GMA 200 Series
Control Panels

Advanced and flexible controllers for combustible, oxygen, and toxic gas

- Advanced and flexible controllers for combustible, O_2 and toxic gas
- Complete controller package available in 4-16 channel configurations
- Up to 16 analog inputs or 16 digital inputs
- Scalable system with fully programmable menu driven relays
- Flexible, reliable and economic
- Clearly structured, easy-to-use push-button interface
- Backlit graphic LCD changes color to indicate alarm
- Local display, stack light horn and strobe
- Easy-to-install wall mounted enclosure
- Terminal blocks for easy transmitter termination
- Modbus (RS485) output
- NEMA 4X housing
- SIL certified

GfG Instrumentation
Technology for people and the environment

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-MT Controller

The GMA 200-MT is our most flexible and advanced gas detection system controller. The design of the GMA 200-MT 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.

ATEX 94/9/EC Conformity

The GMA 200-MT provides full conformity with ATEX Directive 94/9/EC, "Equipment and protective systems intended for use in potentially Explosive Atmospheres - Fourth edition September 2012 - Update December 2013". Conformity with ATEX 94/9/EC is explicitly required if switching or control functions for explosion protection are intended via the gas warning system.

Flexible modular design

Each GMA 200-MT module can control up to 16 individual gas transmitters (sensors). GMA 200-MT systems are scalable, and easy to expand by adding additional controller and relay modules. Optional gateway modules allow control via remote or touchscreen computer interface.

Integrated relays

GMA 200-MT 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.
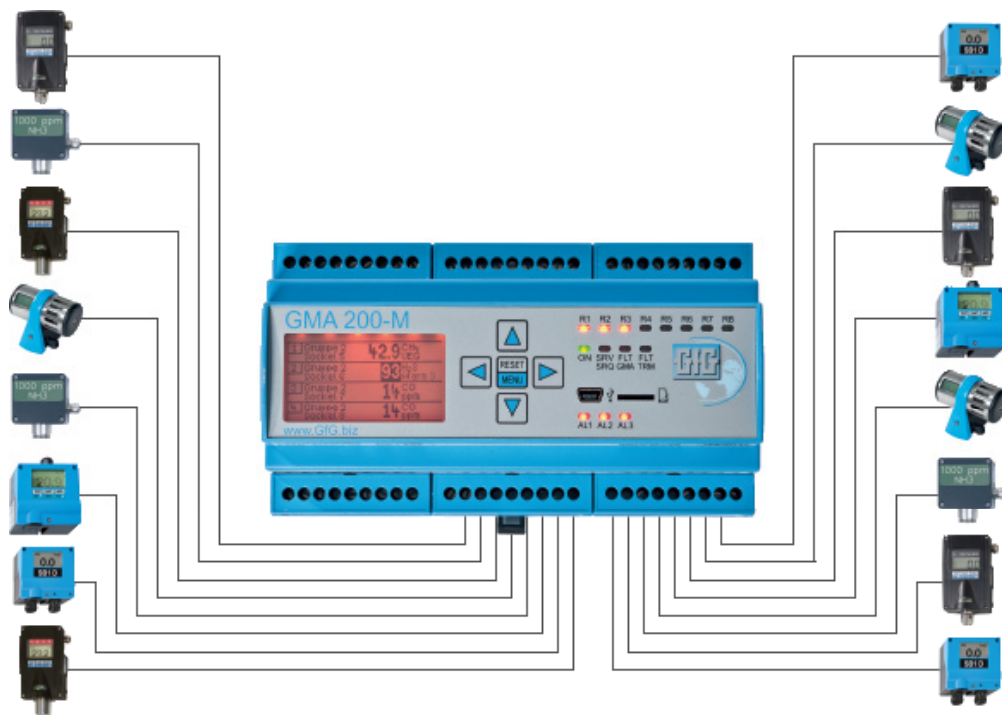
Up to 16 transmitters for combustible, O_2 and toxic gas measurement can be connected to the GMA 200

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

Relay modules

Each GMA 200-RT 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-MT system. Digital connection with the GMA 200-MT controller allows remote positioning of the relay module wherever it makes the most sense, substantially reducing cabling and installation costs. 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-MT 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-MT 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.

LED indicator lights

The status of the GMA 200-MT 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).

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.

Operation via keypad

Operation of the GMA 200 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.
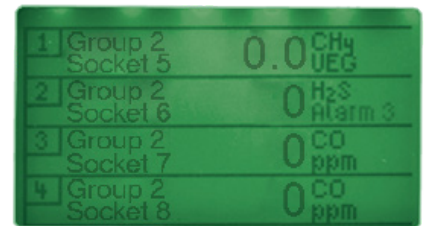
Datalogging standard

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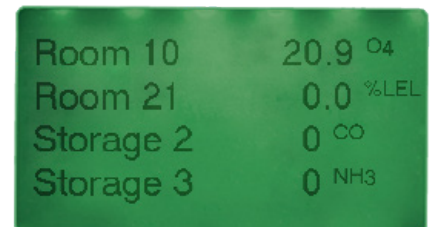
Easy and convenient service

GfG offers full after-the-sale commissioning and field service support.
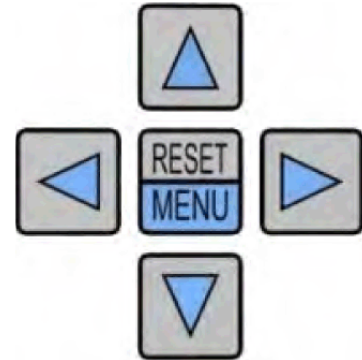
Full control with only five buttons

GMA 200-RTD with display for remote measured value display

Display for quick and safe evaluation

Technical data

GMA 200 Series Control Panels

Gases and sensors:
GfG transmitters for combustible, oxygen and toxic gases and vapors

Dimensions (HxWxD):
Control panel boxes for 4 & 6 channel - 14x12x6 in / 356x305x152 mm

Control panel boxes for 8, 12 & 16 channel - 16x14x8 in / 406x356x203 mm

Relay module box - 10x8x4 in / 254x203x102 mm

Note: add 6 in to height for horn/strobe

Display and control elements (GMA 200-MT & GMA 200-RTD):
Backlit LCD graphical display 1.3x2.1 in (33x53 mm with 132x65 pixels)

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

GMA 200-MT LED indicators: 8 status and alarm (4x red, 1x green, 3x yellow); 8 relay (8x red)

GMA 200-RTD LED indicators: 19 status LEDs for operating and relay statuses

Connection options (GMA 200-MT):
Gas warning system GMA200–MT6:
Up to 6 analog or digital detectors

Gas warning system GMA200–MT16:
Up to 16 analog or digital detectors

Connection options (Relay Module):
Terminal blocks: 18 GA (0.8-2.5 mm^2) cross section

2-4 wire cable 20 GA (0.5-1.5 mm^2) LiYY, NYM (for GMA 200 supply)

2-wire 18 GA (1x2x0.22 mm^2) BUS-LD (for GMA Bus with a length > 33 feet / 10m)

RS485 GMA Bus half-duplex galvanically isolated max. 230400 Baud (for GMA 200-M, control center, PC, PLC or Gateway)

Controller inputs:
16 analog inputs (4-20 mA or 0.2-1 mA); max. 50 Ohm input resistance

2 alarm resets: 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-MT for the connection of GMA 200-RT relay modules)

Controller outputs:
Modbus (RS485)

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

Relay module:
16 relays per module; up to 4 relay modules per GMA 200-MT 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

Horn/Strobe:
90 dB @ 1m
Single tier stack light
LED 960 mcd lumens
Height - 6 in / 150 mm
Main body - ABS resin
Lens - ABS translucent resin

Power supply:
110 V AC

4 channel uses 2 Amp power supply
6 & 8 channel uses 3.2 Amp power supply
12 channel uses 5 Amp power supply
16 channel uses 10 Amp power supply

Protections - short circuit, overload, over voltage and over temperature
LED indicator for power

Housing:
Polycarbonate material
Opaque cover
IP 68
NEMA 6P, 4X, 4, 3R and 12
Integrated lock hasp

Protection classes/Approvals:
Housing:
NEMA 4X

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)

ATEX approval (GMA 200-MT only):
Applied for in accordance with ATEX 94/9/EC

Metrological suitability testing (GMA 200-MT only):
Applied for according to DIN-EN 60079-29-1

For further details on GMA 200 controllers and relay modules please consult the appropriate technical data sheets.