



## OML 343UNI

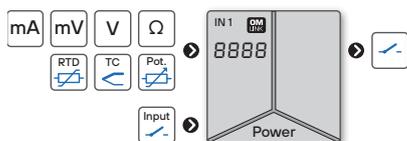
- 3.5-digit programmable projection
- Multifunction input (DC, PM, RTD, T/C, DU)
- Digital filters, Tare
- Size of DIN 96 x 48 mm
- Power supply 10...30 VDC / 24 VAC

### Option

Comparator



### UNIVERSAL INSTRUMENT



Type OML 343UNI is a multifunction instrument with the option of configuration for 8 different input options, easily configurable in the instrument menu. Depth of the instrument box only 30 mm.

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

### OPERATION

The instrument is set and controlled by five buttons accessible from the rear. 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 performing 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 (settings hold even after the instrument is switched off).

### OPTION

**COMPARATOR** is assigned to monitor two limit values with relay output. 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.

### STANDARD FUNCTIONS

#### PROGRAMMABLE PROJECTION

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

**Setting:** manual, optional projection on the display may be set in menu for both limit values of the input signal, e.g. input 0...10 V > 0...150.0

**Projection:** ±1999

#### COMPENSATION

**Wiring (RTD, OHM):** automatic (3- or 4-wire) or manual in menu (2-wire)

**Probes (RTD):** internal wiring (resistance of conductors in the measuring head)

**CJC (T/C):** manual or automatic (terminal temperature)

#### FUNCTIONS

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

#### DIGITAL FILTERS

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

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

#### EXTERNAL CONTROL

**Hold:** display/instrument blocking

**Tare:** tare activation

## TECHNICAL DATA

### INPUT

No. of inputs	1		The range is adjustable in the instrument menu	
<b>DC</b> Range	±90 mA	< 1 V	Input 5	
	±180 mA	< 2 V	Input 5	
	±30 mV	> 10 MΩ	Input 3	
	±60 mV	> 10 MΩ	Input 3	
	±1 000 mV	> 10 MΩ	Input 3	
<b>PM</b> Range	±20 V	1 MΩ	Input 1	
	±40 V	1 MΩ	Input 1	
	±80 V	1 MΩ	Input 1	
	0...20 mA	< 200 mV	Input 5	
<b>OHM</b> Range	4...20 mA	< 200 mV	Input 5	
	0...100 / 300 Ω	0...15 / 3 / 30 kΩ	Input 1	
Connection	2, 3- and 4-wire			
<b>RTD</b> Range	Pt 100/500/1 000, 3 850 ppm/°C	-50°...450°C		
	Pt 100, 3 920 ppm/°C	-50°...450°C		
	Pt 50, 3 910 ppm/°C	-200°...1100°C		
	Pt 100, 3 910 ppm/°C	-200°...450°C		
Connection	2, 3- and 4-wire			
<b>Ni</b> Range	Ni 1 000/10 000, 5 000 ppm/°C	-50°...250°C		
	Ni 1 000/10 000, 6 180 ppm/°C	-200°...250°C		
Connection	2, 3- and 4-wire			
<b>Cu</b> Range	Cu 50/100, 4 260 ppm/°C	-50°...200°C		
	Cu 50/100, 4 280 ppm/°C	-200°...200°C		
Connection	2, 3- and 4-wire			
<b>T/C</b> Range	J (Fe-CuNi)	-200°...900°C		
	K (Ni-Cr-Ni)	-200°...1 300°C		
	T (Cu-CuNi)	-200°...400°C		
	E (Ni-Cr-CuNi)	-200°...690°C		
	B (PtRh30-PtRh6)	300°...1 820°C		
	S (PtRh10-Pt)	-50°...1 760°C		
	R (Pt13Rh-Pt)	-50°...1 740°C		
	N (OmegaGalloy)	-200°...1 300°C		
	L (Fe-CuNi)	-200°...900°C		
	CJC	adjustable -20°...99°C or automatical		
<b>DU</b> Sensor power supply	2.5 VDC/6 mA, potentiometer resistance > 500 Ω			

### EXTERNAL INPUT

No. of inputs	1, on contact
Function	No function assigned Measurement paused Control keys blocking Menu access blocking

### PROJECTION

Display	±1999, single color 7-segment LED
Digit height	14 mm
Display color	red or green
Decimal point	adjustable - in menu
Brightness	adjustable or automatically controllable

### INSTRUMENT SPECIFICATION

TC	50 ppm/°C	
Accuracy	±0.2% of FS ±0.3% of FS ±0.6% of FS	T/C T/C - B
Rate	0.5...20 measurement/s	
Overload	10x (t < 30 ms), 2x	
Compensation of conduct	< 30 Ω	RTD
Measurement accuracy CJC	±15°C	T/C
Functions	Tare	
Digital filters	exponential average, rounding	
OM Link	company communication interface for operation, setting and update of instruments	
Watch-dog	reset after 500 ms	
Calibration	at 25°C and 40% rh.	

### RELAYS / OC OUTPUT

No. of outputs	1
Type	digital, menu adjustable
Mode	HYSTER active above set value
Function Relays/OC	CLOSE is closed in active mode OPEN is open in active mode READY output indicates error-free status ERROR output indicates an error condition
Limits	±1999
Hysteresis	±1999
Delay	0...99.9 s
Outputs	1x relay with switch-on contact (Form A) (250 VAC/30 VDC, 3 A)* 1x 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 VDC / 24 VAC, ±10%, PF ≥ 0.4, I <sub>typ</sub> < 45 A / 1 ms, isolated
Consumption	< 1.8 W / 1.9 VA

### MECHANIC PROPERTIES

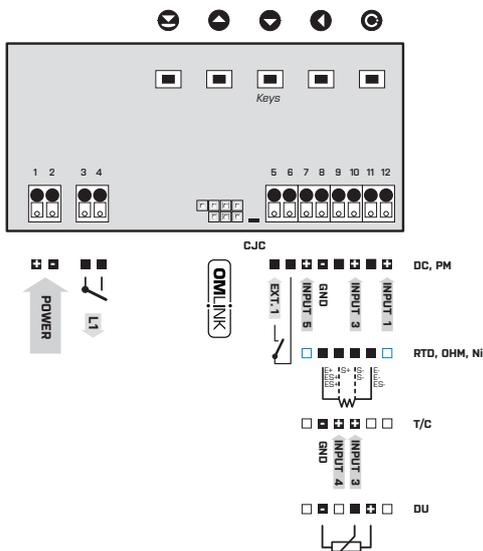
Material	PC, incombustible UL 94 V-1, black
Dimensions	96 x 48 x 30 mm (w x h x d)
Panel cutout	92 x 44 mm (w x h)

### OPERATING CONDITIONS

Connection	terminal blocks, section < 1.5 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	IP65, front panel only with a gasket
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, input > 300 V (PI) input, output > 300 V (DI)
EMC	EN 61326-1:2021, Industrial area
RoHS	EN IEC 63000:2018
Seismic capacity	IEC 980: 1993, par. 6

\* PI - Primary insulation, DI - Double insulation

## CONNECTION



## ORDER CODE

### OML 343UNI

Comparator	no 1x relay (Form A) 1x open collector	0 1 2		
Display color	red green	1 2		
Gasket	no Silicone gasket between instrument and panel		0 1	
Specification	customized version, do not fill in			00

Basic configuration of the instrument is indicated in bold.