

# OMB 402



- OMB 402UNI** DC VOLTMETER AND AMMETER  
PROCESS MONITOR  
OHMMETER  
THERMOMETER FOR Pt  
THERMOMETER FOR Ni  
THERMOMETER  
FOR THERMOCOUPLES  
DISPLAY UNIT FOR LINEAR POTENTIOMETERS
- OMB 402PWR** AC NETWORK ANALYSER
- OMB 402UQC** UNIVERSAL COUNTER

## Description

The OMB 402 model series are panel programmable three-color bar graphs with auxiliary display designed for maximum efficiency and user comfort while maintaining its favourable price. Three versions are available: UNI, PWR and UQC.

The OMB 402UNI is a multifunction instrument with the option of configuration for 7 various input options, easily configurable in the instrument menu.

The instrument is based on an 8-bit microcontroller with a multichannel 24-bit sigma-delta converter, which secures high accuracy, stability and easy operation 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 three adjusting modes :

**Light menu** is protected by optional number code and contains solely items necessary for instrument setting

**Profi menu** is protected by optional number code and contains complete instrument setting

**User menu** may contain arbitrary items from the programming menu (LIGHT/PROFI), which determine the right (see, change). Access w/o password.

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). The program is also designed for visualization and filing of measured values from more instruments .

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

## Options

**Excitation** is suitable for feeding of sensors and transmitters. It is isolated, with continuously adjustable value in the range of 5...24 VDC.

**Comparators** are assigned to monitor one, two, three or four limit values with relay output. The user may select limits regime: LIMIT/DOSING/

- Horizontal bargraph 1 x 30 LED with display
- Multifunction device (DC, PM, RTD, T/C, DU)
- Digital filters, Tare, Linearization
- Size of DIN 96 x 48 mm
- Power supply 80...250 V AC/DC

OMLINK

## Options

- Excitation • Comparators • Data output • Analog output • Data record
- Power supply: 10...30 V AC/DC

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.

**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/MESSBUS/MODBUS/PROFIBUS 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 menu.

**Measured data record** is an internal time control of data collection. It is suitable where it is necessary to register measured values. Two modes may be used. FAST is designed for fast storage (40 records/s) of all measured values up to 8 000 records. Second mode is RTC, where data record is governed by Real Time with data storage in a selected time segment and cycle. Up to 131 000 values may be stored in the instrument memory. Data transmission into PC via serial interface RS232/485 and OM Link.

## Standard functions

### PROGRAMMABLE PROJECTION

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

**Measuring range:** adjustable as fixed or with automatic change (OHM)

**Measuring modes (PWR):** voltage ( $V_{RMS}$ ), current ( $A_{RMS}$ ), real power (W), frequency (Hz) and with calculation of Q, S,  $\cos \psi$

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

**Projection:** 30 LED + 6 digit auxiliary display

### COMPENSATION

**of conduct (RTD, OHM):** in menu it is possible to perform comp. for 2-wire connection

**of CJC (T/C):** manual or automatic, in menu it is possible to perform selection of the type of thermocouple and compensation of cold junctions, which is adjustable or automatic (temperature at the input brackets)

### LINEARIZATION

**Linearization (DC, PM, DU):** by linear interpolation in 50 points (solely via OM Link)

### DIGITAL FILTERS

**Input filter (UQC):** lets through input signal up to 10...2000 Hz

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

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

### MATHEMATIC FUNCTIONS

**Min/max. value:** registration of min/max. value reached during measurement

**Tare:** designed to reset display upon non-zero input signal

**Peak value:** the display shows only max. or min. value

**Mat. operations:** polynome, 1/x, logarithm, exponential, power, root, sin x and at the same time between inputs - sum, difference, product, quotient

### EXTERNAL CONTROL

**Lock** control keys blocking

**Hold** display/instrument blocking

**Tare** tare activation

**Resetting MM** resetting min/max value

