

Technical specifications: GMA200-MT6 / GMA200-MT16



Display & control elements	
Status-LEDs:	15 status LEDs for alarms, operating and relay states
Display:	2,2" graphic display
Buttons:	5 buttons
Alarm:	buzzer max. 70dB(A) adjustable
Environmental conditions	
Mounting:	in the switch cabinet or in the wall housing, indoors on a mounting rail TS35 according to DIN EN 60715 up to an altitude of 2000 m above sea level
for storage:	-25...+60°C 0...99%r.h. (recommended: 0...+30°C 40...60%r.h.)
for operation:	-20...+50°C 0...99%r.h.
Power supply	
external supply with:	GMA200-MT6 stabilized SELV or PELV power supply
Operating voltage U _e :	24V DC (20-30V DC permissible)
Power consumption:	max. 5W (without transmitter) max. 30W (with transmitter)
Fuse:	F1=T 500mA (for GMA200) F2=M 1A (for transmitter)
	GMA200-MT16 stabilized SELV or PELV power supply
	24V DC (20-30V DC permissible)
	max. 5W max. 5W (without transmitter) F1=T 500mA
Transmitter connections	
Supply outputs:	GMA200-MT6 24V DC (20-30V DC see above) 6x 150mA or I _{ges} =900mA
Analog input signals I _{IN} :	6x 4-20mA or 0,2-1mA
Digital signals TRM bus1+2:	GMA200-MT16 not possible 16x 4-20mA or 0,2-1mA
	Tolerance*: ±0,3%MR@4...20mA or ±1,2%MR@0,2...1mA (MR=measuring range) Load approx. 50...100Ω, I _{max} =70mA permanent / 500mA short time RS485; Half-Duplex; max. 38400 Baud
Measurement value processing	
Update time:	1s (If there are more than 16 transmitters and relay modules on the same TRM bus and the data transmission is only at 9600 baud, the cycle time is extended from 1.0 to max. 1.3 s, so that the time of 1 s cannot be maintained)
Adjustment time for RS485:	Rise time t ₅₀ <2s or t ₉₀ <2sec
for 4...20mA:	Rise time t ₅₀ <2s or t ₉₀ <4sec
for 0,2...1mA:	Rise time t ₅₀ <6s or t ₉₀ <10sec
Ready delay:	(extended by setting times of the gas measuring transmitters) <40s (can be extended by running-in times of gas measuring transmitters)
	Decay time t ₅₀ <2s or t ₁₀ <2sec Decay time t ₅₀ <2s or t ₁₀ <4sec Decay time t ₅₀ <6s or t ₁₀ <10sec
RS485 outputs	
GMA bus:	RS485; Half-Duplex; max. 230400 Baud (for GMA200 relay modules, control centre, PC, PLC or gateway)
RS485 bus:	RS485; Half-Duplex; max. 38400 Baud (only for GMA200 relay modules)
Relay outputs	
Contacts:	8 relays with normally open contact
Contact load capacity:	3A/250V AC or 3A/30V DC
Minimum switching current:	10mA
Minimum switching voltage:	5V
Switching frequency:	max. 100 per year (per relay contact), valid for SIL applications according to EN 50402
Insulation clearances:	Basic insulation between the relays: 1&2, 3&4, 5&6, 7&8 Double insulation between the relays: 2&3, 4&5, 6&7
Analogue outputs	
I _{OUT} 1+2:	4-20mA with linear transfer function (load max. 560Ω)
Accuracy:	±0,3%MR@10...30°C or ±0,8%MR@-20...50°C (MR=measurement/signal range)
Alarm acknowledgement inputs	
Reset 1+2:	0-3V DC (alarm acknowledgement occurs on contact with GND; U _{MAX} =30V DC)

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Data logger (optional)	max. 2 GB microSD card with FAT formatting (FAT16)
USB connection	Mini USB socket for device configuration with PC
Housing	Attachment: on mounting rail TS35 according to EN 60715 Protection class: IP20 Material: Plastic Dimensions: 162 x 97 x 62 mm (W x H x D) Weight: 370g
Cable junction	Cable: 2-4 wires 0.5-1.5 mm ² LiYY, NYM (for GMA200 supply) 2-4 wires 0.5-1.5 mm ² LiYY, LiYCY (for transmitters) 2-wire 1x2x0,22 mm ² BUS-LD (for GMA bus with length > 10 m) Terminal blocks: 0,08..2,5mm ² cross-section
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 III for relay contacts) Functional safety: EN 50402:2017; IEC 61508-1 bis -7:2010 (SIL2/SC3) EN 50271:2018; EN 62061:2016; ISO 13849-1:2015 Metrological suitability: EN 60079-29-1:2016 (EX); EN 50104:2010 (OX); EN 45544-1/-2/-3:2015 (TOX)
Service life	20 years

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