

OMM 350/650



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

OMM 650UC UNIVERSAL COUNTER

Description

The OMM 350 model series are small 6 digit panel programmable instruments designed for maximum usefulness and user comfort while maintaining its fair price. There are two versions available: UNI and DC.

The OMM 350UNI type is a multifunction instrument with the option of configuration for 8 different input options, easily configurable in the instrument menu. Version OMM 350DC is suitable for measurement of larger ranges of DC voltage and current.

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

The OMM 650UC type is a universal low-cost counter/frequencymeter/stopwatch.

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).

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

- 6 digit programmable projection
- Digital filters, Linearization
- Size of DIN 72 x 24 mm
- Power supply 10...30 VDC

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.

In OMM 650UC the comparator setting is extended with the resetting function on a set value and the relay switch-on/switch-off function when the stopwatch/timer is running.

Standard functions

PROGRAMMABLE PROJECTION

Setting: manual, optional display projection may be set in the menu for both limit values of input signal, e.g. input 0...19,99 V \Rightarrow 0...150,0

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

Projection: -99999...999999

COMPENSATION

of conduct (RTD): automatic (3- and 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 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

Filtration constant (UC): transmits input signal up to 5...1 000 Hz

FUNCTIONS (UC)

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

Setting current value: initial value, e.g. the amount currently passed-through

EXTERNAL CONTROL

Hold: display/instrument blocking

Lock: control keys blocking

Resetting: counter resetting

Start/Stop: stopwatch/timer control

Technical data

PROJECTION

Display: :99999...999999, red or green 7-segment LED, digit height 9,1 mm

Decimal point: setting - in menu

Brightness: setting - in menu

INSTRUMENT ACCURACY

TC: 50 ppm/°C

Accuracy: ±0,2% of range + 1 digit

±0,3% of range + 1 digit

Accuracy applies for projection ±1999

±0,05% of value + 1 digit

±0,01% of value ±2 ms (UC - stopwatch)

±0,01% of value ±130 ms (UC - RTC)

Accuracy of cold junction measurement: ±1 °C

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 500 ms

Functions: HOLD, LOCK, Digital filters

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

Input filters (UC): Filtration constant, Rounding

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

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

Filtration constant (UC): 0/5/40/100/1 000 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.

COMPARATORS

Type: digital, adjustable in programming mode,

contact switch-on < 50 ms

Limit: :99999...999999

Hysteresis: 999999

Delay: 0...99,9 s

Output: 2x bistable relays (48 VAC/30 VDC, 3 A)

POWER SUPPLY

10...30 VDC/24 VAC, max. 4 VA, isolated

80...250 V AC/DC, max. 4 VA, isolated - in preparation

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: -20°...60 °C

Storage temperature: -20°...85 °C

Cover: IP42 (front panel only)

El. safety: EN 61010-1, A2

Dielectric strength: 2,5 kVAC after 1 min between supply and input

2,5 kVAC after 1 min between supply and relay output

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

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

EMC: EN 61326-1

Seismic capacity: IEC 980: 1993, par. 6

PI - Primary insulation, DI - Double insulation

Measuring ranges

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

type UNI

DC: ±20/±60/±1 000 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/0...30 kΩ

RTD: Pt 50/100/500/1 000

Cu: Cu 50/Cu 100

Ni: Ni 1 000/10 000

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

DU: Linear potentiometer (min. 500 Ω)

type DC

DC - Hi: ±1 A/±5 A/±20 V/±40 V/±100 V/±200 V

type UC

UC: 0...30 V/0...300 V, comparison levels are adjustable in the menu
input frequency 0,02 Hz...50 kHz

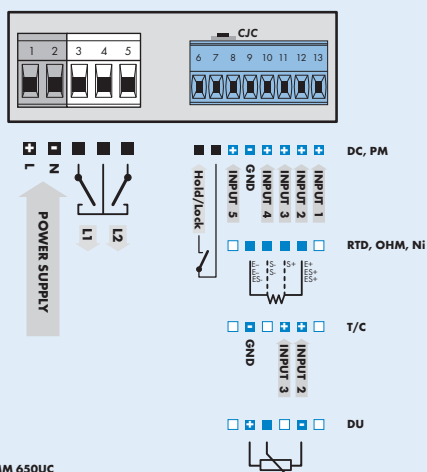
Connecting individual inputs

	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, L	B, S, R, T	
DC - Hi	±100/200 V	±20/40 V			±1±5 A

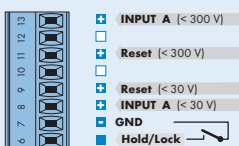
Order code specification **

	UNI	UC
w/a	---	counter/frequency/stopwatch/timer
A	Pt 100/0...300 Ohm	
B	Pt 500/0...1500 Ohm	
C	Pt 1 000/Ni 1 000/0...3 kOhm	
D	Ni 10 000/0...30 kOhm	
Z	on request	

Connection



OMM 650UC



Order code

OMM 350/650 [] [] [] - [] [] [] [] [] [] - [] [] [] [] [] []

Type	U	N	I	.	.	.	.	.	.
Order code shall not include blank spaces!	D	C	.	.	.	.	.	.	.
Power supply	0	1							
Measuring range , see table „Measuring ranges“	?								
Comparators									
								0	
								1	
								2	
								3	
								4	
Time backup									
								0	
								1	
Display color									
								1	
								2	
Other									
									00

* Launch for sale has not been set

** In the „UNI“ type the measuring range is selected under the order code solely for RTD, Ni, OHM. For other types this item has no significance with default setting „A“!