



Data Sheet  
**OML 343UNI**

*Distributed by*



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- 3,5-DIGIT PROGRAMMABLE PROJECTION
- MULTIFUNCTION INPUT (DC, PM, RTD, T/C, DU)
- DIGITAL FILTERS, LINEARIZATION
- SIZE OF DIN 96 x 48 MM
- POWER SUPPLY 10...30 V AC/DC
  
- Option  
Comparator

## OML 343



The OML 343 model series are simple 3½-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.

### OML 343DC

DC VOLTMETER AND AMMETER

### OML 343AC

AC VOLTMETER AND AMMETER

### OML 343UNI

DC VOLTMETER AND AMMETER

PROCESS MONITOR

OHMMETER

THERMOMETER FOR PT/CU/Ni/TERMOCOUPLES

DISPLAY UNIT FOR LINEAR POTENTIOMETERS

### 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

**PROF MENU** is protected by optional number code and contains complete instrument setting

**USER MENU** may contain arbitrary items from the programming menu (LIGHT/PROF), 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).

### OPTION

**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 (UNI):** manual, in menu optional projection on the display may be set for both limit values of the input signal, e.g. input 0...19,99 V ⇒ 0...150,0

**Projection:** ±1999

#### COMPENSATION

**Of conduct (RTD, OHM):** 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:** designed to reset display upon non-zero input signal

#### EXTERNAL CONTROL

**Hold:** display/instrument blocking

**Lock:** control keys blocking

**Tare:** tare activation

## TECHNICAL DATA

### PROJECTION

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

### INSTRUMENT ACCURACY

**TK:** 50 ppm/°C  
**Accuracy:** ±0,15% of range + 1 digit  
±0,3% of range + 1 digit **AC, T/C**  
**Accuracy of cold junction measurement:** ±1,5°C  
**Rate:** 0,5...20 meas./s  
**Overload capacity:** 2x; 10x (t < 30 ms) - not for > 200 V and 5 A  
**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 menu, contact switch-on < 50 ms  
**Limit:** ±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, PF ≥ 0,4, I<sub>STP</sub> < 45 A/1,1 ms, isolated

### MECHANICAL PROPERTIES

**Material:** Polycarbonate, incombustible UL 94 V-0  
**Dimensions:** 98 x 48 x 30 mm  
**Panel output:** 92 x 44 mm

### OPERATING CONDITIONS

**Connection:** connector terminal board, section < 1,5 mm<sup>2</sup>  
**Stabilization period:** within 15 minutes after switch-on  
**Working temperature:** -20°...60°C  
**Storage temperature:** -20°...85°C  
**Cover:** IP65 (front panel only, with the silicone gasket installed), rear side is open!  
**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 [Z]  
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:** ±90/±180 mA, ±30/±60 mV/±1/±20/±40/±80 V  
**PM:** ±20 mA/4...20 mA; ±2/±5/±10 V  
**OHM:** 0...100/300 Ω/0...1,5/3/24/30 kΩ  
**RTD:** Pt 50/100/500/1 000  
**Cu:** Cu 50/100  
**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/±5 A; ±120/240 V

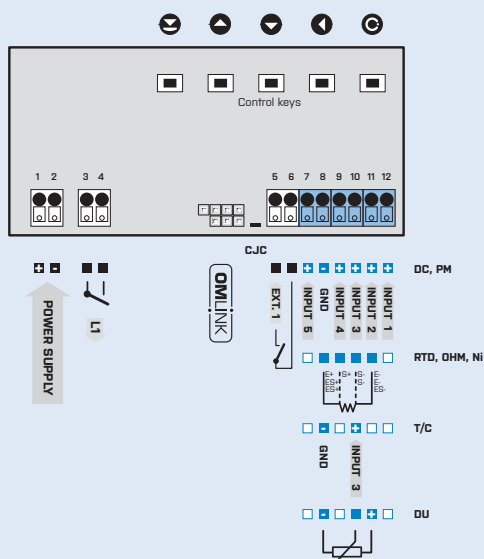
### type AC

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

## CONNECTING INDIVIDUAL INPUTS

	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5
<b>DC</b>	/±20/±40/±80 V		±30/±60 mV/±1 V		±80/±180 mA
<b>PM</b>	±2/±5/±10 V				±20 mA, 4...20 mA
<b>T/C</b>			J/K/T/E/B/S/R/N/L		
<b>DC/Hi</b>	±120/±200 V				±1/±5 A
<b>AC</b>	0...60/250 V	0...24/120 V		0...60/300 mV	0...0,5/1/5 A

## CONNECTION



## ORDER CODE

### OML 343

Type

<b>U</b>	<b>N</b>	<b>I</b>	•	•	•		
<b>D</b>	<b>C</b>		•	•	•		
<b>A</b>	<b>C</b>		•	•	•		

Comparator

no **0**  
1x relay (Form A) **1**

Display color

red **1**  
green **2**

Gasket

Silicone gasket between instrument and panel  
no **0**  
yes **1**

Other

customer version, do not fill in **00**

Default execution is shown in bold