

# 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 <b>GMA22-MW</b> : | -20...+50°C   5...95%r.h. (without internal PSU)<br>-20...+45°C   5...95%r.h. (with internal PSU and max. 150mA load at U <sub>out</sub> )<br>-20...+40°C   5...95%r.h. (with internal PSU and max. 250mA load at U <sub>out</sub> ) |
| Operating conditions <b>GMA22-MS</b> : | -20...+55°C   5...95%r.h. (without internal PSU)<br>-20...+50°C   5...95%r.h. (with internal PSU and max. 150mA load at U <sub>out</sub> )<br>-20...+45°C   5...95%r.h. (with internal PSU and max. 250mA load at U <sub>out</sub> ) |

## Power supply (PSU)

|                                    | <b>GMA22 with internal PSU</b>   | <b>GMA22 without internal PSU</b>                                 |
|------------------------------------|--|---|
| Operating voltage U <sub>e</sub> : | 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)<br>max. 20W (with transmitters)                      | max. 6VA (without transmitters)<br>max. 5W (without transmitters) |
| Fuses:                             | F1: T315mA changeable (for TRM)<br><br>F2: 250mA not changeable (for GMA internal) | F1: T630mA changeable (for TRM)                                   |

## Transmitter connections

|                                       | <b>GMA22 with internal PSU</b>   | <b>GMA22 without internal PSU</b>                         |
|---------------------------------------|--|---|
| Supply output U <sub>out</sub> :      | 24V DC ±5% of internal power supply<br>max. 300mA  | 24V DC (20-30V DC) of external power supply<br>max. 600mA |
| Analog signal input I <sub>IN</sub> : | 4-20mA or 0,2-1mA (4-20mA with ACDC capability)<br>Tolerance*: ±0,3%MR@4-20mA or ±1,2%MR@0,2-1mA (MR=measuring range)<br>(load approx. 50..100Ω, I <sub>max</sub> =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 <sub>50</sub> <2s or t <sub>90</sub> <2sec                   | Decay time t <sub>50</sub> <2s or t <sub>10</sub> <2sec  |
| for 4...20mA:            | Rise time t <sub>50</sub> <2s or t <sub>90</sub> <4sec                   | Decay time t <sub>50</sub> <2s or t <sub>10</sub> <4sec  |
| for 0,2...1mA:           | Rise time t <sub>50</sub> <6s or t <sub>90</sub> <10sec                  | Decay time t <sub>50</sub> <6s or t <sub>10</sub> <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) |
|------------|---|

## Relais outputs

|  |   |
|--|---|
| Contacts of the <b>GMA22-MS</b> :      | 4 relays NO   |
| Contacts of the <b>GMA22-MW</b> :      | 4 relays SPDT (GMA22 without internal PSU)<br>3 relays SPDT, 1 relay NO (GMA22 with internal PSU) |
| Insulation distances <b>GMA22-MS</b> : | Double insulation between adjacent relays   |
| Insulation distances <b>GMA22-MW</b> : | 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) |
|--|---|

## 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)<br>2-4 wires 0,5...1,0...(1,5) $\text{mm}^2$ 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 $\text{mm}^2$ cross section (1,5 $\text{mm}^2$ 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)<br>(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.