# OML 343


- 3 ½ digit programmable projection
- Multifunction device (DC, PM, RTD, T/C, DU)
- Digital filter, Tare, Linearization
- Size of DIN 96 x 48 mm
- Power supply 10...30 V AC/DC

OMLINK

## Options

• Comparator • Power supply 10...30 V AC/DC, isolated

**OML 343UNI** VOLTMETER AND AMMETER
PROCESS MONITOR
OHMMETER
THERMOMETER FOR Pt, Ni, Cu
THERMOMETER FOR THERMOCOUPLES
DISPLAY UNIT FOR LINEAR POTENTIOMETERS

**OML 343AC** AC VOLTMETER AND AMMETER

**OML 343DC** DC VOLTMETER AND AMMETER

NEW

## Description

The OML 343 model series are simple 3 ½ digit panel programmable instruments designed for maximum usefulness and user comfort while maintaining its fair price. Versions UNI, DC and AC are available.

Type OML 343UNI is a multifunction instrument with the option of configuration for 8 different input options, easily configurable in the instrument menu. Versions OML 343DC and OML 343AC are suitable for measurement of larger ranges of DC and AC voltages and currents.

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

## Operation

The instrument is set and controlled by five control keys located at the rear of the instrument. 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

**Comparator** is assigned to monitor a limit value with an optional relay output. The limit has 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 limit is signalled by LED and simultaneously by the switch-on of the 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: ±1999

### COMPENSATION

of conduct (RTD): automatic (3- and 4-wire) or manual in menu (2-wire)
of conduct in probe (RTD): internal connection (conduct resistance in measuring head)
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: through linear interpolation in 25 points (solely via OM Link)

### DIGITAL FILTERS

Exponential average: from 2...100 measurements
Rounding: setting the projection step for display

### FUNCTIONS

Tare: resetting display upon non-zero input signal

### EXTERNAL CONTROL

Hold: display/instrument blocking
Lock: control keys blocking

NEW

## Technical data

### PROJECTION
***Display:*** ±1999, red or green 7-segment LED, digit height 14 mm
***Decimal point:*** setting - in menu
***Brightness:*** setting - in menu

### INSTRUMENT ACCURACY
***TC:*** 50 ppm/°C
***Accuracy:*** ±0,15 % of range + 1 digit
±0,3 % of range + 1 digit **AC, T/C**
***Accuracy of cold junction measurement:*** ±1 °C
***Rate:*** 0,5...20 meas./s
***Overload capacity:*** 10x (t < 30 ms) - not for >200 V and 5A; 2x
***Resolution:*** 0,1 °C (RTD), 1 °C (T/C)
***Watch-dog:*** reset after 500 ms
***Functions:*** HOLD, LOCK, Digital filters, Tare
***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 programming mode, contact switch < 50 ms
***Limits:*** ±1999
***Hysteresis:*** 0...1999
***Delay:*** 0...99,9 s
***Output:*** 1x Form A relays (250 VAC/30 VDC, 3 A)

### POWER SUPPLY
10...30 VDC/24 VAC, ±10 %, 3 VA
10...30 VDC/24 VAC, ±10 %, 3 VA, isolated

### MECHANIC PROPERTIES
***Material:*** Noryl GFN2 SE1, incombustible UL 94 V-I
***Dimensions:*** 96 x 48 x 30 mm
***Panel cutout:*** 92 x 44 mm

### OPERATING CONDITIONS
***Connection:*** connector terminal board, section < 2,5 mm²
***Stabilization period:*** within 15 minutes after switch-on
***Working temperature:*** -20°...60°C
***Storage temperature:*** -20°...85°C
***Cover:*** IP65 (front panel only), IP20
***El. safety:*** EN 61010-1, A2
***Dielectric strength:*** 2,5 kVAC after 1 min between supply and input
4 kVAC after 1 min between supply and relay output
***Insulation resistance:*** for pollution degree II, measuring cat. III.
power supply > 300 V (PI)
input, output > 300 V (DI)
***EMC:*** EN 61326-1

*PI - Primary insulation, DI - Double insulation*

## Measuring ranges

**OML 343 is a multifunction instrument available in following types and ranges**

***type UNI***
***DC:*** ±20/±60/±0,2 V/±0,4 V/±1 V
***PM:*** ±5 mA/±20 mA/4...20 mA/±2 V/±5 V/±10 V
***OHM:*** 0...300 Ω/0...1,5 kΩ/0...3 kΩ/0...30 kΩ
***RTD:*** Pt 50/100/500/1 000
***Cu:*** Cu 50/Cu 100
***Ni:*** Ni 1 000/10 000
***T/C:*** J/K/T/E/B/S/R/N/L
***DU:*** Linear potentiometer (min. 500 Ω)

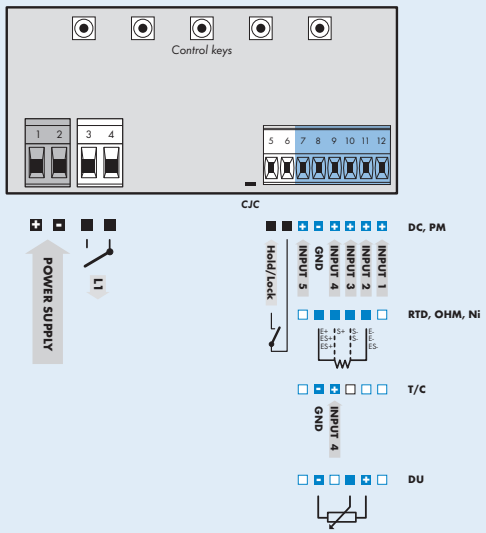
***type DC***
***DC - Hi:*** ±1 A/±5 A/±25 V/±50 V/±100 V/±200 V/±400 V

***typ AC***
***AC:*** 0...1 A/0...5 A
0...60 mV/0...300 mV/0...24 V/0...50 V/0...90 V/0...120 V/0...250 V/0...450 V

**Connecting individual inputs**

| | INPUT 1 | INPUT 2 | INPUT 3 | INPUT 4 | INPUT 5 |
|---|---|---|---|---|---|
| DC | | | | ±30/60 mV<br>±0,2/0,4/1 V | ±100 mA |
| PM | ±2/±5/±10 V | | | | ±5/±20 mA, 4... 20 mA |
| T/C | | | | J/K/T/E/B/S/R/N/L | |
| | | | | | |
| DC - Hi | ±25/±50/±100 V<br>±200/400 V | | | | ±0,5/±1/±5 A |
| AC | 0...90/450 V | 0...50/250 V | 0...24/120 V | 0...60/300 mV | 0...0,5/1/5 A |

## Connection




## Order code

**OML 343** □□□ - □□□ - □

| | | U | N | I | • | • | • | |
|---|---|---|---|---|---|---|---|---|
| **Type** | | | D | C | • | • | • | |
| *Order code shall not include blank spaces!* | | | A | C | • | • | • | |
| **Power supply** | 10...30 V AC/DC | | | | **0** | | | |
| | 10...30 V AC/DC, izolované | | | | **1** | | | |
| **Comparators** | no | | | | | **0** | | |
| | 1x relay *(Form A)* | | | | | **1** | | |
| **Display color** | red | | | | | | **1** | |
| | green | | | | | | **2** | |
| **Other** | *customer version, do not fill in* | | | | | | | **00** |