Technical specifications:
GMA200-MW16

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. 100dB(A) adjustable

Environmental conditions

Mounting:	only indoors up to an altitude of 2000m above sea level
for storage:	-25...+60°C | 0...99%r.h. (recommended: 0...+30°C | 40...60%r.h.)
for operation:	-20...+55°C | 0...99%r.h.

Power supply

Operating voltage Ue:	100 V to 240 Vac 50 Hz to 60 Hz mains voltage or/and 24 Vdc (20 Vdc to 30 Vdc) through stabilized SELV or PELV power supply	
Power consumption:	max. 10W	(without transmitter)
	max. 90W	(with transmitter)
Fuse:	F1=T 500 mA	(for GMA200)
	F2=T 2.5A	(for transmitter)

Transmitter connections

Supply outputs:	24 Vdc ±3 % with built-in power supply, otherwise 20 Vdc to 30Vdc (see above) 16x 150 mA or Iges=0.6 A with different allocation
Analog input signals I_{IN}:	4-20 mA or 0.2-1 mA Tolerance*: ±0,3%MR@4...20mA or ±1,2%MR@0,2...1mA (MR=measuring range) Load approx. 50...100Ω, Imax=70mA permanent / 500mA short time
Digital signals TRM bus1+2:	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	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
	(extended by setting times of the gas measuring transmitters)	
Ready delay:	<40s (can be extended by running-in times of gas measuring transmitters)	

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)

smart GasDetection Technologies

Technical specifications:
GMA200-MW16

Data logger (optional)		max. 2 GB microSD card with FAT formatting (FAT16)
USB connection		Mini USB socket for device configuration with PC
Housing		
	Protection class:	IP65 in accordance with IEC 60529; IK08 in accordance with IEC 62262
	Material:	Plastic
	Dimensions:	270 x 290 x 98 mm (W x H x D)
	Weight:	approx. 2kg
Cable junction		
	Cable:	3-4 wire ≥0.75 mm^2 LiYY, NYM (for GMA200 supply) 2-4 wire 0.5-1.5 mm^2 LiYY, LiYCY (for transmitters) 2-wire 1x2x0,22mm^2 BUS-LD (for GMA bus with length >10 m)
	Cable glands:	max. 20 x M16x1.5 (for cable diameter 3-7 mm respectively 5-10 mm)
	Terminal blocks:	0.08 mm2 to 2.5 mm^2 cross-section
Approvals/Tests		
	Electromagnetic Compatibility:	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)
	Functional safety:	EN 50402:2017; IEC 61508-1 to -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.

smart GasDetection Technologies