

## OMB 500UNI



- Three-color bargraph - 50 LED
- Multifunction input (PM, OHM, RTD, DU)
- Digital filters, Linearization
- Size of DIN 144 x 48 mm
- Power supply 10...30 V AC/DC; 80...250 V AC/DC

### Option

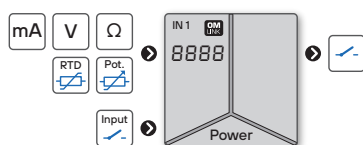
Comparators

The OMB 200/300/500UNI model series are simple bargraphs designed for maximum efficiency and user comfort while maintaining their favourable price. Type OMB 500UNI is a multifunction instrument with the option of configuration for 5 various input options, easily configurable in the instrument menu.

The instrument is based on a microcontroller with ADC which secures good accuracy, stability and easy operation of the instrument.

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

### UNIVERSAL BARGRAPH



### OPERATION

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

**LIGHT MENU** contains solely items necessary for instrument setting.

**PROFI MENU** contains complete instrument setting, which is accessible only via OM Link.

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

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

### OPTION

**COMPARATORS** are assigned to monitor one or two limit values with relay output. The limit has adjustable hysteresis within full range of the display and selectable delay of the switch-on within the range of 0...99 s. Reaching the preset limits is signalled by LED and simultaneously by the switch-on of the relevant relay.

### STANDARD FUNCTIONS

#### PROGRAMMABLE PROJECTION

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

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

**Projection:** 50 LED

#### FUNCTIONS

**Linearization:** non-linear signal is converted by a 25-point linear interpolation

#### 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

## TECHNICAL DATA

### INPUT

No. of inputs	1 The range is adjustable in the instrument menu		
<b>PM</b> Range	0...20 mA	< 1.2 V	Input 1
	4...20 mA	< 1.2 V	Input 1
	0...5 V	182 kΩ	Input 2
	0...10 V	182 kΩ	Input 2
	0...10 V	182 kΩ	Input 2
<b>OHM</b> Range	0...100 kΩ		
	Connection 2-wire		
<b>RTD</b> Range	Pt 1 000, 3 850 ppm/°C		-50°...450°C
	Connection 2-wire		
<b>Ni</b> Range	Ni 1 000, 5 000 ppm/°C		-50°...250°C
	Connection 2-wire		
<b>DU</b> Sensor power supply	2.5 VDC/6 mA, potentiometer resistance > 500 Ω		

### EXTERNAL INPUT

No. of inputs	1, on contact		
Function	OFF	no function assigned	
	LOCK	control keys blocking	
	HOLD	measurement paused	

### PROJECTION

Bargraph display	50 LED
Bar color	red / green / orange
Brightness	adjustable - in menu

### INSTRUMENT SPECIFICATION

TC	50 ppm/°C	
Accuracy	±1% of FS + 1 digit	
Rate	0.5...50 measurement/s	
Overload	10x (t < 30 ms), 2x	
Compensation of conduct	< 30 Ω	RTD
Digital filters	exponential average, rounding	
Linearization	linear interpolation in 25 points <i>setup only via OM Link</i>	
OM Link	company communication interface for operation, setting and update of instruments	
Watch-dog	reset after 25 ms	
Calibration	at 25°C and 40 % r.h.	

### RELAYS / OC OUTPUT

No. of outputs	up to 2
Type	digital, menu adjustable
Mode	HYSTER active above set value
Function Relays	CLOSE is closed in active mode
	OPEN is open in active mode
Limits	-99999...999999
Hysteresis	0...999999
Delay	0...99.9 s
Outputs	1...2x relay with switch-on contact (Form A) (250 VAC/30 VDC, 3 A)*
	1...2x open collector (30 VDC/100 mA)
Relays	1/8 HP 277 VAC, 1/10 HP 125 V, Pilot Duty D300

\* values apply for resistance load

### POWER SUPPLY

Range	10...30 V AC/DC, ±10 %, PF ≥ 0.4, I <sub>30%</sub> < 40 A / 1 ms, isolated 80...250 V AC/DC, ±10 %, PF ≥ 0.4, I <sub>30%</sub> < 40 A / 1 ms, isolated <i>Protection by fuse inside the device</i>
Consumption	< 3.5 W / 3.9 VA

### MECHANIC PROPERTIES

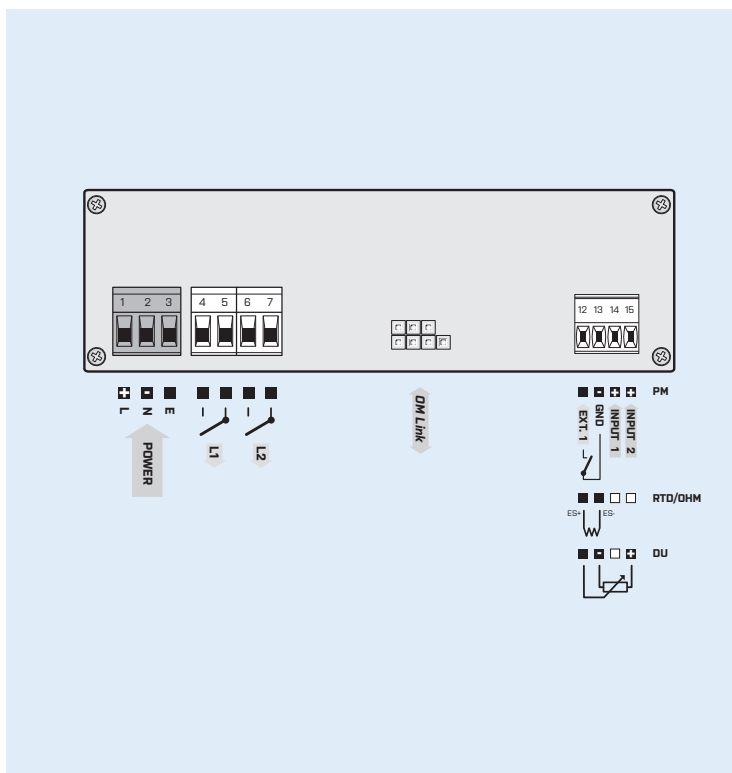
Material	Noryl GFN2 SE1, incombustible UL 94 V-1, black
Dimensions	144 x 48 x 75 mm (w x h x d)
Panel cutout	138 x 43.5 mm (w x h)

### OPERATING CONDITIONS

Connection	connector terminal blocks, section < 1.5 / 2.5 mm <sup>2</sup>
Stabilization period	within 5 minutes after switch-on
Working temperat.	-20°...60°C
Storage temperat.	-20°...85°C
Working humidity	< 95 % r.v., non condensing
Protection	IP40, front panel only
Construction	safety class I
El. safety	EN 61010-1, A2
Dielectric strength	2.5 kVAC for 1 min. between power supply and input 4 kVAC per 1 min test between input and relay output
Insulation resist.*	for pollution degree II, measuring cat. III power supply > 300 V (PI) input, output > 300 V (PI), 150 V (DI)
EMC	EN 61326-1, Industrial area
Seismic qualification	IEC/IEEE 60980-344 Edition 1.0, 2020, par. 6, 9
Mechanical resistance	EN 60068-2-6 ed. 2:2008

\* PI - Primary insulation, DI - Double insulation

## CONNECTION



## ORDER CODE

### OMB 500UNI - [ ] - [ ]

Power supply	10...30 V AC/DC 80...250 V AC/DC	<b>0</b> 1	
Comparators	no	<b>0</b>	
	1x relay (Form A)	<b>1</b>	
	2x relay (Form A)	<b>2</b>	
	1x open collector	<b>3</b>	
	2x open collector	<b>4</b>	
Specification	customized version, do not fill in		<b>00</b>

Basic configuration of the instrument is indicated in bold.