



OMM 323UNI



- 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...30VDC / 24 VAC

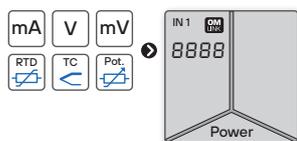
The OMM 323 model range are inexpensive 3.5-digit panel programmable instruments designed for simple applications.

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 with ADC, which ensure good accuracy, stability and easy operation of the instrument.



UNIVERSAL INSTRUMENT



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

Wiring (RTD, OHM): automatic (3-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

Linearization: non-linear signal is converted by a 25-point linear interpolation

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

No. of inputs	1		The range is adjustable in the instrument menu
DC Range	±30 mV	> 10 MΩ	Input 3
	±60 mV	> 10 MΩ	Input 3
	±1000 mV	> 10 MΩ	Input 3
	±20 V	1 MΩ	Input 1
	±40 V	1 MΩ	Input 1
	±80 V	1 MΩ	Input 1
PM Range	±5 mA	< 200 V	Input 4
	±20 mA	< 200 V	Input 4
	4...20 mA	< 200 V	Input 4
	±2 V	1 MΩ	Input 1
	±5 V	1 MΩ	Input 1
	±10 V	1 MΩ	Input 1
OHM Range	0...100 / 300 Ω		
	0...15 / 3 / 24 / 30 kΩ		
Connection	2-, 3- and 4-wire with broken cable/sensor detection		
RTD Range	Pt 100/500/1000, 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 with broken cable/sensor detection		
Ni 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 with broken cable/sensor detection		
Cu 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 with broken cable/sensor detection		
T/C Range	J (Fe-CuNi)	-200°...900°C	
	K (NiCr-Ni)	-200°...1300°C	
	T (Cu-CuNi)	-200°...400°C	
	E (NiCr-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	
DU 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	.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 SPECIFICATION

T/C	50 ppm/°C
Accuracy	±0.15 % of FS ±0.3 % of FS <i>the specified accuracy applies to 20 measurements/s</i>
Rate	0.5...20 measurement/s
Overload	10x (t < 30 ms), 2x
Compensation of conduct	< 30 Ω
Measurement accuracy CJC	±1.5°C
Functions	Tare
Digital filters	exponential average, rounding
Linearization	linear interpolation in 25 points <i>setup only via OM Link</i>
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.

POWER SUPPLY

Range	10...30 VDC / 24 VAC, ±10 %, PF ≥ 0.4, $I_{in} < 45 A / 1 ms$, isolated
Consumption	< 1 W / 1.1 VA

MECHANIC PROPERTIES

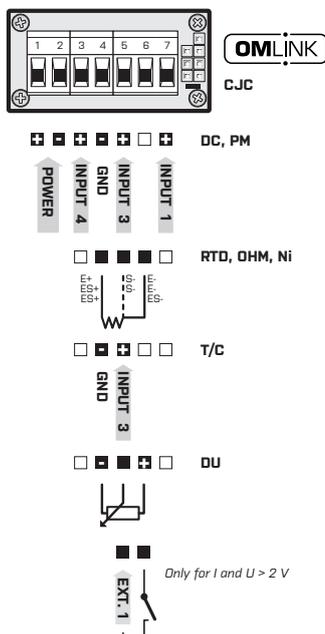
Material	Noryl GFN2 SE1, incombustible UL 94 V-1, black
Dimensions	48 x 24 x 72 mm (w x h x d)
Panel cutout	43.5 x 21.5 mm (w x h)

OPERATING CONDITIONS

Connection	connector terminal blocks, section < 1.5 mm ²
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	IP42, front panel only
Construction	safety class I
El. safety	EN 61010-1, A2
Dielectric strength	2.5 KVAC for 1 min. between power supply and input
Insulation resist.*	for pollution degree II, measuring cat. III power supply > 300 V (PI)
EMC	EN 61326-1:2021, Industrial area
RoHS	EN IEC 63000:2018
Seismic qualification	IEC/IEEE 60980-344 Edition 1.0, 2020, par. 6, 9
Mechanical resistance	EN 60068-2-6 ed. 2:2008

* PI - Primary insulation, DI - Double insulation

CONNECTION



ORDER CODE

OMM 323UNI

Display color	red green	1 2	
Specification	customized version, do not fill in input 1 > 0...199.9 V		00 01

Basic configuration of the instrument is indicated in bold.