



OM 602AV

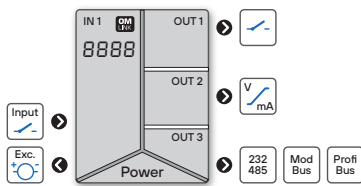
- 6-digit programmable projection
- Output 0...5/20 mA/4...20 mA
0...2/5/10 V; ±10 V
- Sinus/Saw/Triangle/Rectangle/Random function
- Size of DIN 96 x 48 mm
- Power supply 10...30 V AC/DC; 80...250 V AC/DC

Option

Excitation ● Comparators ● Data output ● Three-color display



PROGRAMMABLE ANALOG OUTPUT



OM 602AV is a panel programmable analog output.

The instrument is based on a single-chip microprocessor and precision D/A transmitters, which guarantees accuracy, stability and easy control.

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

No. of outputs	1	isolated, adjustable with 16-bit DAC, output type and range is selectable
AV Range	0...2 V 0...5 V 0...10 V ±10 V 0...5 mA 0...20 mA 4...20 mA	resistive load ≥ 1 kΩ resistive load ≥ 1 kΩ resistive load ≥ 1 kΩ resistive load ≥ 1 kΩ compensation < 1 000 Ω/24 V compensation < 1 000 Ω/24 V compensation < 1 000 Ω/24 V
TC	15 ppm/°C	
Non-linearity	0.1 % from FS	
Accuracy	±0.02 % of FS	
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	

EXTERNAL INPUT

No. of inputs	3, on contact
Function	OFF no function assigned 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 mm 20 mm
Display color	red or green red / green / orange
Description	last two characters on the display may be used for description of measured quantities <i>only for display with LED height 14 mm</i>
Decimal point	adjustable - in menu
Brightness	adjustable - in menu

INSTRUMENT SPECIFICATION

TC	50 ppm/°C
OM Link	company communication interface for operation, setting and update of instruments
Watch-dog	reset after 500 ms
Calibration	at 25°C and 40 % r.h.

RELAYS / OC OUTPUT

No. of outputs	up to 4
Type	digital, menu adjustable
Mode	HYSTER active above set value WINDOW active in the set window / band BATCH active in set period ER.FR.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
Function Relays/OC	CLOSE is closed in active mode OPEN is open in active mode
Limits	-.99999...999999
Hysteresis	0...999999
Delay	0...99.9 s
Outputs	1...2x relay with switch-on contact (Form A) (250 VAC/30 VDC, 3 A)* 1...2x relay with switching contact (Form C) (250 VAC/50 VDC, 3 A)* 2x bistable relays (250 VAC/250 VDC, 3 A/0,3 A) 2...4x open collector (30 VDC/100 mA)
Relays	1/8 HP 277 VAC, 1/10 HP 125 V, Pilot Duty D300

* values apply for resistance load

DATA OUTPUTS

No. of outputs	1
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	300...230 400 Baud 9 600 Baud...12 Mbaud (PROFIBUS)
RS 232	isolated
RS 485	isolated, addressing (max. 31 instruments)

EXCITATION

Adjustable	5...24 VDC, <1.2 W, isolated
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POWER SUPPLY

Range	10...30 V AC/DC, ±10 %, PF ≥ 0.4, I _{30%} < 40 A / 1 ms, isolated 80...250 V AC/DC, ±10 %, PF ≥ 0.4, I _{30%} < 40 A / 1 ms, isolated <i>Protection by fuse inside the device</i>
Consumption	< 8.0 W / 7.8 VA

MECHANIC PROPERTIES

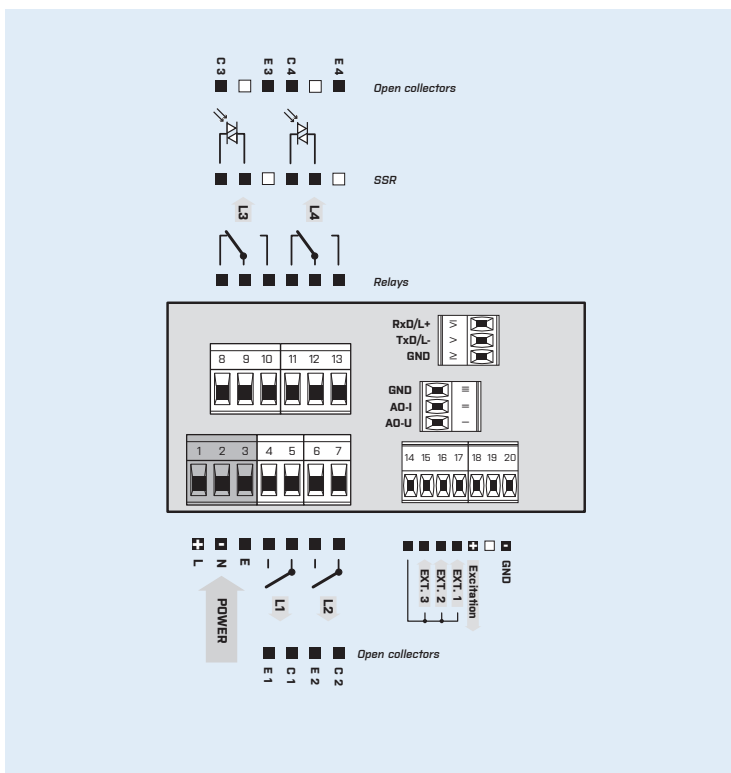
Material	Noryl GFN2 SE1, incombustible UL 94 V-1, black
Dimensions	96 x 48 x 120 mm (w x h x d)
Panel cutout	90.5 x 45 mm (w x h)

OPERATING CONDITIONS

Connection	connector terminal blocks, section < 1.5 / 2.5 mm ²
Stabilization period	within 5 minutes after switch-on
Working temperat.	-20°...60°C
Storage temperat.	-20°...85°C
Working humidity	< 95 % r.v., non condensing
Protection	IP64, front panel only
Construction	safety class I
El. safety	EN 61010-1, A2
Dielectric strength	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 resist.*	for pollution degree II, measuring cat. III power supply, input > 670 V (PI), 300 (DI) input, output, excitation > 300 V (PI), 150 V (DI)
EMC	EN 61326-1, Industrial area
Seismic qualification	IEC/IEEE 60980-344 Edition 1.0, 2020, par. 6, 9
Mechanical resistance	EN 60068-2-6 ed. 2:2008

* PI - Primary insulation, DI - Double insulation

CONNECTION



ORDER CODE

OM 602AV

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Power supply	10...30 V AC/DC 80...250 V AC/DC	0 1		
Comparators	none 1x relay (Form A) 2x relay (Form A) 3x relays (2x Form A + 1x Form C) 4x relays (2x Form A + 2x Form C) 2x open collector 4x open collector 2x open collector + 2x relays (Form C) 2x relays (Form C) 2x SSR 2x bistable relays 1x relay (Form C)	0 1 2 3 4 5 6 7 8 9 A B		
Data output	none RS 232 RS 485 Modbus PROFIBUS	0 1 2 3 4		
Excitation	no yes	0 1		
Display color	red (14 mm) green (14 mm) red/green (20 mm)	1 2 3		
Specification	customized version, do not fill in SW validation - IEC 62138, IEC 61226			00 VS

Basic configuration of the instrument is indicated in bold.