

## OM 651UC



2003-3-en

- **6 digit programmable projection**
- **Counter - frequency/stopwatch - watch**
- **Measuring range < 10 kHz**
- **Calibration and filtration constant, Preset**
- **Data backup**
- **Size of DIN 96 x 48 mm**
- **Power supply 230 VAC**

### Options

Dual comparator • Excitation • Time backup • Data output • Universal analog output  
Power supply: 24 VAC, 110 VAC, 10...30 VDC

### Description

The OM 651UC model is a universal 6 digit panel programmable impulse counter/frequency meter/ and stopwatch/watch. The instrument is based on an 8-bit processor that secures high accuracy, stability and easy operation of the instrument.

### Standard functions

#### Programmable display projection

Measuring modes	counter/frequency meter or stopwatch/watch
Calibration	calibration coefficient may be set in „CM“ for every channel
Projection	-99999...999999 with fixed or floating DP in adjustable format 10/24/60
Time base	0,5/1/5/10 s

#### Digital filters

Filtration constant	limiting the maximum input frequency, suppressing interfering impulses, 10 Hz...2 kHz
Exponen. average	from 2...100 measurements
Radius of insensitiv.	band of suppressed change of measured value

#### Function

Preset	initial non-zero value, which is always read after instrument resetting
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#### External control

Hold	display/instrument/CM blocking
Lock	control keys blocking

### Operation

The instrument is set and controlled by four control keys. All programmable settings of the instrument are realised in two adjusting regimes.

Configuration menu	(hereinafter referred to as CM) is protected by an optional number code and contains complete instrument setting
User menu	may contain arbitrary programming settings defined in „CM“ with another selective restriction (see, change)

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

### 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.

**Excitation** is suitable for feeding of sensors and transmitters. It has a galvanic isolation, with fixed value of 15 VDC.

**Data outputs** are for their rate and accuracy suitable for transmission of the measured data for further projection or directly into the control systems. We offer an isolated RS232 and RS485 with the ASCII protocol.

**Analog outputs** will find their place in applications where further evaluating or processing of measured data is required in external devices. We offer universal analog output with the option of selection of the type of output - voltage/current. The value of analog output corresponds with the displayed data and its type and range are selectable in CM.

**Time backup** is suitable where time needs to be measured even in case of power supply dropout (upon power supply dropout the instrument does not display).

## Technical data

### INPUT

Type:	upon contact, TTL, NPN/PNP 0...60 V	Input 1
	0...300 V	Input 2
Mode 1:	UP or DOWN counter UP or DOWN counter + frequency measurement frequency measurement frequency measurement + UP or DOWN counter	
Mode 2:	stopwatch/watch, measuring range is adjustable	
Input frequency:	0,02...10 000 Hz	

### PROJECTION

Display:	-99999...999999, red or green 7-segment LED, digit height 14 mm
Decimal point:	adjustable - in Configuration menu
Brightness:	adjustable - in Configuration/User menu

### INSTRUMENT ACCURACY

Tempco:	60 ppm/°C
Accuracy:	±0,01 % of range (frequency) + 1 digit
Time base:	0,5/1/5/10 s
Calibration coefficient:	0,00001...99999
Filtration constant:	0/0,005/0,01/0,1/1 kHz
Presetting:	0...999999
Watch-dog:	reset after 20 ms
Function:	data backup time backup - RTC keeps running even in case of power supply dropout (mode - stopwatch/watch) Hold, Lock (upon contact)
Calibration:	at 25°C and 40 % r.h.

### COMPARATOR

Type:	digital, adjustable in programming mode, contact switch-on < 30 ms
Limit 1 and 2:	-99999...99999
Hysteresis:	0...99999
Delay:	0...99,9 s
Outputs:	2 relays with switch-on (switch-off) contact (250 VAC/30 VDC, 3 A) - the relay function is adjustable in Configuration menu upon request SSR (250 VAC, 1 A) or open collector may be fitted

### DATA OUTPUTS

Data format:	rate 1 200...38 400 Baud 8 bit + no parity + 1 stop bit
RS 232	isolated
RS 485	isolated, addressing (max. 31 instruments)

### ANALOG OUTPUTS

Type:	isolated, programmable with resolution max. 5 000 points, analog output corresponds with the displayed data, output type and range are selectable in CM
Non-linearity:	0,2 % of range
Tempco:	100 ppm/°C
Rate:	response to change of value < 100 ms
Voltage:	0...2 V/5 V/10 V
Current:	0...5 mA/0/4...20 mA (compensation of conduct up to 600 Ohm)

### EXCITATION

Fixed:	15 VDC/50 mA
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### POWER SUPPLY

24; 110; 230 VAC, 50/60 Hz, ±10 %, 3 VA
12...24 VDC/max. 200 mA, non-isolated (without analog output and RSxxx)
10...30 VDC/max. 250 mA, (24 VDC/max. 90 mA), isolated - power supply is protected by a fuse inside the instrument

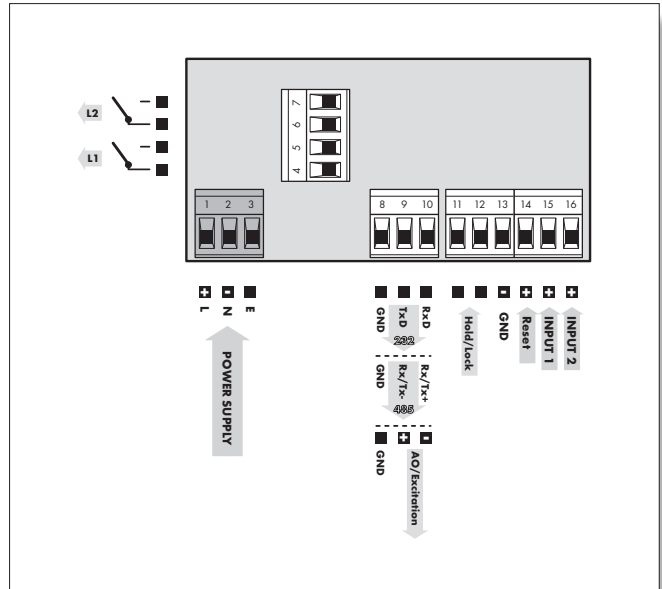
### MECHANIC PROPERTIES

Material:	Noryl GFN2 SE1, incombustible UL 94 V-I
Dimensions:	96 x 48 x 120 mm
Panel cut:	90,5 x 45 mm

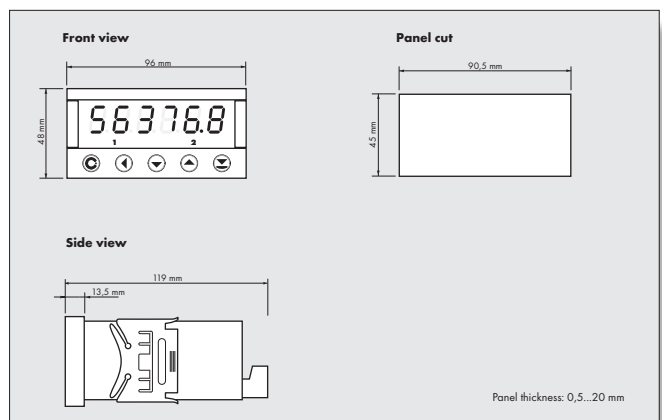
### OPERATING CONDITIONS

Connection:	connector terminal board, conductor section up to 2,5 mm <sup>2</sup>
Stabilization period:	within 15 minutes after switch-on
Working temperature:	0°...60°C, (storage temperature: -10°...85°C)
Covering:	IP65 (front panel only)
Overvoltage category:	EN 61010-1, A2, for pollution degree II III. - instrument power supply, relay outputs (300 V) II. - input, output, excitation (300 V)
EMC:	EN 61000-3-2+A12; EN 61000-4-2, 3, 4, 5, 8, 11; EN 550222, A1, A2

## Connection



## Dimensions



## Order code

