GMA 200-MT

Fixed Gas Monitoring Controller

GMA 200-MT
Controller

- A variety of transmitters can be connected for measurement of combustible, toxic gases/vapors and oxygen
- Multiple relay configurations
- Flexible, reliable and economic
- Intuitive, backlit graphical LCD with "traffic light function" (green, amber, red)
- SIL certification
- DIN rail mounting

GMA 200-MT
Decisive Safety Advantage

Transmitter for combustible gases and vapors

Transmitter for toxic gases / vapors and oxygen

GMA200 MT-16

Transmitter for combustible gases and vapors

Transmitter for toxic gases / vapors and oxygen

GMA200 MT-6

GfG

For more than 50 years, the key goal of GfG has been to meet the highest demands of occupational health and safety, industrial equipment reliability and environmental protection. This goal has been reached by developing innovative and reliable gas warning systems. Development of the new GMA 200 gas warning system satisfies these requirements while taking into account suitability testing in line with ATEX Directive 94/9/EC. If switching functions for explosion protection are required, the GMA 200 gas warning system is the optimal solution. It also meets the requirements for gas warning systems without necessary ATEX certification and functional safety requirements (SIL).

Design of the GMA 200 gas warning system

The design of the GMA 200 gas warning system ensures flexible and simple operation in industrial and commercial applications for measuring combustible

and toxic gases / vapors, and for measuring oxygen concentrations. The compact design of the GMA 200 as a DIN rail module enables cost-effective and space-saving installation.

Modular design of the GMA 200 MT6 / MT16 gas warning system:

Up to 16 detectors can be connected to the GMA 200 gas warning system. A software program enables the quick and easy configuration of the measuring points for already installed GMA 200 gas warning systems. Measuring point designations, the detector type, the type of gas and measuring range as well as three individual or specified alarm thresholds can be programmed for each measuring point using the configuration software. A microprocessor evaluates the analog input signals of the connected detectors.

Integrated relays

As a result of the increasing requirements being placed on safety measures, even redundant protection against gas hazards, complex gas warning systems are in demand. The GMA 200 gas warning system is equipped with 8 internal relays. 6 relays can be freely configured using the software program in order to implement safety measures and alarms. The configuration software offers numerous and flexible options, such as the assignment of one or several measuring points to relays, single alarms per measuring point and alarm threshold, configuration of collective or group alarms and fault messages and voting functions. Two further relays are available for safety-related fault messages and for maintenance.

Relay modules

Using a GMA RT relay module, it is possible to extend the GMA 200 gas warning system by 16 additional freely configurable relays. A total

Universal: various detectors can be connected and evaluated

of 4 additional relay modules and thus 64 additional relays can be managed via the GMA 200 gas warning system. Digital connection of the GMA RT relay module to the GMA 200 gas warning system enables the local positioning of the relay modules. The local and thus flexible installation of the relay modules results in large cost savings due to reduced cabling and assembly functions.

Availability of the gas warning system

Besides the traditional voltage supply, the GMA 200 gas warning system can also be operated with a redundant, safety-related voltage supply and therefore meets the highest demands of functional safety and the required permanent availability of gas warning systems for detecting potential gas hazards.

System functions: LED displays

The status of the GMA 200 gas warning system – operation, fault, service – is shown via LEDs.

Graphical display

The clearly structured layout of the GMA 200 gas warning system enables the quick detection of hazardous situations. Currently measured values are permanently displayed on the LCD
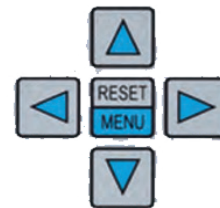

GMA 200-MT with a display for quick and safe evaluation

graphical display. In the event of gas alarms, the display lighting is automatically activated with a red background.

Additionally, the LED display for Alarm 1, Alarm 2, Alarm 3 is shown. In the event of an alarm, the status of the active relays 1-8 is displayed simultaneously via LEDs. The integrated memory enables the reading of alarm levels and minimum / maximum values per measuring point at the LCD for an initial, quick hazard assessment.

Data logger function

The GMA 200 gas warning system can be equipped with a micro SD card for saving the measured values. The measured values, mean values, alarm events and faults are permanently stored at

individually configurable intervals, and can be read out for evaluation.

Operation via keyboard

Five buttons enable operation at the GMA 200 gas warning system. The main functions of the keyboard are the acknowledgement of alarms and the menu-driven operation. Information on the status of the gas warning system, detector and the relays can be retrieved in the operating menu.

Configuration

A USB port at the GMA 200 gas warning system can be used for connection to the configuration software.

GMA 200-RTD with display for remote measured value display

A USB port on the GMA 200 gas warning system can be used for connection to the configuration software.

Specifications

GMA 200 MT

Gas
Combustible, oxygen, and toxic gases/vapors, for all GfG transmitters.

Ambient Temperature
Operation: -4 to +122°F / -20°C to + 50ºC
Storage: -22 to +140°F / -30°C to + 60°C

Humidity
30 to 96 % r.h.

Power Supply
2 x 24 V DC, 20-30 V
(1 x redundant voltage supply)

Power Consumption
GMA 200–MT6 gas warning system:
30 W including connected detectors
GMA 200–MT16 gas warning system: 5 W
GMA 200 RT relay module: 6 W

Input Signal
16 analog inputs 4…20 mA or 0.2-1 mA
max. 50 Ohm input resistance

2 digital inputs: Acknowledgement of alarms can be freely configured

2x RS485 BUS, e.g., for the connection of external relay modules or digital transmitters in BUS wiring

1x RS485 BUS for the digital transfer of measured and output data to a higher-level control center or with master functionality of a GMA 200 for the connection of GMA 200-RT relay modules

Output Signal
6 relays (normally open contact), freely configurable for single alarms per measuring point and alarm threshold, configuration of collective or group alarms, fault messages and voting functions

1 relay for maintenance and 1 for fault messages (closed-circuit principle)

2 analog outputs: 4-20mA / 600 Ohm max. resistance, freely configurable

External Relay Module
Up to 64 additional freely configurable relays (with additional relay modules, each with 16 relays)
Can be configured for single alarms per measuring point and alarm threshold, configuration of collective or group alarms, fault messages and voting function

Display and Control Elements
Backlit LCD graphical display 33 x 53 mm with 132 x 65 pixels 5 buttons (left, right, up, down, OK)8 LEDs: 4x red, 1x green, 3x yellow

Connection Options
GMA 200 – MT 6 gas warning system:
Up to 6 analog detectors or digital detectors
GMA 200 – MT 7 -16 gas warning system:
Up to 16 analog detectors or digital detectors

Function Keys
5 keys for all settings, e.g. alarm levels, calibration

Alarms
3 independent threshold alarms per measuring point for Alarm 1, Alarm 2 and Alarm 3
Can be freely set in the measuring range

Alarm Functions
Exceeding, not achieved resettable (additional horn only), non-resettable
non-latching / latching

Data Storage
Measured values can be stored on an SD card for the permanent data recording of measured values, alarms and faults

Intervals can be set (5 sec.-60 min.), recording of instantaneous and mean values, minimum/ maximum concentration can be selected per measuring channel

Casings
Wall mount casings for 2, 4, 7, 12, 24 or 36 controllers
Panel mount casings for 2, 4 or 7 controllers
19-inch racks for 12 controllers
Cabinets for large systems

Weight
21.7 ounces (620 grams)

Dimensions
3.5433x6.2992x2.5591 inches (90x160x65 mm) (HxWxD)

Protection Classes / Approvals
Housing:
IP20

ATEX approval
Applied for in accordance with ATEX 94/9/EC

Electrical safety:
EN 61010:2010
Degree of soiling 2
Overvoltage category III for relay contacts

Electromagnetic compatibility:
EN 50270:2006
Emitted interference type class I
Interference resistance type class II

Metrological suitability testing:
Applied for according to DIN-EN 60079-29-1

Specifications subject to change without notification

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