

GMA 200-MW Controller

High-performance gas measurement and warning system for up to 16 transmitters



- Advanced and flexible controller for combustible, O₂ and toxic gas
- IP-65 wall-mounting housing, with integral audible and LED alarms
- Flexible, reliable and economic
- Up to 16 transmitters per GMA 200-MW controller...*in any combination*
- Freely programmable relays
- Clearly structured, easy-to-use push-button interface
- Backlit graphic LCD changes color to indicate alarm
- Connect to other measurement devices with 4-20 mA output
- SIL certified



Decisive safety advantage

GfG Instrumentation

GfG Instrumentation is a global leader in the design and manufacture of gas detection products used to protect people, facilities and the environment. For over 50 years we have provided gas detection solutions for life critical health and safety applications. Our innovative and reliable gas warning and measurement systems provide the industry benchmark for accuracy, dependability, and cost-effective ownership.

GMA 200-MW Controller

The GMA 200-MW is our most flexible and advanced gas detection system controller. The design of the GMA 200-MW ensures simple and clearly structured operation in industrial and commercial applications. The system can be configured for control of any combination of GfG gas transmitters for the measurement of an extremely wide range of toxic and combustible gases and vapors.

Flexible modular design

Each GMA 200-MW module can control up to 16 individual gas transmitters (sensors). The self-contained, IP-65 wall-mounted housing facilitates cost-effective and space-saving installation. GMA 200-MW systems are scalable, and easy to expand by adding additional controller and relay modules. Optional gateway modules allow control via remote or touch-screen computer interface.

Easy to configure

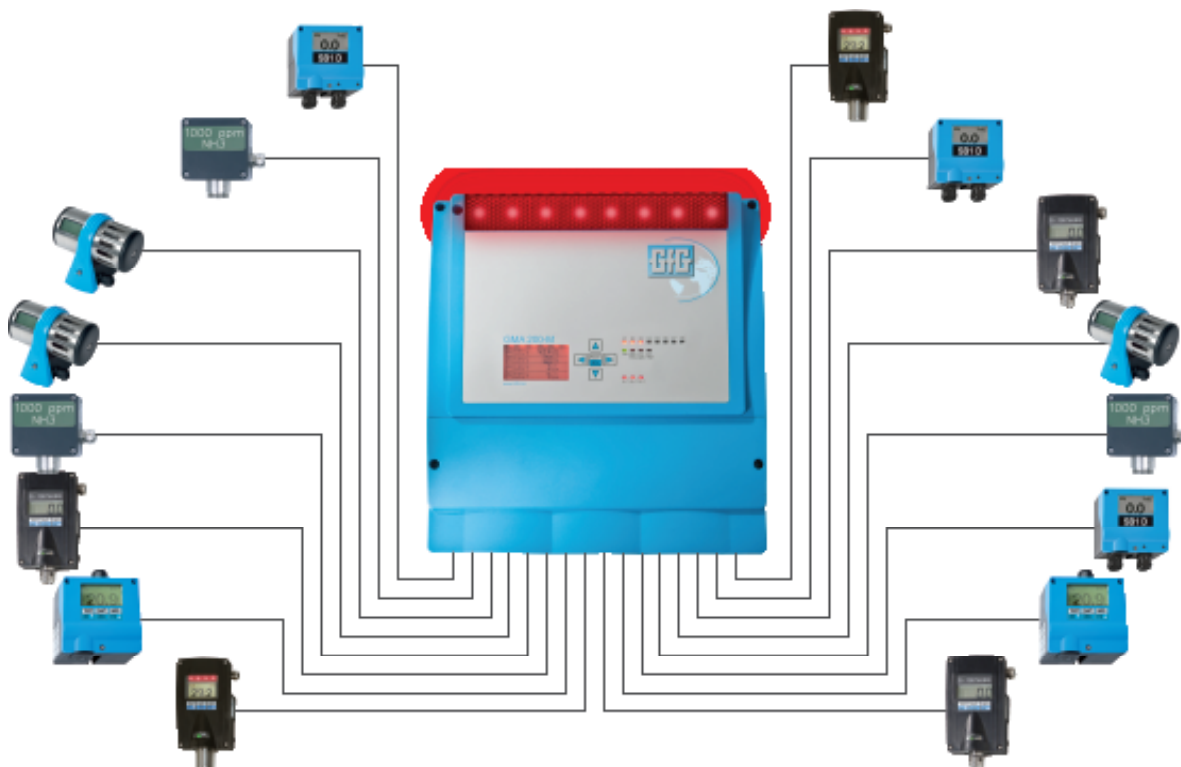
Easy-to-use, menu driven GMA 200-MW software allows configuration of sensor type, gas type, measuring point designations, units of measurement, calibration curves, and function of the comprehensive and fully programmable relays. Up to three individual or specified alarm thresholds can be programmed for each measuring point. The GMA 200-MW continuously evaluates the analog input signals of the connected detectors.

Integrated relays

GMA 200-MW systems include comprehensive and fully programmable relays. Each controller is equipped with 8 internal relays. Menu-driven software allows easy assignment of measuring points to relays, single or multiple alarms per point, alarm thresholds, configuration of collective or group alarms, zoning, fault messages and voting functions.

Relay modules

GMA 200-RW relay modules are housed in easy to install IP-65 wall mounted enclosures. Each relay module provides an additional 16 freely configurable relays. A total of four additional relay modules (for 64 additional relays) can be managed by the same GMA 200-MW system. Digital connection with the GMA 200-MW controller allows remote positioning of the relay module wherever it makes the most sense, substantially reducing cabling and installation costs.



Up to 16 transmitters for combustible, oxygen and toxic gas measurement can be connected to the GMA 200-MW

Universal: Use to connect and control all available GfG gas transmitters

Remote terminal displays

Relay modules are available with or without an integral display for readings and system information, making it easy to add a remote terminal wherever needed.

Optional Fieldbus-Gateways

Optional gateway modules allow integration of the GMA 200-MW system into existing company networks based on TCP/IP, Process Field Bus or Process Field Network protocols. Monitoring and system performance data are easily exported for viewing or analysis. A wifi interface can be added to the gateway to allow wireless connection with a touch screen Windows® computer or smart-phone to display or access system information.

GMA 200 power options

GMA 200-MW power options include traditional voltage inputs (2 x 24 V DC, 20-30 V), as well as operation via a redundant, uninterruptible power supply (UPS), ensuring continued operation of the gas warning system even during a power outage.

Integral alarms

The GMA 200-MW includes built-in bright LED strobe light and loud audible alarms.

LED indicator lights

The status of the GMA 200-MW system (including operation, fault, service, alarm and relay status) is shown via LEDs. Individual LED indicators identify the type and severity of the alarm condition, (FLT, AL1, AL2, AL3), and any relays activated by the condition, (R1 through R8).

Datalogging standard

Measured values, mean values, alarm events and faults are permanently stored on a microSD memory card.

Graphical display

Currently measured values are displayed on a backlit, graphical LCD. In the event of an alarm the display changes color from green to red, and highlights the affected channels.

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

Operation via keypad

Operation of the GMA 200-MW is through easy-to-use menus, and a simple 5 button interface for alarm acknowledgement, and viewing information on the status of the gas warning system, detectors and relays. The intuitive push-button controls make it easy to navigate through additional screens of information. The integrated display enables the reading of alarm levels through the controller LCD for easy hazard assessment.

Configuration

A built-in USB port in the GMA 200-MW is used for connection to the configuration software. GMA 200-MW systems connected through a Fieldbus gateway can be remotely connected with a GfG factory service center for configuration, diagnostic or service evaluation.

Easy and convenient service

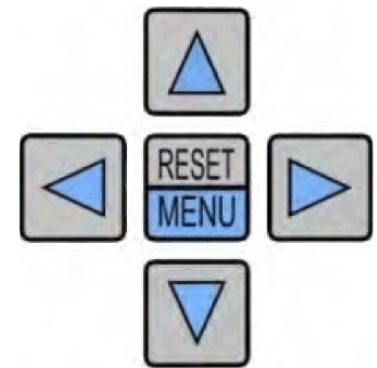
GfG offers full after-the-sale commissioning and field service support.

Additional modules available in IP-65 wall-mounting housings

- External relay module: GMA 200-RW
- Independent power supply: GMA 200-UPS
- Continuous, motorized pump sampling unit: GMA 200-ASV
- Fieldbus gateway: GMA 200-GW



GMA 200-MW in IP-65 wall-mounted housing



Full control with only five buttons: GMA 200-MW keypad



Redundant power supply in IP-65 wall-mounted housing: GMA 200-UPS

Technical data

GMA 200-MW

Gases and sensors:

GfG transmitters for combustible, oxygen and toxic gases and vapors

GMA 200-MW wall mounting (dimensions):

Approx. 10.6 x 11.4 x 3.9 in / 270 x 290 x 98 mm (WxHxD)

Display and control elements:

Backlit LCD graphical display 1.3 x 2 in (33 x 53 mm with 132 x 65 pixels)

5 buttons (left, right, up, down, OK)

LED indicators: 8 status and alarm (4x red, 1x green, 3x yellow); 8 relay (8x red)

Connection options:

Gas warning system GMA200-MW6:
Up to 6 analog or digital detectors

Gas warning system GMA200-MW16:
Up to 16 analog or digital detectors

Inputs:

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 (for connection of external relay modules or digital transmitters in BUS wiring)

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

Outputs:

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

Alarms:

3 independent threshold alarms per measuring point (AL1, AL2, AL3)

Gas alarms can be freely set in the measuring range

Alarm activation logic:

Ascending, descending, exceeding, not achieved acknowledgeable (additional horn only), non-acknowledgeable non-self-locking / self-locking

Data storage:

Measured values stored on microSD card

Intervals can be set (5 sec.-60 min.)

Records instantaneous and mean values, minimum/maximum concentration

Logger settings individually programmable per measuring channel

Ambient temperature:

Operation: -4 °F to +125 °F / -20 °C to +50 °C
Storage: -22 °F to +140 °F / -30 °C to +60 °C

External relay module:

16 relays per module; up to 4 relay modules per GMA 200-MW system (for up to 64 additional relays); freely configurable for single alarms per measuring point and alarm threshold, configuration of collective or group alarms, fault messages and voting functions

Power supply:

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

Power consumption:

Gas warning system GMA 200-MW6:
30 W (incl. connected detectors)

Gas warning system GMA 200-MW16:
5 W (not incl. connected detectors)

Relay module GMA 200 RT: 6 W

Protection classes/Approvals: Housing:

IP65

ATEX approval

Applied for in accordance with ATEX 94/9/EC

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 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)



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Specifications subject to change without notification