

Technical specifications: GMA22-MW / GMA22-MS



Display & control elements

Status-LEDs:	4 status LEDs for alarms and operating states
Display:	2,2" graphic display
Buttons:	3 buttons
Alarm:	Buzzer max.100dB(A) adjustable

Environmental conditions

Mounting:	only indoors up to 2000m above sea level
Storage:	-25...+60°C 5...95%r.h. (recommended 0...+30°C 40...60%r.h.)
Operating conditions GMA22-MW :	-20...+50°C 5...95%r.h. (without internal PSU) -20...+45°C 5...95%r.h. (with internal PSU and max. 150mA load at U_{out}) -20...+40°C 5...95%r.h. (with internal PSU and max. 250mA load at U_{out})
Operating conditions GMA22-MS :	-20...+55°C 5...95%r.h. (without internal PSU) -20...+50°C 5...95%r.h. (with internal PSU and max. 150mA load at U_{out}) -20...+45°C 5...95%r.h. (with internal PSU and max. 250mA load at U_{out})

Power supply (PSU)

	GMA22 with internal PSU	GMA22 without internal PSU
Operating voltage U_e :	100-240V AC mains voltage 50-60Hz	24V DC (20-30V DC) through stabilized SELV or PELV power supply
Power consumption:	max. 25VA (with transmitters) max. 20W (with transmitters)	max. 6VA (without transmitters) max. 5W (without transmitters)
Fuses:	F1: T315mA changeable (for TRM) F2: 250mA not changeable (for GMA internal)	F1: T630mA changeable (for TRM)

Transmitter connections

	GMA22 with internal PSU	GMA22 without internal PSU
Supply output U_{out} :	24V DC $\pm 5\%$ of internal power supply max. 300mA	24V DC (20-30V DC) of external power supply max. 600mA
Analog signal input I_{IN} :	4-20mA or 0,2-1mA (4-20mA with ACDC capability) Tolerance*: $\pm 0,3\%MR@4-20mA$ or $\pm 1,2\%MR@0,2-1mA$ (MR=measuring range) (load approx. 50..100 Ω , $I_{max}=70mA$ permanent / 500mA temporary)	
Digital signals RS485 bus:	RS485; Half-Duplex; max. 38400 Baud	

Measurement processing

Update time:	1s	
Setting times for RS485:	Rise time $t_{50} < 2s$ or $t_{90} < 2sec$	Decay time $t_{50} < 2s$ or $t_{10} < 2sec$
for 4...20mA:	Rise time $t_{50} < 2s$ or $t_{90} < 4sec$	Decay time $t_{50} < 2s$ or $t_{10} < 4sec$
for 0,2...1mA:	Rise time $t_{50} < 6s$ or $t_{90} < 10sec$	Decay time $t_{50} < 6s$ or $t_{10} < 10sec$
Standby delay:	<40s (can be extended by running-in times of gas measuring transmitters)	

RS485 output

RS485 bus:	RS485; Half-Duplex; max. 38400 Baud (only for GMA200 relay modules)
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Relais outputs

Contacts of the GMA22-MS :	4 relays NO
Contacts of the GMA22-MW :	4 relays SPDT (GMA22 without internal PSU) 3 relays SPDT, 1 relay NO (GMA22 with internal PSU)
Insulation distances GMA22-MS :	Double insulation between adjacent relays
Insulation distances GMA22-MW :	Basic insulation between adjacent relays
Contact load capacity:	3A/250V AC or 3A/30V DC
Minimum switching current:	10mA
Minimum switching voltage:	5V

Data logger (optional)

	max. 2GB microSD card with FAT formatting (FAT16)
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USB connection

	Mini USB socket for device configuration with PC
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Housing

Protection class:	IP64 according to IEC 60529; IK08 according to IEC 62262
Material:	Plastic
Dimensions:	97 x 140 x 50 mm (W x H x D)
Weight:	275g

Cable junction

Cable:	3-wire $\geq 0,75\text{mm}^2$ LiYY, NYM (for GMA supply) 2-4 wires 0,5...1,0...(1,5) mm^2 LiYY, LiYCY, Y(St)Y (for transmitters)
Cable glands:	5 pieces M16x1,5 (for cable diameter 4,5-10mm)
Terminal blocks:	0,5...1,0 mm^2 cross section (1,5 mm^2 for solid conductor)

Approvals / Tests

Electromagnetic compatibility:	DIN EN 50270:2015	(Interference emission: type class I, interference immunity: type class II)
Electrical safety:	EN 61010-1:2010	(Pollution degree 2, overvoltage category II for mains supply) (Pollution degree 2, overvoltage category III for relay contacts)

Service life

20 years

* This is only the measurement tolerance of the GMA. The transmitters have additional tolerances.