



- 3½-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

OMLINK

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/Thermocouple

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

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, 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

TC: 50 ppm/°C
Accuracy: ±0,15% of range + 1 digit **AC, T/C**
 ±0,3% of range + 1 digit
Accuracy of cold junction measurement: ±1,5°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 menu, contact switch-on < 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, PF≥0,4, I_{STP}< 45 A/1,1 ms, isolated

MECHANIC PROPERTIES

Material: Noryl GFN2 SE1, incombustible UL 94 V-1
Dimensions: 96 x 48 x 30 mm
Panel output: 92 x 44 mm

OPERATING CONDITIONS

Connection: connector terminal board, section < 1,5 mm²
Stabilization period: within 15 minutes after switch-on
Working temperature: -20°...60°C
Storage temperature: -20°...85°C
Cover: IP65 (front panel only, 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 [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: ±90/±180 mA, ±30/±60 mV/±1/±20/±40/±80 V
PM: ±20 mA/4...20 mA/±2 V/±5 V/±10 V
OHM: 0...100 Ω/300 Ω/0...1,5 kΩ/0...3 kΩ/0...24 kΩ/0...30 kΩ
RTD: Pt 50/100/Pt 500/Pt 1 000
Cu: Cu 50/Cu 100
Ni: Ni 1 000/Ni 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, ±120/240 V

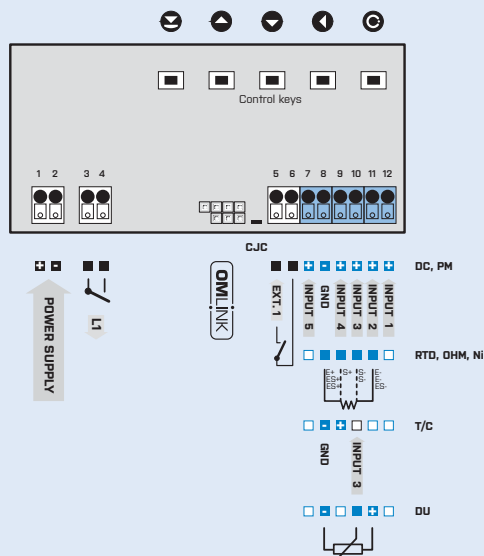
Type AC

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

CONNECTING INDIVIDUAL INPUTS

| | INPUT 1 | INPUT 2 | INPUT 3 | INPUT 4 | INPUT 5 |
|--------------|------------------|--------------|---------|-------------------|---------------------|
| DC | ±1/±20/±40/±80 V | | | ±30/60 mV | ±80/±180 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 | ±120/±200 V | | | | ±1/±5 A |
| AC | 0...60/250 V | 0...24/120 V | | 0...60/300 mV | 0...0,5/1/5 A |

CONNECTION



ORDER CODE

OML 343

Type

| | | | | | | | |
|----------|----------|----------|---|---|---|--|--|
| | | | | | | | |
| U | N | I | • | • | • | | |
| D | C | | • | • | • | | |
| A | C | | • | • | • | | |

Comparator

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

Display color

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

Gasket

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

Other

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

Default execution is shown in bold