

## OMM 650UC

OMLINK

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

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

- 6-DIGIT PROGRAMMABLE PROJECTION
- COUNTER/FREQUENCY/TIMER/CLOCK
- DIGITAL FILTERS, LINEARIZATION
- SIZE OF DIN 72 x 24MM
- POWER SUPPLY 10...30 V AC/DC
- Option  
Comparators

**OMM 650UC**  
UNIVERSAL COUNTER

### 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).

### 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.

**TIME BACKUP** is suitable where time needs to be measured even in case of supply voltage outage (upon power supply outage the instrument does not display)

### STANDARD FUNCTIONS

#### PROGRAMMABLE PROJECTION

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

**Projection:** -99999...999999

#### 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:** transmits input signal up to 5...1 000 Hz

#### FUNCTIONS

**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 9,1mm  
**Decimal point:** setting - in menu  
**Brightness:** setting - in menu

### INSTRUMENT ACCURACY

**TK:** 50 ppm/°C  
**Accuracy:** ±0,05% of value + 1 digit  
 ±0,01% of value ±2ms (stopwatch)  
 ±0,01% of value ±130ms (RTC)  
**Overload capacity:** 2x; 10x (t < 30 ms) - not for 300 V  
**Watch-dog:** reset after 500 ms  
**Functions:** HOLD, LOCK, Digital filters  
**Functions:** Data backup, Time backup, Preset  
**Input filters:** Filtration constant, Rounding  
**Time base:** 0,5/1/5/10/50 s  
**Calibration constant:** 0,00001...999999  
**Filtration constant:** 0/5/40/100/1000 Hz  
**PRESET:** 0...999999  
**DM Link:** Company communication interface for operation, setting and update of instruments  
**Calibration:** at 25°C and 40% r.h.

### COMPARATORS

**Type:** digital, setting in menu, contact switch-on < 50 ms  
**Limit:** -99999...999999  
**Hysteresis:** 0...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, PF ≥ 0,4, I<sub>STP</sub> < 45 A/1,1 ms, isolated

### MECHANIC PROPERTIES

**Material:** Noryl GFN2 SE1, incombustible UL 94 V-1  
**Dimensions:** 72 x 24 x 106 mm  
**Panel cutout:** 68 x 21,5 mm

### OPERATING CONDITIONS

**Connection:** connector terminal board, section < 1,5/2,5 mm<sup>2</sup>  
**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 (Z1), 150 V (D1)  
**EMC:** EN 61326-1  
**Seismic capacity:** IEC 980:1993, par. 6

PI - Primary insulation, DI - Double insulation

## MEASURING RANGES

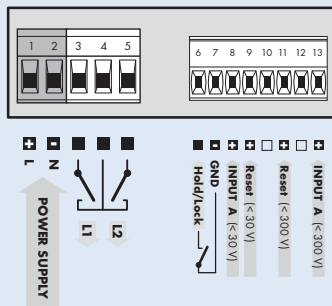
**OMM 650 is a multifunction instrument available in following types**

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

### Measuring modes

**SINGLE** Counter/Frequencymeter  
**UP/DW** UP/DW Counter/Frequencymeter  
 - used in inputs A, B (direction) and can display count/frequency  
**TIME** Stopwatch  
**RTC** Timer

## CONNECTION



## ORDER CODE

**OMM 650UC** - **0**     -

<b>Power supply</b>	10...30 V AC/DC, isolated	<b>0</b>			
<b>Comparators</b>	no	<b>0</b>			
	1x relay (Form A)	<b>1</b>			
	2x relays (Form A)	<b>2</b>			
	1x open collector	<b>3</b>			
	2x open collectors	<b>4</b>			
<b>Time backup</b>	no		<b>0</b>		
	Only for measuring mode „Watch“	yes	<b>1</b>		
<b>Display color</b>	red			<b>1</b>	
	green			<b>2</b>	
<b>Other</b>	customer version, do not fill in				<b>00</b>

Default execution is shown in bold