



Data Sheet
OMB 502UNI

Distributed by



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UNIVERSAL BARGRAPH

- Three-color bargraph - 2x 50 LED
- Two-channel design
- 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

OMB 502UNI



The OMB 200/300/500UNI model series are simple bargraphs designed for maximum efficiency and user comfort while maintaining their favourable price.

Type OMB 502UNI 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 single-chip microcontroller with an A/D converter, 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.

OMB 502UNI

PROCESS MONITOR

OHMMETER

THERMOMETER FOR Pt/Ni

DISPLAY UNIT FOR LINEAR POTENTIOMETERS

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 signals can be linearized by the means of a linearization table (up to 25 points)

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			
Number inputs	2		
PM Range	optional in configuration menu		
	0...20 mA	< 1,2 V	Input 1
	4...20 mA	< 1,2 V	Input 1
	0...2 V	182 kΩ	Input 2
	0...5 V	182 kΩ	Input 2
0...10 V	182 kΩ	Input 2	
OHM Range	optional in configuration menu		
	0...100 kΩ		
Connection	2 wire		
Pt Type	optional in configuration menu		
	EU > 1 000 Ω, 3 850 ppm/°C	-50°...450°C	
Connection	2 wire		
Ni Type	optional in configuration menu		
	Ni 1 000, 5 000 ppm/°C	-50°...250°C	
Connection	2 wire		
DU Pot. power supply	2,5 VDC/6 mA, Potentiometer resistance > 500 Ω		
External input	1 input, on contact		
	The following functions can be assigned:		
	OFF	input off	
	HOLD	display stop	
	LOCK	control keys blocking	

PROJECTION

Display: 2x 50 LED
 Bar color: red/green/orange
 Decimal point: adjustable - in menu
 Brightness: adjustable - in menu

INSTRUMENT ACCURACY

TC: 50 ppm/°C
 Accuracy: ±1% of range + 1 digit
 Rate: 0,5/5/50/max. measurement/s
 Overload capacity: 2x; 10x (t < 30 ms)
 Line compensation: max. 30 Ω (RTD)
 Linearization: linear interpolation in 25 points (only via OM Link)
 Digital filters: exponential average, rounding
 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.

COMPARATOR

Type: digital, menu adjustable, contact switch-on < 50 ms
 Hysteresis mode: switching limit, hysteresis band (Lim and ±1/2 Hys.) and time (±99,9 s) determining the switching delay
 Output: 1...2x relays Form A (250 VAC/30 VDC, 3 A);
 1...2x open collector (30 VDC/100 mA)

POWER SUPPLY

Range: 10...30 V AC/DC, ±10 %, PF ≥ 0,4, I_{STB} < 45 A/1 ms, isolated
 80...250 V AC/DC, ±10 %, PF ≥ 0,4, I_{STB} < 45 A/1 ms, isolated
 Consumption: < 5,0 W/5,4 VA
 Power supply is protected by a fuse inside the instrument.

MECHANIC PROPERTIES

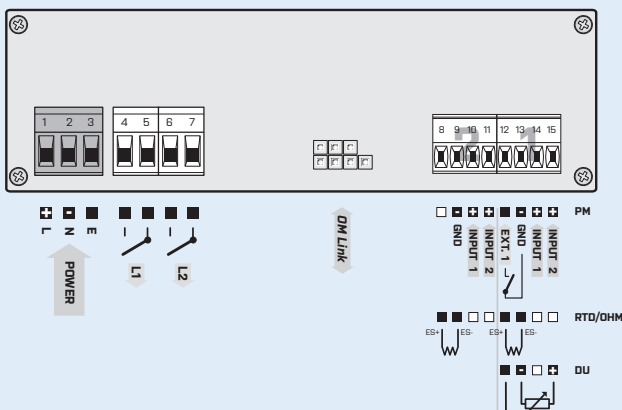
Material: Noryl GFN2 SE1, incombustible UL 94 V-I
 Dimensions: 144 x 48 x 75 mm (w x h x d)
 Panel cutout: 138 x 43,5 mm (w x h)

OPERATING CONDITIONS

Connection: connector terminal blocks, section < 1,5/2,5 mm²
 Stabilization period: within 5 minutes after switch-on
 Working temperature: -20°...60°C
 Storage temperature: -20°...85°C
 Protection: IP40 (front panel only)
 EI. safety: EN 61010-1, A2
 Dielectric strength: 4 kVAC per 1 min test between supply and input
 4 kVAC per 1 min test between input and relay output
 Insulation resistance: for pollution degree II, measuring cat. III
 power supply > 300 V (PI)
 input, output > 300 V (PI), 150 V (DI)
 EMC: EN 61326-1

PI - Primary insulation, DI - Double insulation

CONNECTION



ORDER CODE

OMB 502UNI

- [] [] - []

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

Basic configuration of the instrument is indicated in bold.