OM 602RS

DATA DISPLAY RS 232/485

- 6-digit programmable projection
- Input: RS 232/485
- ASCII, MESSBUS, PROFIBUS DP, MODBUS RTU
- Digital filter
- Size of DIN 96 x 48 mm
- Power supply 10...30 V AC/DC; 80...250 V AC/DC
- Option
  Excitation • Comparators • Analog output • Three-color display - 20 mm

Type OM 602RS is a 6-digit panel data display from serial lines RS 232/485 with protocol ASCII, MESSBUS, PROFIBUS DP and MODBUS RTU.

The instrument is based on a single-chip microprocessor, which guarantees accuracy, stability and easy control.

OM 602RS
DATA DISPLAY RS 232/485

OPERATION

The instrument is set and controlled by five buttons 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 performing 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 (settings hold even after the instrument is switched off). The measured units may be projected on the display.

OPTION

EXCITATION is suitable for feeding sensors and transmitters. It is continuously adjustable within the range of 5...24 VDC.

COMPARATORS are assigned to monitor one, two, three or four limit values with relay output. As a user you can select the mode limit: LIMIT/BATCH/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.

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. Its type and range are selectable in menu.

STANDARD FUNCTIONS

PROGRAMMABLE PROJECTION
Input: both RS 232 and RS 485
Protocol: ASCII - Master/Slave/Universal, MESSBUS, PROFIBUS DP, MODBUS RTU
Projection: -99999...999999

FUNCTIONS
Min./max. value: registration of min/max value reached during measurement
Mathemat. operations: polynom, 1/x, log., exponential, power, root, sin x

DIGITAL FILTERS
Floating average: from 2...30 measurements
Exponential average: from 2...100 measurements
Arithmetic average: from 2...100 measurements
Rounding: setting the projection step for display

EXTERNAL CONTROL
Hold: display/instrument blocking
Lock: control keys blocking
Resetting MM: resetting min./max. value
Functions: control of optional functions from instrument menu

TECHNICAL DATA

INPUT

Number of inputs		1
RS	Input	fixed - by order RS 232/RS 485 PROFIBUS
	Protocol	**ASCII** - data display, controlled from the master system **ASCII - Master** - the instrument controls data sending from the slave system - „COMM" can be used to select the received data - the instrument asks with the rate of 10 queries/s **ASCII - Slave** - Passive bus display where other devices or computers communicate in „MAST." mode. If the „COMM" and the requested data are correctly received, they will be displayed by the instrument **ASCII - Universal** - in dynamic menu items (Stat, Ad.Un, Sign, Data, Stop, Req.) you can build your own communication protocol format **MESSBUS** **MODBUS RTU** **PROFIBUS DP**
	Format	8 bit + no parity + 1 stop bit 7 bit + even parity + 1 stop bit
	Adressse	0...31 (ASCII) / 1...247 (Modbus) / 1...127 (Profibus)
	Rate	300...230 400 Baud 9 600 Baud...12 Mbaud (PROFIBUS)
Ext. inputs		3 inputs, on contact **The following functions can be assigned:** OFF input off LOCK control keys blocking HOLD display stop TARE tare activation CL. M.M. resetting min/max value CL. T. tare resetting

PROJECTION

Display: -99999...999999, single color 14-segment LED; -999...9999, 3-color 7-segment LED
Digit height: 14 or 20 mm
Display color: red or green (height 14 mm) red/green/orange (height 20 mm)
Decimal point: adjustable - in menu
Brightness: adjustable - in menu

FUNCTIONS

Digital filters: Exp./Floating/Arithm. average, Rounding
Functions: Tare
OM Link: Company communication interface for operation, setting and update of instruments
Calibration: at 25°C and 40 % r.h.

COMPARATOR

Type: digital, menu adjustable, contact switch-on < 30 ms
Hysteresis mode: switching limit, hysteresis band (Lim and ±1/2 Hys.) and time (±99,9 s) determining the switching delay
Mode From-To: switching on and switching off interval
Mode Batch: period, its multiples and time (0...99.9 s), within which the output is active
Output: 1...2x relays Form C (250 VAC/30 VDC, 3 A) and 1...2x relays Form A (250 VAC/50 VDC, 3 A); 2x/4x open collector (30 VDC/100 mA); 2x SSR (250 VAC/ 1 A); 2x bistable relays (250 VAC/250 VDC, 3 A/0,3 A)

ANALOG OUTPUTS

Type: isolated, programmable with a 16 bit D/A converter, type and range of output is optional in the menu
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. < 600 Ω/12 V or 1 000 Ω/24 V)

EXCITATION

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

POWER SUPPLY

Range: 10...30 V AC/DC, ±10 %, PF≥ 0,4, I_{STP}< 40 A/1 ms, isolated
80...250 V AC/DC, ±10 %, PF≥ 0,4, I_{STP}< 40 A/1 ms, isolated
Consumption: < 9,4 W/9,2 VA
Power supply is protected by a fuse inside the instrument.

MECHANIC PROPERTIES

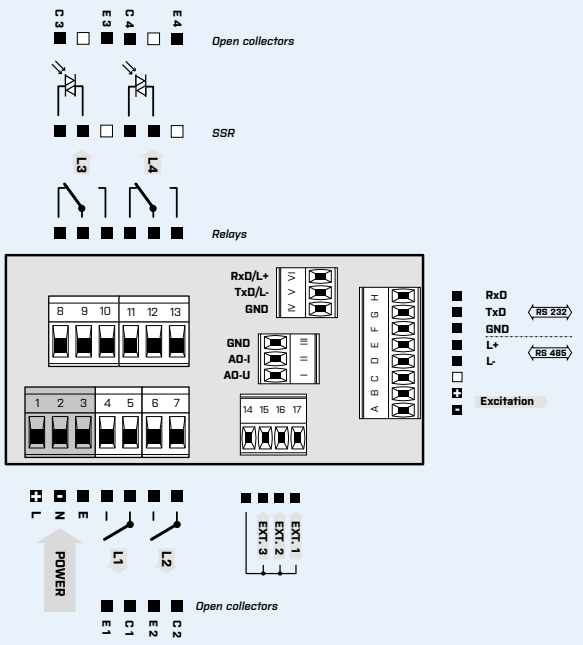
Material: Noryl GFN2 SE1, incombustible UL 94 V-I
Dimensions: 96 x 48 x 120 mm (w x h x d)
Panel cutout: 90,5 x 45 mm (w x h)

OPERATING CONDITIONS

Connection: connector terminal blocks, section < 1,5/2,5 mm²
Stabilization period: within 5 minutes after switch-on
Working temperature: -20°...60°C
Storage temperature: -20°...85°C
Protection: IP64 (front panel only)
El. safety: EN 61010-1, A2
Dielectric strength: 4 kVAC per 1 min test between supply and input
4 kVAC per 1 min test between supply and data/analog output
4 kVAC per 1 min test between input and relay output
2,5 kVAC per 1 min test 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, PN > 300 V (PI), 150 V (DI)
EMC: EN 61326-1
Seismic capacity: IEC 980: 1993, par. 6

PI - Primary insulation, DI - Double insulation

CONNECTION



ORDER CODE

OM 602RS - [ ][ ][ ][ ][ ][ ] - [ ]

Power supply	10...30 V AC/DC	**0**
	80...250 V AC/DC	**1**
Protocol	**ASCII/MESSBUS**	**A**
	MODBUS RTU	**B**
	PROFIBUS DP	**C**
Comparators	**none**	**0**
	1x relay (Form A)	**1**
	2x relay (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**
Analog output	**no**	**0**
	yes (compensation < 600 Ω/12 V)	**1**
	yes (compensation < 1 000 Ω/24 V)	**2**
Excitation	**no**	**0**
	yes	**1**
Display color	**red (14 mm)**	**1**
	green (14 mm)	**2**
	red/green (20 mm)	**3**
Specification	**customized version, do not fill in**	**00**

Basic configuration of the instrument is indicated in bold.