

# 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 • Three-color display - 20 mm

**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 266 000 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 menu  
**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, < 266k 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)  
**Ethernet:** 10/100BaseT, Security Protocols, POP3, FTP

ANALOG OUTPUT

**Type:** isolated, programmable with 12-bit D/A converter, type and range are selectable in programming mode  
**Non-linearity:** 0,1 % of range  
**TC:** 15 ppm/°C  
**Rate:** response to change of value < 1 ms  
**Ranges:** 0...2/5/10 V, ±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-1  
**Dimensions:** 96 x 48 x 120 mm  
**Panel cutout:** 90,5 x 45 mm

OPERATING CONDITIONS

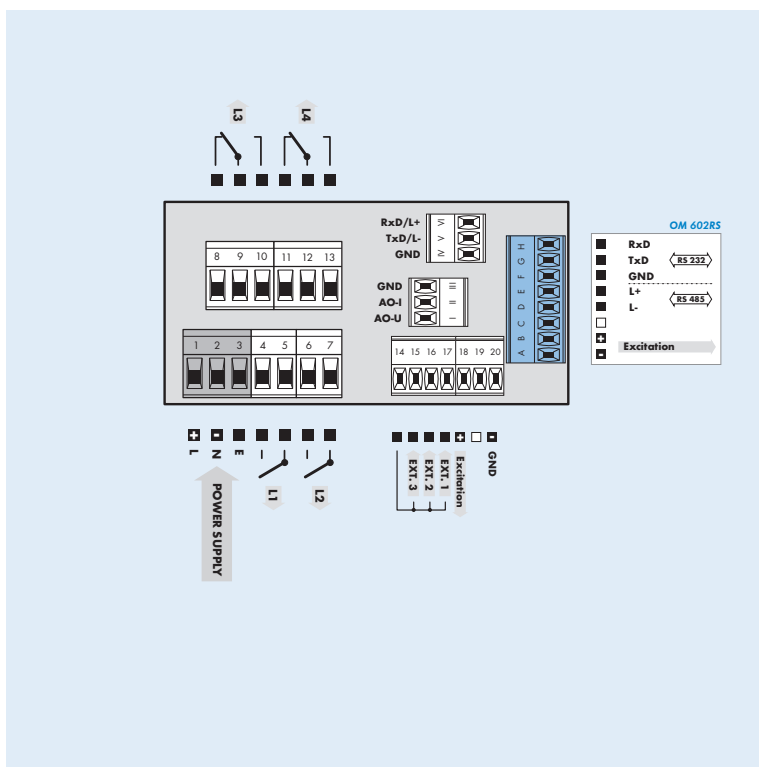
**Connection:** connector terminal board, section < 2,5 mm<sup>2</sup>  
**Stabilization period:** within 15 minutes after switch-on  
**Working temperature:** -20°...60 °C  
**Storage temperature:** -20°...85 °C  
**Cover:** IP65 (front panel only)  
**El. safety:** EN 61010-1, A2  
**Dielectric strength:** 4 kVAC after 1 min between supply and input  
 4 kVAC after 1 min between supply and data/analog output  
 2,5 kVAC after 1 min between input and data/analog output  
**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 61326-1  
**Seismic capacity:** IEC 980: 1993, par. 6  
**SW validation (AV):** class B, C in compliance with IEC 62138, 61226

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	•	•	•	•	•	•
Power supply	A	V	•	•	•	•	•	•
Power supply	10...30 V AC/DC	0						
	80...250 V AC/DC	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
	10/100BaseT Ethernet (not possible with analog output)*							7
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
Other	customer version, do not fill in							00
	SW validation - IEC 62138, IEC 61226							VS

\* Launch for sale has not been set