

## OM 601UQC



- **6 digit programmable projection**
- **2x counter - UP/DOWN - frequency - phase - repeat - stopwatch**
- **Measuring range < 100 kHz**
- **Calibration and filtration constant, Preset**
- **Dual comparator, Data backup**
- **Size of DIN 96 x 48 mm**
- **Power supply 230 VAC**

### Extension

Excitation • Data output • Universal analogue output • Power supply: 24 VAC, 110 VAC, 8...32 VDC

### Description

The OM 601UQC model is a universal 6 digit panel programmable impulse counter/frequency meter/repeat/phase evaluation of signal from IRC sensors and stopwatch.

The instrument is based on an 8-bit  $\mu$ -processor that secures high accuracy, stability and easy operation of the instrument.

### Standard functions

#### Programmable display projection

Measuring modes	counter/frequency meter/dual counter/UP-DW counter/counter for IRC sensors/repeat measurement/stopwatch
Calibration	calibration coefficient may be set in „CM“ for every channel individually
Projection	.99999...999999 with fixed or floating DT in adjustable format 10/24/60
Measuring channels	A and B, two independent functions may be evaluated from one or more measuring inputs
Time base	0,05/0,5/1/2/5/10/20/50 s

#### Digital filters

Filtration constant	limiting the maximum input frequency, suppressing interfering impulses, 10 Hz...2 kHz
Exponen. average n-th value	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
Summation	registration of the number upon shift operation
Division constant	increas. calib.constant 1/10/60/100/1000/3600
Min./max. value	registration of min./max. value reached during measurements
Tare	designed to reset display upon non-zero input signal
Top value	the display shows only max. (min.) value for a selected time period
Mathem. operation	between inputs A and B A+B, A-B, A*B, A/B, (A-B)/B, Polynom, Logarithmus

#### External control

Hold	display/instrument blocking
Lock	control keys blocking

#### Output

Limits	2 relay with switch-on contact, type LIMIT/FROM-TO/DOSING
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Limits have both adjustable hysteresis and optional delay of the switch-on. Reaching the limits is signalled by LED and at the same time by the switch-on of the relevant relay.

### Operation

The instrument is set and controlled by five control keys located on the front panel. All programmable settings of the instrument are realised in two adjusting modes.

**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). The measured units may be projected on the display.

### Options

**Excitation** is suitable for feeding of sensors and transmitters. It has galvanic isolation, with continuously adjustable value in range of 2...24 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 DIN MessBus/ASCII protocol.

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

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

## Technical data

### INPUT

Type: upon contact, TTL, NPN/PNP  
 Measurement: 1x UP/DOWN counter + 1x frequency  
 2x counter UP or DOWN + 2x frequency  
 1x counter UP or DOWN + 1x frequency (period) measurement  
 1x phase/repeat measurement  
 1x stopwatch/watch, measuring range is adjustable  
 Input frequency: 0,02...100 kHz (250 kHz - for IRC input)

### PROJECTION

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

### INSTRUMENT ACCURACY

Tempco: 25 ppm/°C  
 Accuracy: ±0,01 % of range (frequency)  
 Time base: 0,05/0,5/1/2/5/10/20/50 s  
 Calibration coefficient: 0,00001...99999  
 Filtration constant: 0/0,01/0,02/0,045/0,055/0,065/0,1/0,2/0,5/1/2 kHz  
 Division constant: 1/10/60/100/1000/3600  
 Presetting: 0...999999  
 Watch-dog: reset after 2,25 s  
 Function: data backup, mathematic operations between inputs, summation - registration of shift operation  
 time backup - RTC keeps running even in case of power supply dropout  
 Hold, Lock (upon contact)  
 Calibration: at 25°C and 40 % r.h.

### COMPARATOR

Type: digital, adjustable in programming mode, contact switch-on < 10 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 the output may be fitted with SSR (250 VAC, 1 A)

### DATA OUTPUTS

Data format: rate 600...115 200 Baud  
 7 bit + even parity + 1 stop bit (DIN MessBus)  
 8 bit + no parity + 1 stop bit (ASCII)  
 RS 232: isolated, two-way communication  
 RS 485: isolated, addressing (max. 31 instruments)

### ANALOGUE OUTPUTS

Type: isolated, programmable with resolution max. 14 bit, analogue output corresponds with 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

Adjustable: 2...9 VDC/100 mA - 9...12 VDC/65 mA - 15...24 VDC/50 mA

### POWER SUPPLY

24/110/230 VAC/50 Hz  
 8...32 VDC/max. 500 mA, (24 VDC/max. 150 mA), isolated

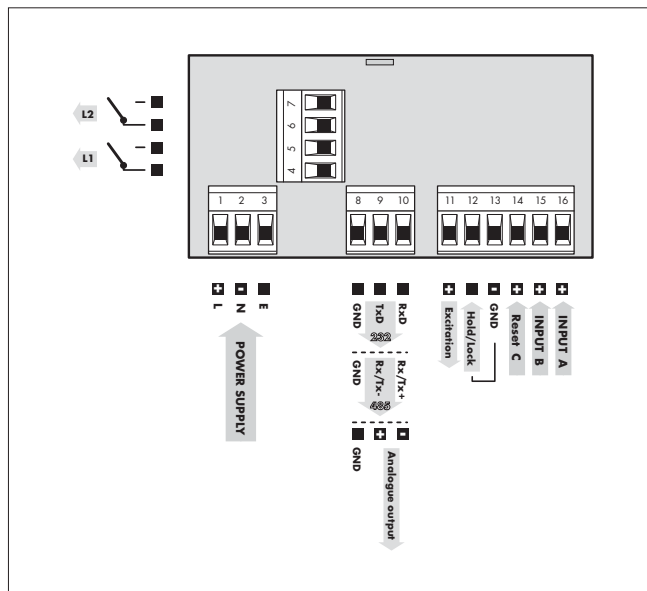
### MECHANIC PROPERTIES

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

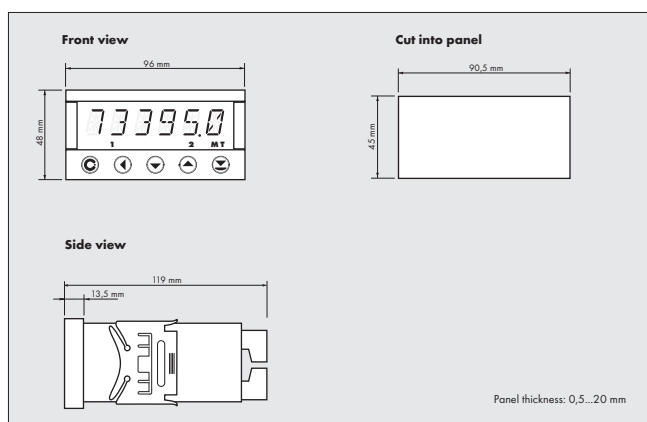
### OPERATING CONDITIONS

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

