

# OMB 200/300/500



<b>OMB 200UNI</b>	1 x 20 LED
<b>OMB 300UNI</b>	1 x 30 LED
<b>OMB 500UNI</b>	1(2) x 50 LED
	<b>PROCESS MONITOR</b>
	<b>OHMMETER</b>
	<b>THERMOMETER FOR Pt</b>
	<b>THERMOMETER FOR Ni</b>
	<b>DISPLAY UNIT FOR LINEAR POTENTIOMETERS</b>
<b>OMB x00RS</b>	<b>DATA DISPLAY</b>

## Description

The OMB 200/300/500UNI model series are simple bargraphs designed for maximum efficiency and user comfort while maintaining its low cost.

The OMB 200/300/500UNI type is a multifunction instrument with the option of configuration for 5 different types of inputs easily configurable in the instrument menu.

The instrument is based on an 8-bit microcontroller with A/D converter, which secures good accuracy, stability and easy operation of the instrument.

Another version of the OMB 200/300/500 instrument is the RS type, a display device for projection of data from serial line RS 232/485.

By selecting the mode of insertion of the front plexiglass (reverse/face) you may choose the required printing of scale for vertical or horizontal design of the instrument.

## Operation

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

**Profi menu** contains complete instrument setting

Standard equipment is the OM Link interface, which together with operation program enables modification and filing of all instrument settings as well as perform firmware updates (with OML cable).

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

## Options

**Comparators** are assigned to monitor two limit values with relay output. 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.

- Three-color bargraph 20/30/50 LED
- Multifunction input (PM, OHM, RTD, DU)
- Digital filter, Linearization
- Voltage 10...30 V AC/DC

OMLINK

## Options

- Comparators

## Standard function

### PROGRAMMABLE PROJECTION

**Selection:** of type of input measuring range

**Setting:** manual, in menu optional projection on the display may be set for both limit values of the input signal

**Projection:** 20, 30 or 50 LED

### LINEARIZATION

**Linearization:** by linear interpolation in 25 points (solely via OM Link)

### DIGITAL FILTERS

**Exponential average:** from 2...100 measurements

**Rounding:** setting the projection step for display

### EXTERNAL CONTROL

**Hold display/instrument blocking**

**Lock control keys blocking**

NEW

## Technical data

### PROJECTION

**Display:** three-color LED (red/green/orange)  
 OMB 200 - 20 LED  
 OMB 300 - 30 LED  
 OMB 500 - 50 LED  
 OMB 502 - 2x 50 LED  
**Decimal point:** setting - in menu  
**Brightness:** setting - in menu

### INSTRUMENT ACCURACY

**TC:** 100 ppm/°C  
**Accuracy:** 1% of range + 1 digit  
**Rate:** 0,5/5/50/max. measurements/s  
**Overload capacity:** 10x (t < 30 ms); 2x  
**Watch-dog:** reset after 20 ms  
**Functions:** HOLD, LOCK, Digital filters  
**OM Link:** Company communication interface for operation, setting and update of instruments  
**Calibration:** at 25 °C and 40% r.h.

### COMPARATOR

**Type:** digital, setting in prog. mode, contact switch < 50 ms  
**Limits:** within full range  
**Hysteresis:** positive values  
**Delay:** 0...99,9 s  
**Output:** 1(2)x bistable relays (250 VAC/30 VDC, 3 A)

### POWER SUPPLY

10...30 VDC/24 VAC, ±10%, max. 3 VA

### MECHANIC PROPERTIES

**Material:** Noryl GFN2 SE1, incombustible UL 94 V-I  
**Dimensions:** OMB 200 72 x 24 x 100 mm  
 OMB 300 96 x 24 x 100 mm  
 OMB 500 144 x 48 x 75 mm  
**Panel cutout:** OMB 200 68 x 22,5 mm  
 OMB 300 92 x 22,5 mm  
 OMB 500 138 x 43,5 mm

### OPERATING CONDITIONS

**Connection:** connectors, section < 2,5 mm<sup>2</sup>  
**Stabilization period:** within 15 minutes after switch-on  
**Working temperature:** 0°...60°C  
**Storage temperature:** -10°...85°C  
**Cover:** IP40 (front panel only)  
**El. safety:** EN 61010-1, A2  
**Insulation resistance:** for pollution degree II, measuring cat. III.  
 power supply > 300 V (PI), 300 V (DI)  
 input, output, Exc. > 300 V (PI), 150 V (DI)  
**EMC:** EN 61000-3-2+A12; EN 61000-4-2, 3, 4, 5, 8, 11;  
 EN 550222, A1, A2

PI - Primary insulation, DI - Double insulation

## Measuring ranges

OMB 200/300/500UNI is a multifunction instrument available in following types and ranges

**PM:** 0...20 mA/4...20 mA/0...2 V/ 0...5 V/0...10 V  
**OHM:** 0...100 kΩ  
**RTD:** Pt 1000/KTY/Termistor  
**Ni:** Ni 1 000  
**DU:** Linear potentiometer (min. 500 Ω)

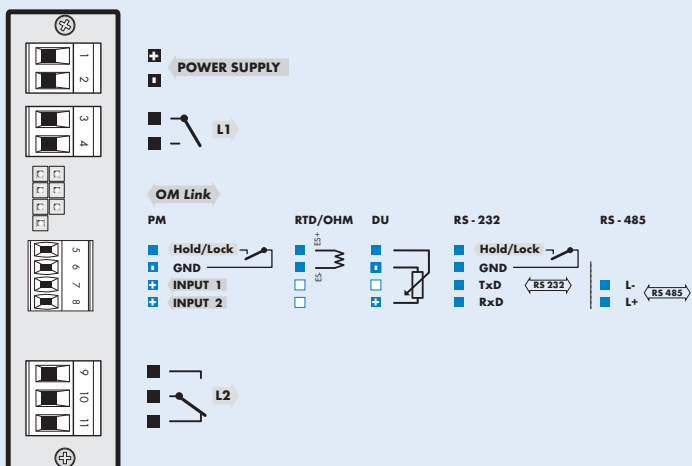
### typ OMB xxxRS

**RS:** input RS 232/RS 485, protocol ASCII/MODBUS - RTU

### Connecting individual inputs

	INPUT 1	INPUT 2
PM	0...20 mA, 4...20 mA	0... 2 V/0...5 V/0...10 V
OHM	0...100 k Ω	
RTD	Pt 1 000/KTY/Termistor	
NI	Ni 1 000	
DU	Linear potentiometer (min. 500 Ω)	

## Connection



## Order code

<b>OMB</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>UNI-</b>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<b>RS-</b>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
<b>Type</b>	<b>2</b>	<b>0</b>	<b>0</b>			<b>•</b>
	<b>3</b>	<b>0</b>	<b>0</b>		<b>•</b>	
	<b>5</b>	<b>0</b>	<b>0</b>		<b>•</b>	
	<b>5</b>	<b>0</b>	<b>2</b>		<b>•</b>	
<b>Comparator</b>				no	<b>0</b>	
				1x relay	<b>1</b>	
				*2x relays	<b>2</b>	

\* Only for type OMB 300 a OMB 500/502