OM 602AV

PROGRAMMABLE ANALOG OUTPUT

- 6-digit programmable projection
- Output: 0...5/20 mA/4...20 mA
  0...2/5/10 V; ±10 V
- Sinus/Saw/Triangle/Rectangle/Random function
- Size of DIN 96 x 48 mm
- Power supply 10...30 V AC/DC; 80...250 V AC/DC
- Option
  Excitation • Comparators • Data output • Three-color display - 20 mm

OM 602AV is a panel programmable analog output.
The instrument is based on a single-chip microprocessor and precision D/A converter, which guarantees accuracy, stability and easy control.

OM 602AV
PROGRAMMABLE OUTPUT

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.

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/PROFIBUS protocols.

STANDARD FUNCTIONS

PROGRAMMABLE PROJECTION
Setting: optional projection may be set for both limit values of the AV range
Projection: -99999...999999

ANALOG OUTPUT
Type: isolated, programmable with a resolution of 16 bit, rate < 1 ms
Output signal: sinus/ramp/triangle/square/random function
Range: 0...2/5/10 V, ±10 V, 0...5 mA, 0/4...20 mA

EXTERNAL CONTROL
Hold: display/instrument blocking
Lock: control keys blocking
Functions: control of optional functions from instrument menu

TECHNICAL DATA

OUTPUT

AV	Type	isolated, programmable with a 16-bit D/A converter, output type and range are optional in the menu
	Range	0...2 V 0...5 V 0...10 V ±10 V 0...5 mA compensation < 1 000 Ω/24 V 0...20 mA compensation < 1 000 Ω/24 V 4...20 mA compensation < 1 000 Ω/24 V
	Non-linearity	0,1 % of range
	TC	15 ppm/°C
	Rate	response to change of value < 1 ms
	Functions	the instrument generates signal within the set range and frequency; in addition you can set the min. and max. signal change times as well as number of generated pulses MANUAL manual setting of the output value SINUS sinus output signal RAMP saw output signal TRIANGL. triangle output signal SQUARE rectangle output signal RANDOM random generated signal
Ext. inputs		3 inputs, on contact **The following functions can be assigned:** OFF input off LOCK control keys blocking HOLD display stop PASS. menu access blocking CL. M.M. resetting min/max value CH1. UP. long step - up CH1. DW. long step - down CH2. UP. fine step - up CH2. DW. fine step - down MIN. V. min. range MAX. V. max. range UP increases every 10 ms by „Step" DOWN decreases every 10 ms by „Step" START start of the set cycle STOP stop of the set cycle ST.-ST. start/stop of the set cycle

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)
Description: the last two characters on the display can be used to describe the measured quantities (only height 14 mm)
Decimal point: adjustable - in menu
Brightness: adjustable - in menu

INSTRUMENT ACCURACY

TC: 50 ppm/°C
Watch-dog: reset after 0,4 s
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
Mode CH.From-To - switching on and switching off intervals, which represent the measuring range. Above and under the set intervals the instrument displays an error message, underflow/overflow
Output: 1...2x relays Form A (250 VAC/30 VDC, 3 A)
and 1...2x relays Form C (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)

DATA OUTPUTS

Protocol: ASCII, MESSBUS, MODBUS RTU, PROFIBUS DP
Data format: 8 bit + no parity + 1 stop bit (ASCII)
7 bit + even parity + 1 stop bit (Messbus)
Rate: 600...230 400 Baud
9 600 Baud...12 Mbaud (PROFIBUS)
RS 232: isolated
RS 485: isolated, addressing (max. 31 instruments)

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

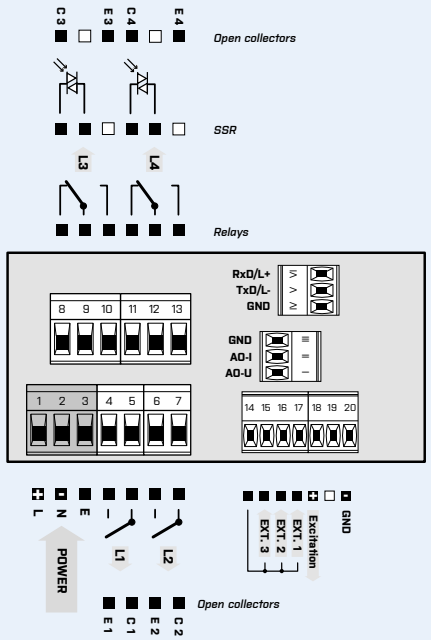
Material: Noryl GFN2 SE1, incombustible UL 94 V-I
Dimensions: 96 x 48 x 120 mm (w x h x d)
Panel cutout: 90,5 x 45 mm (w x h)

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
SW validation: Class B, C in compl. with IEC 62138, 61226

PI - Primary insulation, DI - Double insulation

CONNECTION



ORDER CODE

OM 602AV - [ ][ ][ ][ ][ ] - [ ]

Power supply	10...30 V AC/DC	**0**					
	80...250 V AC/DC	**1**					
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**				
Data output	**none**			**0**			
	RS 232			**1**			
	RS 485			**2**			
	MODBUS			**3**			
	PROFIBUS			**4**			
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**
	SW validation - IEC 62138, IEC 61226						**VS**

Basic configuration of the instrument is indicated in bold.