OM 611UQC

- **6 digit programmable projection**
- **2x counter - UP/DOWN - IRC - frequency - phase - repeat**
- **Measuring range < 1 MHz**
- **Calibration and filtration constant, Preset**
- **Data backup, Summation**
- **Size of DIN 96 x 48 mm**
- **Power supply 230 VAC**

Options

Comparators • Excitation • Data output • Universal analogue output • Real time
Power supply: 24 VAC, 110 VAC, 10...30 VDC

Description

The OM 611UQC model is a universal 6 digit panel programmable UP/DOWN counter/frequency meter/phase/repeat/period/evaluation of signal from IRC sensors and stopwatch.

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/dual counter/UP-DW counter/counter for IRC sensors/repeat measurement
Calibration	calibration coefficient may be set in „CM"for every channel individually
Projection	-99999...999999 with fixed or floating DP in adjustable format 10/24/60
Measuring channels	A and B, two independent functions may be evaluated from one measuring input
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
Floating average	from 2...255 measurements
Exponen. average	from 2...255 measurements
n-th value	from 2...255 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
Pre-division constant	increas. cal. 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
Round up/down	setting the projection step for display
Mathem. operation	between inputs - A+B, A-B, A*B, A/B, (A-B)/B; polynome, 1/x, logarithm, exponential, power, root, sin x

External control

Hold	display/instrument blocking
Lock	control keys blocking

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.

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.

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 CM.

Real time is an internal time control of data collection. It is suitable everywhere where it is necessary to register measured data in a given time segment. Up to 65 000 values may be stored in the instrument's memory.

Technical data

INPUT

Type:	upon contact, TTL, NPN/PNP - line input - < 100 mV
Measurement:	1x UP/DOWN counter, IRC counter 2x counter UP or DOWN 1x counter UP or DOWN + 1x frequency (period) measurement 1x UP/DOWN for IRC counter + frequency (evaluates both edges of signals A & B) 1x phase measurement
Input frequency:	0,02...1 000 kHz (500 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:	60 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
Function:	data backup, mathematic operations between inputs, Math. operations, summation - registration of shift operation, Hold, Lock (upon contact)
External control:	INP 1 , INP 2 - adjustable fce: Hold, Lock, Tare, resetting
Real time:	15 ppm/°C time-date-display value (max. 65000 data), transmission of stored data via RS 232
Calibration:	at 25°C and 40 % r.h..

COMPARATOR

Type:	digital, adjustable in programming mode, contact switch-on < 30 ms
Limit 1...4	-99999...99999
Hysteresis:	0...99999
Delay:	0...99,9 s
Outputs:	4 relays with switching contact (250 VAC/50 VDC, 3 A) *upon request SSR (250 VAC, 1 A) or open collector may be fitted*

DATA OUTPUTS

Data format:	rate 600...38 400 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. 10 000 points, analogue 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 < 40 ms
Voltage:	0...2 V/5 V/10 V
Current:	0...5 mA/20 mA/4...20 mA (compensation of conduct up to 600 Ohm)

EXCITATION

Adjustable:	2...9 VDC/150 mA - 9...12 VDC/100 mA - 15...24 VDC/80 mA

POWER SUPPLY

24/110/230 VAC, 50/60 Hz, ±10 %, 7,5 VA
10...30 VDC/max. 1,2 A, (24 VDC/350 mA), isolated
- power supply is protected by a fuse inside the instruments

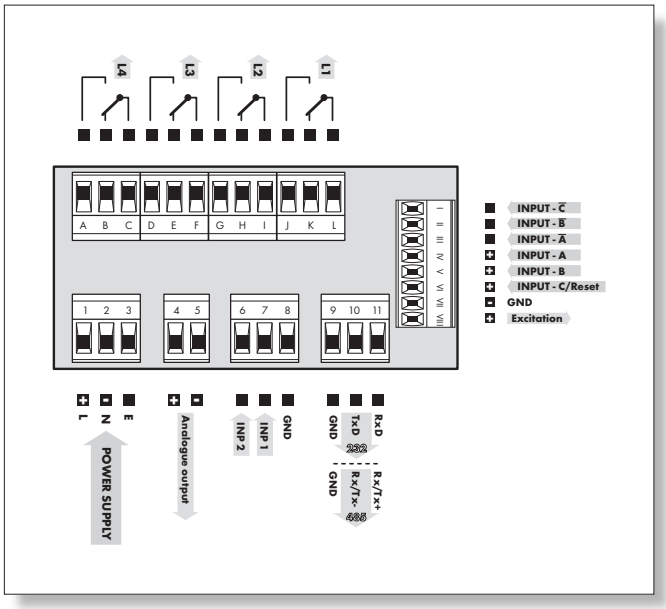
MECHANIC PROPERTIES

Material:	Noryl GFN2 SE1, incombustible UL 94 V-I
Dimensions:	96 x 48 x 154 mm
Panel cut:	90,5 x 45 mm

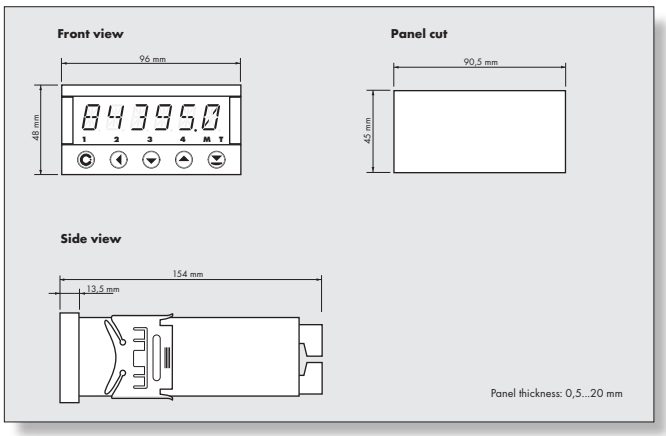
OPERATING CONDITIONS

Connection:	connector terminal board, conductor section up to 1,5/2,5 mm^2
Stabilization period:	within 15 minutes after switch-on
Working temperature:	0°...60°C , (storage temperature: -10°...85°C)
Covering:	IP65 (front panel only)
Construction:	safety class II
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

OM 611UQC - xxxxxxxx

Power supply
0: 24 VAC/50 Hz
1: 230 VAC/50 Hz
3: 110 VAC/50 Hz
4: 10...30 VDC, isolated

Input
A: standard
B: standard, from 100 mV
C: line

Comparators
0: no
1: 1 relay
2: 2 relays
3: 3 relays
4: 4 relays

Data output
0: no
1: RS 232
2: RS 485

Display color
1: red
2: green

Real time
0: no
1: yes

Excitation
0: no
1: yes

Analogue output
0: no
1: yes

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