

OMM 350UNI

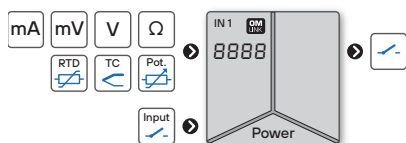
- 3.5-digit programmable projection
- Multifunction input (DC, PM, RTD, T/C, DU)
- Digital filters, Linearization
- Size of DIN 72 x 24 mm
- Power supply 10...30 VDC / 24 VAC

Option

Comparators



UNIVERSAL INSTRUMENT



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

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

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

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

Lock: control keys 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	0...20 mV	> 10 MΩ	Input 4
	0...60 mV	> 10 MΩ	Input 3
	0...1000 mV	> 10 MΩ	Input 1
PM Range	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
OHM Range	0...100 / 300 Ω		
	0...1.5 / 3 / 30 kΩ		
Connection	2, 3- and 4-wire		
RTD 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		
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		
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		
T/C Range	J (Fe-CuNi)	-200°...900°C	
	K (NiCr-Ni)	-200°...1 300°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 automatic	
DU Sensor power supply	2.5 VDC/6 mA, potentiometer resistance > 500 Ω		

EXTERNAL INPUT

No. of inputs	1, on contact
Function	OFF no function assigned LOCK control keys blocking HOLD measurement paused TARE 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 SPECIFICATION

TC	50 ppm/°C	
Accuracy	±0.2 % of FS + 1 digit	T/C
	±0.3 % of FS + 1 digit	T/C - B
	±0.6 % of FS + 1 digit	above accuracies apply for projection 1999
Rate	0.5...10 measurement/s	
Overload	10x (t < 30 ms), 2x	
Compensation of conduct	< 30 Ω	RTD
Measurement accuracy CJC	±15°C	T/C
Resolution	0.1°C 1°C	RTD T/C
Functions	Tare	
Digital filters	exponential average, rounding	
Linearization	linear interpolation in 25 points setup only via OM Link	
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	2
Type	digital, menu adjustable
Mode	HYSYSTER active above set value
Function Relays/OC	CLOSE is closed in active mode
	OPEN is open in active mode
Limits	-99999...999999
Hysteresis	0...9999
Delay	0...99.9 s
Outputs	1...2x relay with bistable contact (Form A) (48 VAC/30 VDC, 3 A)* 1...2x 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 _{typ} < 45 A / 1 ms, isolated
Consumption	< 2.1 W / 2.2 VA

MECHANIC PROPERTIES

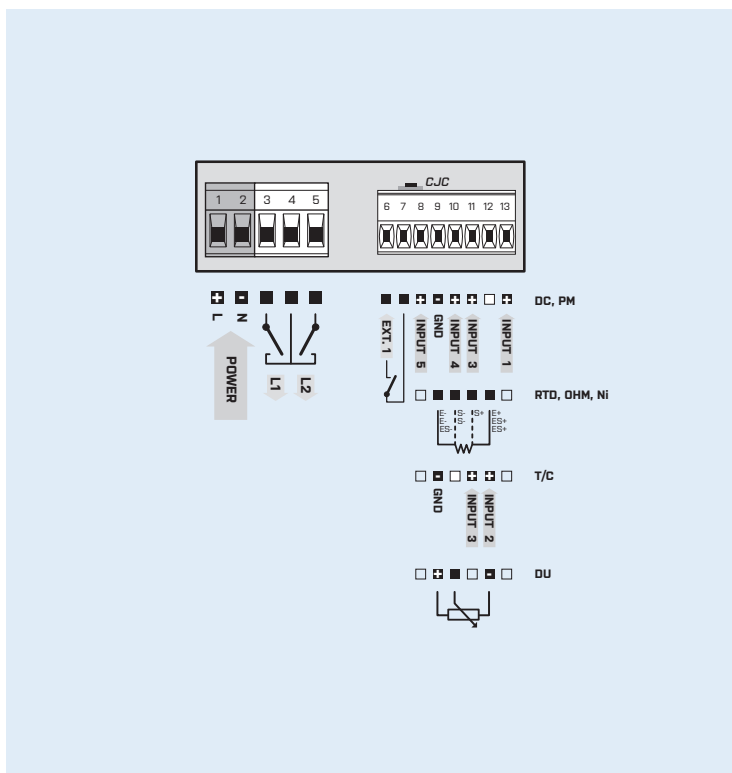
Material	Noryl GFN2 SE1, incombustible UL 94 V-1, black
Dimensions	72 x 24 x 106 mm (w x h x d)
Panel cutout	68 x 21.5 mm (w x h)

OPERATING CONDITIONS

Connection	connector terminal blocks, section < 1.5 / 2.5 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 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), 150 V (DI)
EMC	EN 61326-1, Industrial area
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.