

OM 621UQC



- **6 digit programmable projection**
- **2x counter - counter UP/DOWN (IRC) - frequency - phase - repeat - stopwatch**
- **Measuring range < 400 kHz**
- **Calibration and filtration constant, Preset**
- **Data backup, Summation**
- **Size of DIN 96 x 48 mm**
- **Power supply 80...250 V AC/DC**

Extension

Comparators • Excitation • Data output • Universal analogue output • Real time
Power supply 9...50 V AC/DC

Description

The OM 621UQC 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 μ -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 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 |
| 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, exp.function, rooting/involution function, inversion |

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. Limits have both hysteresis adjustable within the full display range and optional delay of the switch-on. Reaching the set limits is signalled by LED and at the same time 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 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.

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. Data transmission into PC via serial interface RS232/485.

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 phase measurement
 1x stopwatch/watch, measuring range is adjustable

Input frequency: 0,02...400 kHz

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
 Function: data backup, mathematic operations between inputs, summation - registration of shift operation
 Hold, Lock (upon contact)

Real time: 15 ppm/°C
 time-date-display value (max. 65000 data), transmission of stored data via RS 232 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 switching & 2 relays with switch-on contact (250 VAC/50 VDC, 3 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 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 < 10 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/200 mA - 9...12 VDC/100 mA - 15...24 VDC/80 mA

POWER SUPPLY

80 ... 250 V (AC/DC)
 9 ... 50 V (AC/DC)
 - Power supply is protected by a fuse inside the instrument (630 mA)

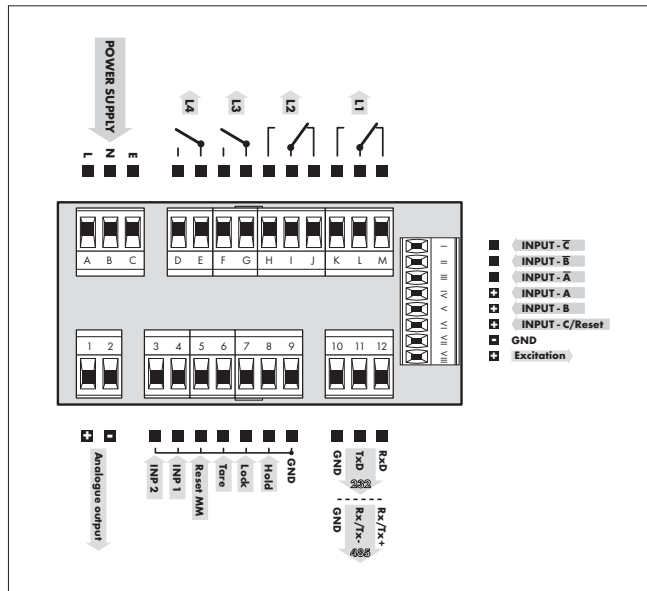
MECHANICAL PROPERTIES

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

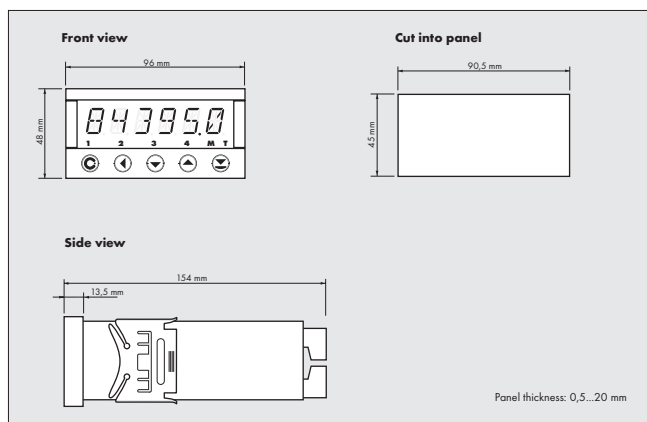
OPERATING CONDITIONS

Connection: connector terminal board, conductor section up to 1,5/2,5 mm²
 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 55022, A1, A2

Connection



Dimensions



Order code

