

OM 602



OM 602RS DATA DISPLAY RS 232/485
OM 602AV PROGRAMMABLE OUTPUT

- 6-digit programmable projection
- Size of DIN 96 x 48 mm
- Power supply 80...250 V AC/DC



Options

- Excitation • Comparators • Data output • Analog output • Data record
- Power supply: 10...30 V AC/DC

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 menu.

Measured data record is an internal time control of data collection. It is suitable where it is necessary to register measured values. Two modes may be used. FAST is designed for fast storage (80 records/s) of all measured values up to 8 000 records. Second mode is RTC, where data record is governed by Real Time with data storage in a selected time segment and cycle. Up to 130 000 values may be stored in the instrument memory. Data transmission into PC via serial interface RS232/485 and OM Link.

Description

The OM 602RS model is a 6 digit panel display device for projection of data from serial lines RS 232/485.

The OM 602AV is a programmable analog output.

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 may be performed in three adjusting modes:

Light menu is protected by optional number code and contains solely items necessary for instrument setting

Profi menu is protected by optional number code and contains complete instrument setting

User menu may contain arbitrary items from the programming menu (LIGHT/PROFI), which determine the right (see, change). Access w/o password.

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 (with OML cable). The program is also designed for visualization and filing of measured values from more instruments .

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.

Standard functions

PROGRAMMABLE PROJECTION

Input (RS): optional RS 232 or RS 485, with protocols ASCII, MESSBUS, PROFIBUS, MODBUS - RTU

Projection: -99999...999999 with fixed or floating DP

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

DIGITAL FILTERS

Exponen. average: from 2...255 measurements

Rounding: setting the projection step for display

MATHEMATIC FUNCTIONS

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

Mat. operations: polynome, 1/x, logarithm, exponential, power, root, sin x

Type of output signal (AV): sinus/saw/triangle/rectangle/random functions (selected by control keys or on inputs 1 and 2)

EXTERNAL CONTROL

Lock control keys blocking

Hold display/instrument blocking

Resetting MM resetting min/max value

Function: control of optional functions from instrument menu

Technical data

PROJECTION

Display: -99999...999999, red or green 14-segment LED, digit height 14 mm, 9999, red/green 7-segment LED, height 20 mm
Decimal point: setting - in pmenu
Brightness: setting - in menu

INSTRUMENT ACCURACY

Input filters: Filtration constant, Rounding
Ext. control: HOLD, LOCK, Tare
Data record: measured data record into instrument memory
RTC - 15 ppm/°C, time-date-display value, < 250k data
FAST - display value, < 8k data
Watch-dog: reset after 1,2 s
OM Link: Company communication interface for operation, setting and update of instruments
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 relays Form A (250 VAC/30 VDC, 3 A) and 2x Form C relays (250 VAC/50 VDC, 3 A), 2x/4x open collectors, 2x SSR, 2x bistable relays

DATA OUTPUT

Protocol: ASCII, MESSBUS, MODBUS - RTU, PROFIBUS
Data format: 8 bit + no parity + 1 stop bit
 7 bit + even parity + 1 stop bit (Messbus)
Rate: 600...115 200 Baud
 9 600 Baud...12 Mbaud (PROFIBUS)
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/12 V or 1 000 Ω/24 V)

EXCITATION

Adjustable: 5...24 VDC/max. 1,2 W

POWER SUPPLY

10...30 V AC/DC, ±10%, max. 13,5 VA
 80...250 V AC/DC, ±10%, max. 13,5 VA
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 cutout: 90,5 x 45 mm

OPERATING CONDITIONS

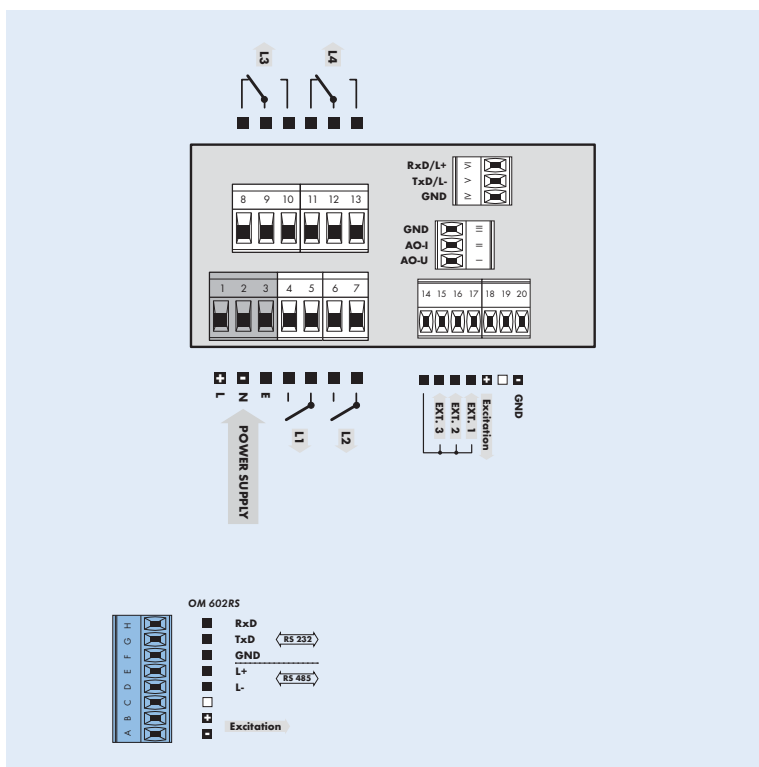
Connection: connector terminal board, section < 2,5 mm²
Stabilization period: within 15 minutes after switch-on
Working temperature: 0°...60 °C
Storage temperature: -10°...85 °C
Cover: IP65 (front panel only)
El. safety: EN 61010-1, A2
Insulation resistance: for pollution degree II, measuring cat. III. power supply > 670 V (PI), 300 V (DI) input, output, Exc. > 300 V (PI), 150 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

	AV	RS
w/o	Programmable analog output	
A		ASCII/MESSBUS
B		MODBUS - RTU
C		PROFIBUS
Z	on request	on request

Connection



Order code

OM 602 -

Type	R	S	.	.	.	.	.	.	.
	A	V	.	.	.	.	.	.	.
Power supply			0						
			1						
Measuring range , see table „Measuring ranges“			?						
Comparators									
none								0	
1x relay (Form A)								1	
2x relays (Form A)								2	
3x relays (2x Form A + 1x Form C)								3	
4x relays (2x Form A + 2x Form C)								4	
2x open collector								5	
4x open collector								6	
2x open collector + 2x relays (Form C)								7	
2x relays (Form C)								8	
2x SSR								9	
2x bistable relays								A	
1x relay (Form C)								B	
Data output									
no								0	
RS 232								1	
RS 485								2	
MODBUS								3	
PROFIBUS								4	
Analog output									
no								0	
yes (compensation < 500 Ω/12 V)								1	
yes (compensation < 1 000 Ω/24 V)								2	
Excitation									
no								0	
yes								1	
Data record									
no									0
RTC									1
FAST									2
Display color									
red (14 mm)									1
green (14 mm)									2
red/green/orange (20 mm)									3