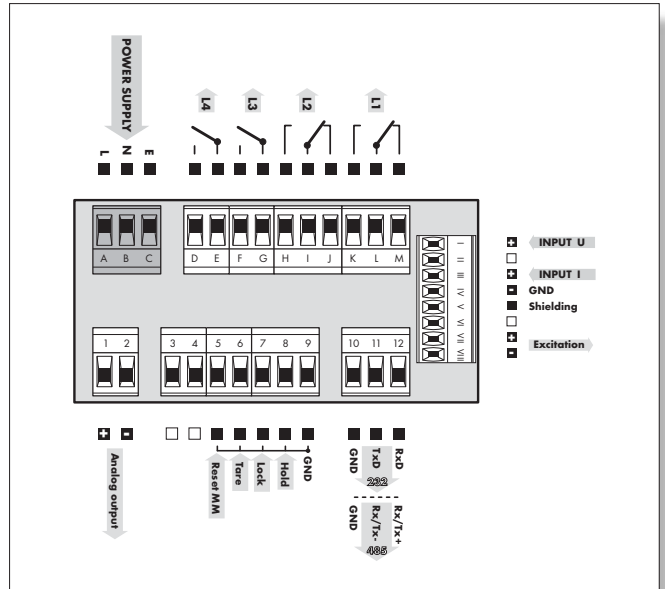
Analog outputs will find their place in applications where further evaluating or processing of measured data is required in external devices. We offer universal analog output with the option of selection of the type of output - voltage/current. The value of analog output corresponds with the displayed data and its type and range are selectable in CM.

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.

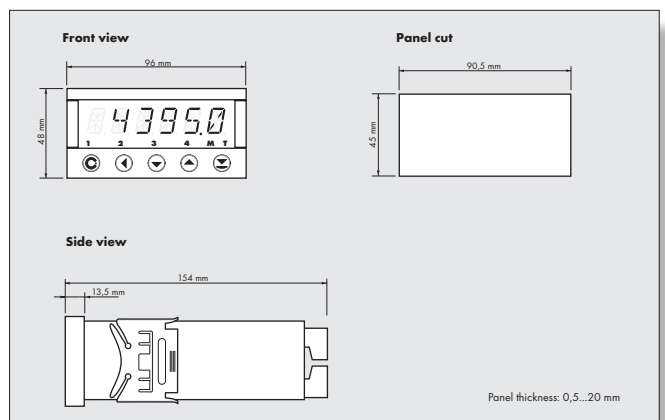
Technical data

MEASURING RANGE		Impedance/Max. drop	
0...20 mA	< 260 mV	Input I	
4...20 mA	< 260 mV	Input I	
±2 V	1 MOhm	Input U	
±5 V	1 MOhm	Input U	
±10 V	1 MOhm	Input U	
	upon request		
PROJECTION			
Display:	±99999, red or green 14-segment LED, digit height 14 mm		
Decimal point:	adjustable - in Configuration menu		
Brightness:	adjustable - in Configuration/User menu		
INSTRUMENT ACCURACY			
Tempco:	60 ppm/°C		
Accuracy:	±0,02 % of range (applies for full projection range) + 1 digit		
Rate:	1...100 measurements/s		
Overload capacity:	10x (t < 30 ms), 2x (long-term)		
Watch-dog:	reset after 1,2 s		
Input filters:	floating (2-30) and exp. average, radius of insensitiveness, n-th value (2-255)		
Function:	offset, min./max. value, Tare, top value, Hold, Lock		
Real time:	15 ppm/°C		
Calibration:	time-date-display value (max. 65000 data) at 25°C and 40 % r.h.		
COMPARATOR			
Type:	digital, adjustable in programming mode, contact switch-on < 30 ms		
Limit 1... 4	±99999		
Hysteresis:	0...99999		
Delay:	0...99,9 s		
Outputs:	2 relays with switching & 2 relays with switch-on contact (250 VAC/50 VDC, 3 A)		
DATA OUTPUTS			
Data format:	rate 600...38 400 Baud		
	7 bit + even parity + 1 stop bit (DIN MessBus),		
	8 bit + no parity + 1 stop bit (ASCII)		
RS 232	isolated		
RS 485	isolated, addressing (max. 31 instruments)		
ANALOG OUTPUTS			
Type:	isolated, programmable with resolution max. 10 000 points, analog output corresponds with the displayed data, output type and range are selectable in CM		
Non-linearity:	0,2 % of range		
Tempco:	100 ppm/°C		
Rate:	response to change of value < 40 ms		
Voltage:	0...2 V/5 V/10 V		
Current:	0...5 mA/20 mA/4...20 mA (compensation of conduct up to 600 Ohm)		
EXCITATION			
Adjustable:	2...24 VDC/50 mA, isolated		
POWER SUPPLY			
	80 ... 250 V (AC/DC), 13,5 VA		
	9 ... 50 V (AC/DC), 13,5 VA		
	- power supply is protected by a fuse inside the instrument		
MECHANIC PROPERTIES			
Material:	Noryl GFN2 SE1, incombustible UL 94 V-I		
Dimensions:	96 x 48 x 154 mm		
Panel cut:	90,5 x 45 mm		
OPERATING CONDITIONS			
Connection:	connector terminal board, conductor section up to 1,5/2,5 mm ²		
Stabilization period:	within 15 minutes after switch-on		
Working temperature:	0°...60°C		
Storage temperature:	-10°...85°C		
Covering:	IP65 (front panel only)		
Construction:	safety class II		
Electrical safety:	EN 61010-1, A2		
Overvoltage category:	for pollution degree II		
	III. - instrument power supply, relay outputs (300 V)		
	II. - input, output, excitation (300 V)		
EMC:	EN 61000-3-2+A12; EN 61000-4-2, 3, 4, 5, 8, 11; EN 550222, A1, A2		

Connection



Dimensions



Order code

