

OM 601UQC



OM 601UQC UNIVERSAL COUNTER

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 timer/clock.

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

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)

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. The OM Link program is freely accesible.

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.

Options

Excitation is suitable for feeding of sensors and transmitters. It is isolated, with continuously adjustable value in the range of 2...24 VDC.

Comparators are assigned to monitor one, two, three or four limit values with relay output. The user may select limits regime: LIMIT/DOSING/FROM-TO. 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.

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.

- 6-digit programmable projection
- Size of DIN 96 x 48 mm
- Power supply 230 VAC

Options

- Excitation • Data output • Analog output • Time backup
- Power supply: 24/110 VAC, 10...30 VDC, 80...250 V AC/DC

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 supply voltage outage (upon power supply outage the instrument does not display)

Standard functions

PROGRAMMABLE PROJECTION

Measuring modes (UQC): counter/frequency meter/dual counter/UP-DW counter/counter for IRC sensors/repeat measurement/timer/clock

Calibration (UQC): calibration coefficient may be set in „CM“ for every channel individually

Projection (UQC): -99999...999999 with fixed or floating DP in format 10/24/60

Measuring channels (UQC): A and B, two independent functions may be evaluated from one or more measuring inputs

Time base (UQC): 0,05/0,5/1/2/5/10/20/50 s

Setting (AO): optional projection may be set for both limit values of the AO range in „CM“

DIGITAL FILTERS (UQC)

Filtration constant (UC): transmits signal longer than the time set 2,5...100 ms

Exponen. average: z 2...100 measurements

n-th value: z 2...100 measurements

Radius of insensitiveness: band of suppressed change of measured value

FUNCTIONS (UQC)

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

Summation (UQC): registration of the number upon shift operation

Pre-division constant (UQC): 1/10/60/100/1000/3600

Min./max. value (UQC): registration of min./max. value reached during measurement

Tare (UQC): designed to reset display upon non-zero input signal

Rounding (UQC): setting the projection step for display

Mat. operations (UQC): polynome, 1/x, log., exponential, power, root, sin x

EXTERNAL CONTROL

Hold: display/instrument blocking

Lock: control keys blocking

OUTPUTS

Limits: 2 relays with switching contact, the limits have adjustable hysteresis and time delay of the switch-on, which is signalled by LED and switch-on of the relevant relay. The „UQC“ type has adjustable regime of limits switching > LIMIT/DOSE/FROM-TO

Technical data

PROJECTION

Display: 999999, red or green 14-segment LED, digit height 14 mm
Decimal point: setting - in menu
Brightness: setting - in menu

INSTRUMENT ACCURACY

TC: 50 ppm/°C
Accuracy: ±0,01 % of range + 1 digit
Input frequency: 0,02...100 kHz (200 kHz for IRC)
Measuring mode: 2x UP or DW counter, UP or DW counter + frequency, UP/DW counter, UP/DW counter for IRC + frequency, timer/clock/phase
Functions: Data backup, Time backup, Preset
Input filters: Filtration constant, Rounding
Time base: 0,05...50 s
Calibration constant: 0,00001...999999
Filtration constant: 0/2,5/5/12,5/100 ms
PRESET: 0...999999
Pre-division constant: 1/10/60/100/1000/3600
Watch-dog: reset after 1,2 s
Functions: HOLD, LOCK, Digital filters, Tare
Calibration: at 25 °C and 40 % r.h.

COMPARATOR

Type: digital, setting in prog. mode, contact switch < 30 ms
Limits: -99999...999999
Hysteresis: 0...999999
Delay: 0...99,9 s
Output: 2x Form A relays (250 VAC/30 VDC, 3 A)
On request SSR or open collector may be fitted

DATA OUTPUT

Data format: 8 bit + no parity + 1 stop bit
Rate: 600...115 200 Baud
RS 232: isolated
RS 485: isolated, addressing (max. 31 instruments)

ANALOG OUTPUT

Type: isolated, programmable with resolution of max. 10 000 points, AO corresponds with the displayed data, type and range are selectable in programming mode
Non-linearity: 0,2% of range
TC: 100 ppm/°C
Rate: response to change of value < 150 ms
Ranges: 0...2/5/10 V, 0...5 mA, 0/4...20 mA (comp. < 500 Ω)

EXCITATION

Adjustable: 2...9 V/100 mA - 9...12 V/65 mA - 15...24 V/50 mA
- with DC power supply maximum consumption is 80 mA

POWER SUPPLY

24; 110; 230 VAC, 50/60 Hz, ±10%, 5 VA
 10...30 VDC/max. 300 mA, isolated
 80...250 V AC/DC, isolated
Power supply is protected by a fuse inside the instrument

MECHANIC PROPERTIES

Material: Noryl GFN2 SE1, incombustible UL 94 V-1
Dimensions: 96 x 48 x 120 mm
Panel cutout: 90,5 x 45 mm

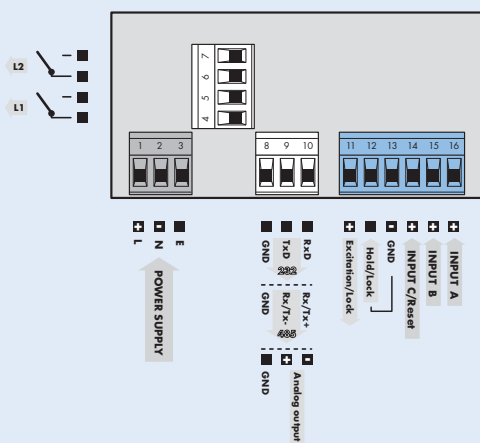
OPERATING CONDITIONS

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: IP65 (front panel only)
El. safety: EN 61010-1, A2
Insulation resistance: for pollution degree II, measuring cat. III.
 AC power supply > 600 V (PI), 300 V (DI)
 DC power supply, input, output, Exc. > 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

Connection



Order code

OM 601UQC		-				
Power supply	24 VAC/50 Hz	0				
	230 VAC/50 Hz	1				
	110 VAC/50 Hz	3				
	10...30 VDC, isolated	4				
	80...250 V AC/DC, isolated	5				
Output	none	0				
	Analog	1				
	RS 232	2				
	RS 485	3				
Time backup	no		0			
	yes		1			
Excitation	no			0		
	yes			1		
Display color	red				1	
	green				2	