

OMB 301PM/OMB 311PM



- **1 x 30/25 LED + auxiliary display**
- **0...2/5/10 V**
- **0...20 mA/4...20 mA**
- **Digital filter, Tare**
- **Size of DIN 96 x 48 mm**
- **Power supply 230 VAC**

Options

Comparators • Data output • Universal analog output
Excitation • Power supply 24 VAC, 110 VAC, 10...30 VDC

Description

The OMB 301PM resp. OMB 311PM model is a three-color panel bargraph (process monitor) with auxiliary display designated for direct projection of analog signals in required units.

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.

Standard functions

Programmable display projection

Setting	manual, arbitrary display projection may be set for both limit values of the input signal in „CM“ e.g.: range 4...20 mA ⇒ projection 35.5...380.0
Projection	OMB 301 > 30 LED + 6-digit auxiliary display OMB 311 > 25 LED + 3-digit auxiliary display

Digital filter

Radius of insensitiv. band of suppressed change of measured value

Function

Tare resetting display upon non-zero input signal

External control

Hold display/instrument blocking
Lock control keys blocking

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 auxiliary display.

Options

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

Comparators serve to monitor two limit values with relay output. Reaching the preset limits is signalled by LED and at the same time 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.

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.

Technical data

MEASURING RANGE	Impedance/Max. drop	
0...20 mA	< 400 mV	Input I
4...20 mA	< 400 mV	Input I
0...2 V	1 MOhm	Input U
0...5 V	1 MOhm	Input U
0...10 V	1 MOhm	Input U

PROJECTION

Display: 1x 30 LED - three-color and 6-digit auxiliary display with LED height 9 mm
1x 25 LED - three-color and 3-digit auxiliary display with LED height 9 mm

Brightness: adjustable

INSTRUMENT ACCURACY

Tempco: 60 ppm/°C
Accuracy: $\pm 0,15\%$ of range (applies for full range of the projection) + 1 digit
Rate: 1,3 - 2,5 - 5 - 10 - 20 - 40 measurements/s
Overload capacity: 10x ($t < 30$ ms), 2x (long-term)
Watch-dog: reset after 1,2 s
Function: Hold - stop measuring (upon contact)
Lock - control keys blocking (upon contact), not simultaneously with Hold function
Digital filter - adjustable in Configuration menu
Tare - resetting display upon non-zero input signal
Calibration: at 25°C and 40 % r.h.

COMPARATOR

Type: digital, adjustable in programming mode, contact switch-on < 30 ms
Limit 1 and 2: -999...3999
Hysteresis: 0...999
Delay: 0...99,9 s
Outputs: 2 relays with switch-on (switch-off) contact (250 VAC/30 VDC, 3 A)
upon request SSR (250 VAC, 1 A) or open collector may be fitted

DATA OUTPUTS

Data format: rate 150...115 200 Baud, 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/0/4...20 mA (compensation of conduct up to 600 Ohm)

EXCITATION

Adjustable: 2...24 VDC/50 mA, galvanic separation

POWER SUPPLY

24; 110; 230 VAC, 50/60 Hz, $\pm 10\%$, 5 VA
10...30 VDC/max. 300 mA, (24 VDC/150 mA), isolated
- power supply is protected by a fuse inside the instrument

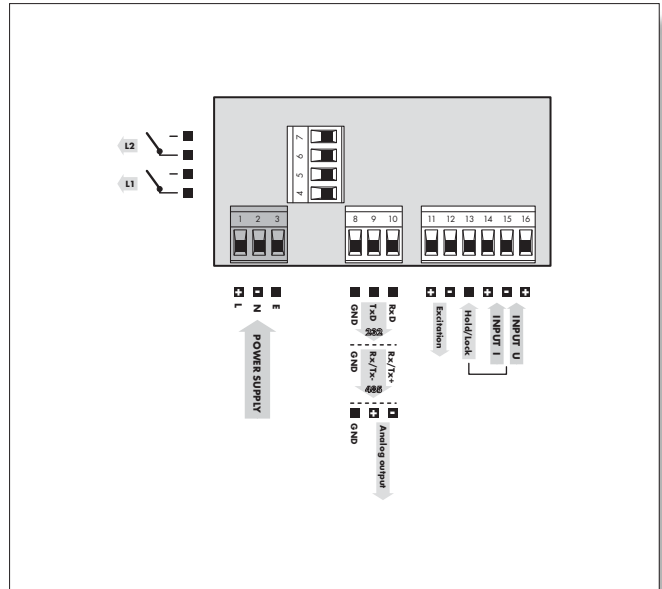
MECHANIC PROPERTIES

Material: Noryl GFN2 SE1, incombustible UL 94 V-I
Dimensions: 96 x 48 x 120 mm
Panel cut: 90,5 x 45 mm

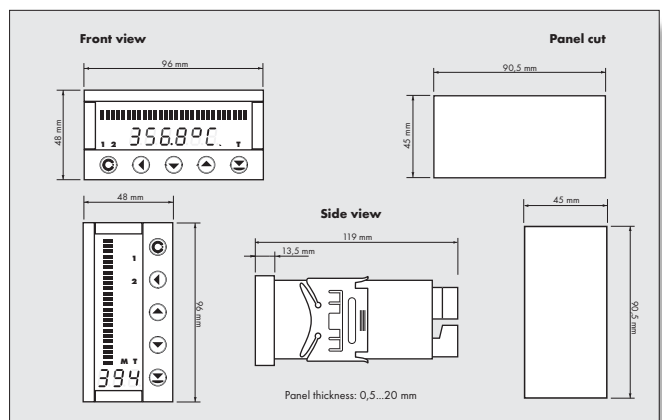
OPERATING CONDITIONS

Connection: connector terminal board, conductor section up to 2,5 mm²
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 I
Electrical safety: EN 61010-1, A2
Overvoltage category: for pollution degree II
III. - instrument power supply, relay outputs (300 V)
II. - input, output (300 V)
EMC: EN 61000-3-2+A12; EN 61000-4-2, 3, 4, 5, 8, 11; EN 55022, A1, A2

Connection



Dimensions



Order code

