

OMM 350/650



OMM 350DC DC VOLTMETER AND AMMETER
OMM 350UNI DC VOLTMETER AND AMMETER
 PROCESS MONITOR
 OHMMETER
 THERMOMETER FOR Pt
 THERMOMETER FOR Ni
 THERMOMETER FOR THERMOCOUPLES
 DISPLAY UNIT FOR LINEAR POTENTIOMETERS

OMM 650UC UNIVERSAL COUNTER

Description

The OMM 350 model series are small 3 1/2 digit panel programmable instruments, designed for maximum purposefulness and comfort of the user while maintaining its good price. Two versions are on offer, UNI and DC.

The OMM 350UNI type is a multifunction instrument with the option of configuration for 7 various types of input, easily configurable in the instrument menu. The OMM 350DC type is suitable for measuring bigger ranges of DC voltage and current. The OMM 650UC type is a low-cost universal counter/frequency meter/stopwatch.

The instrument is based on an 8-bit microcontroller with A/D converter, which secures high accuracy, stability and easy operation of the instrument.

Operation

The instrument is set and controlled by four control keys located 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 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).

The measured units may be projected on the display.

- 3 1/2/6 digit programmable projection
- Digital filters, Linearization
- Size of DIN 72 x 24 mm
- Power supply 10...30 V AC/DC

OMLINK

Options

- Comparators • Power supply: 80...250 V AC/DC

Options

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, in menu optional projection on the display may be set for one (DC), respectively both (PM) limit values of the input signal, e.g. input 0...19,99 V ⇒ 0...150,0

Setting (UC): measuring mode counter/frequency/timer/clock with adjustable calibration coefficient, time base and projection

Projection: ±1999, resp. -99999...999999

COMPENSATION

of conduct (RTD): in menu it is possible to perform compensation for 2-wire connection

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

Input filter (UC): lets through input signal up to 5...200 Hz

FUNCTIONS (UC)

Preset: initial non-zero value, which is always read after resetting the instrument to zero

EXTERNAL CONTROL

Hold: display/instrument blocking

Lock: control keys blocking

Resetting: counter resetting

Technical data

PROJECTION

Display: ±1999 resp. 999999, red or green 7-segment LED, digit height 9,1 mm

Decimal point: setting - in programming mode

Brightness: setting - in programming mode

INSTRUMENT ACCURACY

TC: 100 ppm/°C, 50 ppm/°C (UC)

Accuracy: ±0,2% of range + 1 digit

±0,3% of range + 1 digit (T/C)

±0,05% of range + 1 digit (UC)

Rate: 0,5...10 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 20 ms

Functions: HOLD, LOCK, Digital filters

Functions (UC): Data backup, Preset, Time backup

Input filters (UC): Filtration constant, Rounding

Time base (UC): 0,5/1/5/10/50 s

Calibration constant (UC): 0,00001...999999

Input filter (UC): 0/5/40/100/200 Hz

PRESET (UC): 0...999999

OM Link: Company communication interface for operation, setting and update of instruments

Calibration: at 25°C and 40% r.h.

COMPARATOR

Type: digital, adjustable in programming mode, contact switch < 50 ms

Limit: ±1999, resp. -99999...999999

Hysteresis: 0...1999, resp. 999999

Delay: 0...99,9 s

Output: 2x latching relay (48 VAC/30 VDC, 3 A)

POWER SUPPLY

10...30 V AC/DC, isolated

80...250 V AC/DC, isolated

MECHANIC PROPERTIES

Material: Noryl GFN2 SE1, incombustible UL 94 V-I

Dimensions: 72 x 24 x 106 mm

Panel cutout: 68 x 22,5 mm

OPERATING CONDITIONS

Connection: connector terminal board, section < 2,5 mm²

Stabilization period: within 15 minutes after switch-on

Working temperature: 0°...60°C

Storage temperature: -10°...85°C

Cover: IP42 (front panel only)

El. safety: EN 61010-1, A2

Insulation resistance: for pollution degree II, measuring cat. III.

Power supply, input > 300 V (PI), 250 V (DI)

EMC: EN 61000-3-2+A12; EN 61000-4-2, 3, 4, 5, 8, 11; EN

550222, A1, A2

PI - Primary insulation, DI - Double insulation

Measuring ranges

OMM 350 is a multifunction instrument available in following types and ranges

type UNI

DC: 0...20/60/1000 mV

PM: 0...20 mA/4...20 mA/0...2 V/ 0...5 V /0...10 V

OHM: 0...300 Ω/0...1,5 kΩ/0...3 kΩ

RTD: Pt 100/Pt 500/Pt 1000

Ni: Ni 1 000

T/C: J/K/T/E/B/S/R/N

DU: Linear potentiometer (min. 500 Ω)

type DC

DC - Hi: 0...0,5 A/0...1 A/0...5 A/0...20 V/0...40 V/0...200 V

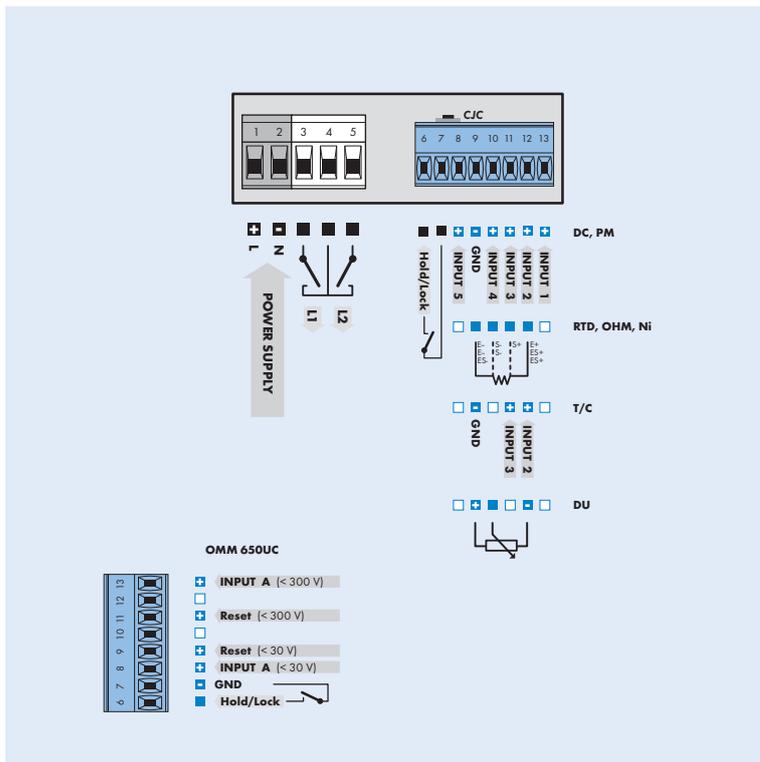
type UC

UC: 0...30 V/0...300 V, comparison levels are adjustable in the menu

	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5
DC	0...1 V		0...60 mV	0...20 mV	
PM	0...5/10 V			0...2 V	0...20 mA, 4...20 mA
T/C			J, K, E, N	B, S, R, T	
DC - Hi		0...20/40/200 V			0...0,5/1/5 A

	UNI	UC
A	Pt 100/0...300 Ohm	counter/frequency
B	Pt 500/0...1500 Ohm	timer/clock
C	Pt 1 000/Ni 1 000/0...3 kOhm	
Z	on request	

Connection



Order code

OMM 350/650

□ □ □ □ - □ □ □ □

Type

U	N	I	•	•	•
D	C	U	•	•	•
U	C	U	•	•	•

Order code shall not include blank spaces!

Power supply

10...30 V AC/DC, isolated

80...250 V AC/DC, isolated

0

1

Measuring range, see table „Measuring ranges“

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Display color

red

green

1

2