



OMM 323UNI

OMLINK

The OMM 323 model Range are inexpensive 3,5-digit panel programmable instruments designed for simple applications.

Type OMM 323UNI is a multifunction instrument with the possibility of configuration for 8 different input options, easily configurable in the instrument's menu.

The instrument is based on a single-chip microcontroller and an A/D converter, which ensure good accuracy, stability and easy operation of the instrument.

UNIVERSAL INSTRUMENT

- 3,5-DIGIT PROGRAMMABLE PROJECTION
- MULTIFUNCTION INPUT UNI (DC, PM, RTD, T/C, DU)
- DIGITAL FILTERS, TARE, LINEARIZATION
- SIZE OF DIN 48 x 24 MM
- POWER SUPPLY 10...30 V DC/24 VAC

OMM 323UNI

DC VOLTMETER AND AMMETER
 PROCESS MONITOR
 OHMMETER
 THERMOMETER FOR PT/CU/NI/THERMOCOUPLES
 DISPLAY UNIT FOR LINEAR POTENTIOMETERS

OPERATION

The instrument is controlled by four buttons situated under 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 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).

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...19,99 V > 0...150,0

Projection: -999...9999

COMPENSATION

Of conduct (RTD): automatic (3-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 of the terminals)

FUNCTIONS

Linearization: through linear interpolation in 25 points (solely via OM Link)

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: designed to reset display upon non-zero input signal

TECHNICAL DATA

INPUT

DC	Range	optional in configuration menu			
		±90 mA	< 1 V		
		±180 mA	< 2 V		
		±30 mV	> 10 MΩ		
		±60 mV	> 10 MΩ		
		±1 000 mV	> 10 MΩ		
		±20 V	1 MΩ		
	±40 V	1 MΩ			
	±80 V	1 MΩ			
PM	Range	optional in configuration menu			
		±5 mA	< 200 mV		
		±20 mA	< 200 mV		
		4...20 mA	< 200 mV		
		±2 V	1 MΩ		
		±5 V	1 MΩ		
	±10 V	1 MΩ			
OHM	Range	optional in configuration menu			
		0...100 Ω			
		0...300 Ω			
		0...15 kΩ			
		0...3 kΩ			
		0...24 kΩ			
		0...30 kΩ			
	Connect.	2 or 3-wire (0...30 kΩ - 2-wire only)			
RTD	Type	optional in configuration menu			
		EU > 100/500/1 000 Ω, with 3 950 ppm	-50°...450°C		
		US > 100 Ω, with 3 920 ppm/°C	-50°...450°C		
		RU > 50 Ω with 3 910 ppm/°C	-200°...1 100°C		
		RU > 100 Ω with 3 910 ppm/°C	-200°...450°C		
			Connect.	2 or 3-wire	
		Ni	Type	optional in configuration menu	
Ni 1 000/10 000 with 5 000 ppm/°C	-50°...250°C				
Ni 1 000/10 000 with 6 180 ppm/°C	-200°...250°C				
	Connect.			2 or 3-wire	
Cu	Type	optional in configuration menu			
		Cu 50/100 with 4 260 ppm/°C	-50°...200°C		
		Cu 50/100 with 4 280 ppm/°C	-200°...200°C		
	Connect.	2 or 3-wire			
T/C	Type	optional in configuration menu			
		J (Fe-CuNi)	Input 3 -200°...900°C		
		K (NiCr-Ni)	Input 3 -200°...1 300°C		
		T (Cu-CuNi)	Input 4 -200°...400°C		
		E (NiCr-CuNi)	Input 3 -200°...690°C		
		B (PtRh30-PtRh6)	Input 4 300°...1 820°C		
		S (PtRh10-Pt)	Input 4 -50°...1 760°C		
		R (Pt13Rh-Pt)	Input 4 -50°...1 740°C		
		N (Omega alloy)	Input 3 -200°...1 300°C		
		L (Fe-CuNi)	Input 3 -200°...900°C		

DU Potent. power supply 2,5 VDC/6 mA, Potentiometer resistance > 500 Ω

External input 1 input, on contact
The following functions can be assigned:
OFF input off
HOLD display stop
TARE tare activation

PROJECTION

Display: -999...9999, single color 7-segment LED
Digit height: 9,1 mm
Display color: red or green
Decimal point: adjustable - in menu
Brightness: adjustable or automatically controllable

INSTRUMENT ACCURACY

TK: 50 ppm/°C
Accuracy: ±0,15% of range + 1 digit
±0,3% of range + 1 digit **T/C**
(for projection -999...1999)
Accuracy of cold junction measur.: ±1,5°C
Rate: 0,5...20 measur./s
Overload capacity: 2x; 10x (t < 30 ms)
Resolution: 0,1°C (RTD), 1°C (T/C)
Line compensation: max. 30 Ω (RTD)
Cold junction compens.: adjustable -20°...99°C or automatic
Linearization: linear interpol. in 25 points (only via OM Link)
Digital filters: exponential average, rounding
Functions: Tare
OM Link: Company communication interface for operation, setting and update of instruments.
Watch-dog: reset after 500 ms
Calibration: at 25°C and 40 % r.h.

POWER SUPPLY

Range: 10...30 VDC/24 VAC, ±10 %, PF ≥ 0,4, I_{stop} < 45 A/1,1 ms, isolated
Consumption: < 1 W/1,1 VA

MECHANIC PROPERTIES

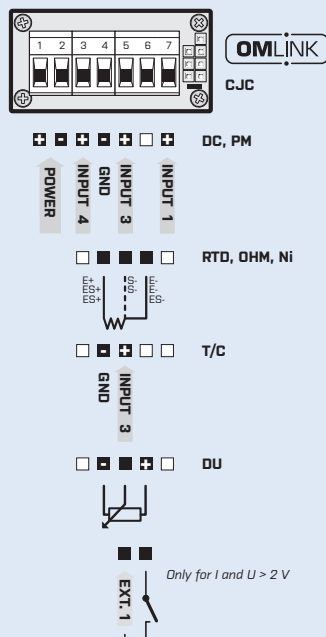
Material: Noryl GFN2 SE1, incombustible UL 94 V-1
Dimensions: 48 x 24 x 72 mm [w x h x d]
Panel cutout: 43,5 x 21,5 mm [w x h]

OPERATING CONDITIONS

Connection: connector terminal blocks, section < 1,5 mm²
Stabilization period: within 15 minutes after switch-on
Working temperature: -20°...60°C
Storage temperature: -20°...85°C
Protection: IP42 (front panel only)
El. safety: EN 61010-1, A2
Dielectric strength: 2,5 kVAC per 1 min test between supply and input
Insulation resistance: for pollution degree II, measuring cat. III
power supply > 300 V (PI)
EMC: EN 61326-1

PI - Primary insulation, DI - Double insulation

CONNECTION



ORDER CODE

OMM 323UNI

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Display color	red	1	
	green	2	
Specification	customized version, do not fill in		00
	input 1 > 0...199,9 V		01

Basic configuration of the instrument is indicated in bold.