OMM 350UNI

OMLINK

The OMM 350 model series are small 3,5-digit panel programmable instruments designed for maximum usefulness and user comfort while maintaining its fair price.

Type OMM 350UNI is a multifunction instrument with the option of configuration for 8 different input options, easily configurable in the instrument's menu.

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

UNIVERSAL INSTRUMENT

- 3,5-DIGIT PROGRAMMABLE PROJECTION
- MULTIFUNCTION INPUT (DC, PM, RTD, T/C, DU)
- DIGITAL FILTERS, LINEARIZATION
- SIZE OF DIN 72 x 24 MM
- POWER SUPPLY 10...30 VDC/24 VAC

- Option
  Comparators

OMM 350UNI
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 on 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).

All settings are stored in the EEPROM memory (settings hold even after the instrument is switched off).

OPTION

COMPARATORS are 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
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: -99999...9999

COMPENSATION
Of conduct (RTD): automatic (3- or 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 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
Lock: control keys blocking
Tare: designed to reset display upon non-zero input signal

TECHNICAL DATA

INPUT

DC	**Range**	optional in configuration menu		
		±20 mV	> 10 MΩ	Input 4
		±60 mV	> 10 MΩ	Input 3
		±1 000 mV	1,25 MΩ	Input 1
PM	**Range**	optional in configuration menu		
		0...20 mA	< 200 mV	Input 5
		4...20 mA	< 200 mV	Input 5
		0...2 V	10 MΩ	Input 4
		0...5 V	1,25 MΩ	Input 1
		0...10 V	1,25 MΩ	Input 1
OHM	**Range**	fixed - by order		
		0...300 Ω		
		0...1,5 kΩ		
		0...3 kΩ		
		0...30 kΩ		
	Connect.	2, 3 or 4 wire		
RTD	**Type**	fixed - by order		
		EU > 100/500/1 000 Ω, with 3 850 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, 3 or 4 wire		
Ni	**Type**	fixed - by order		
		Ni 1 000/10 000 with 5 000 ppm/°C		-50°...250°C
		Ni 1 000/10 000 with 6 180 ppm/°C -50°...250°C		
	Connect.	2, 3 or 4 wire		
Cu	**Type**	fixed - by order		
		Cu 50/100 with 4 260 ppm/°C		-50°...200°C
		Cu 50/100 with 4 280 ppm/°C		-200°...200°C
	Connect.	2, 3 or 4 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 (Omegalloy)	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		
		LOC. control keys blocking		
		HOD display stop		
		TAR. tare activation		

PROJECTION

Display: -99999...999999, single color 7-segment LED
Digit height: 9,1 mm
Display color: red or green
Decimal point: adjustable - in menu
Brightness: adjustable - in menu

INSTRUMENT ACCURACY

TK: 50 ppm/°C
Accuracy: ±0,2 % of range + 1 digit (for projection -999...1999)
±0,3 % of range + 1 digit T/C
Accuracy of cold junction measur.: ±1,5°C
Rate: 0,5/1,2/2,5/5/10 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.

COMPARATORS

Type: digital, menu adjustable, contact switch-on < 50 ms
Hysteresis mode: switching limit, hysteresis band „Lim ±1/2Hys." and time (± 99.9) s, which determines switching delay
Output: 1...2x relay with bistable contact (48 VAC/30 VDC, 3 A); 1...2x open collector (30 VDC/100 mA)

POWER SUPPLY

Range: 10...30 VDC/24 VAC, ±10 %, PF ≥ 0,4, I_{STP} < 45 A/1 ms, isolated
Consumption: < 2,1 W/2,2 VA

MECHANIC PROPERTIES

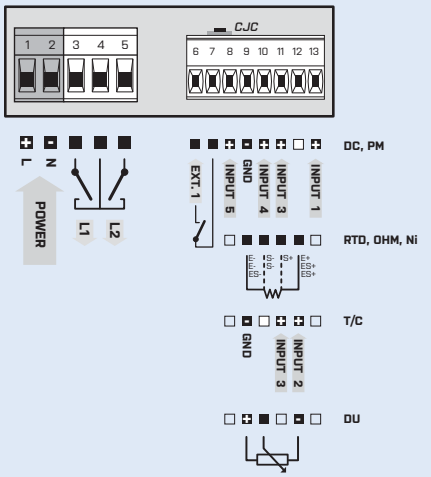
Material: Noryl GFN2 SE1, incombustible UL 94 V-I
Dimensions: 72 x 24 x 106 mm (w x h x d)
Panel cutout: 68 x 21,5 mm (w x h)

OPERATING CONDITIONS

Connection: connector terminal blocks, section < 1,5/2,5 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
4 kVAC per 1 min test between input and relay output
Insulation resistance: for pollution degree II, measuring cat. III
Instrument power supply, input > 300 V (PI), 150 V (DI)
EMC: EN 61326-1
Seismic capacity: IEC 980: 1993, par. 6

PI - Primary insulation, DI - Double insulation

CONNECTION



ORDER CODE

OMM 350UNI - **0** [ ] [ ] [ ] - [ ]

Power supply	**10...30 VDC/24 VAC, isolated**	**0**				
Measuring range	**Pt 100/300 Ω**		**A**			
	Pt 500/1,5 kΩ		**B**			
	Pt 1 000/Ni 1 000/3 kΩ		**C**			
	Ni 10 000/30 kΩ		**D**			
Ranges DC, PM, T/C, DU are always fitted	on request		**Z**			
Comparators	**no**			**0**		
	1x relay (Form A)			**1**		
	2x relay (Form A)			**2**		
	1x open collector			**3**		
	2x open collector			**4**		
Display color	**red**				**1**	
	green				**2**	
Specification	**customized version, do not fill in**					**00**

Basic configuration of the instrument is indicated in bold.