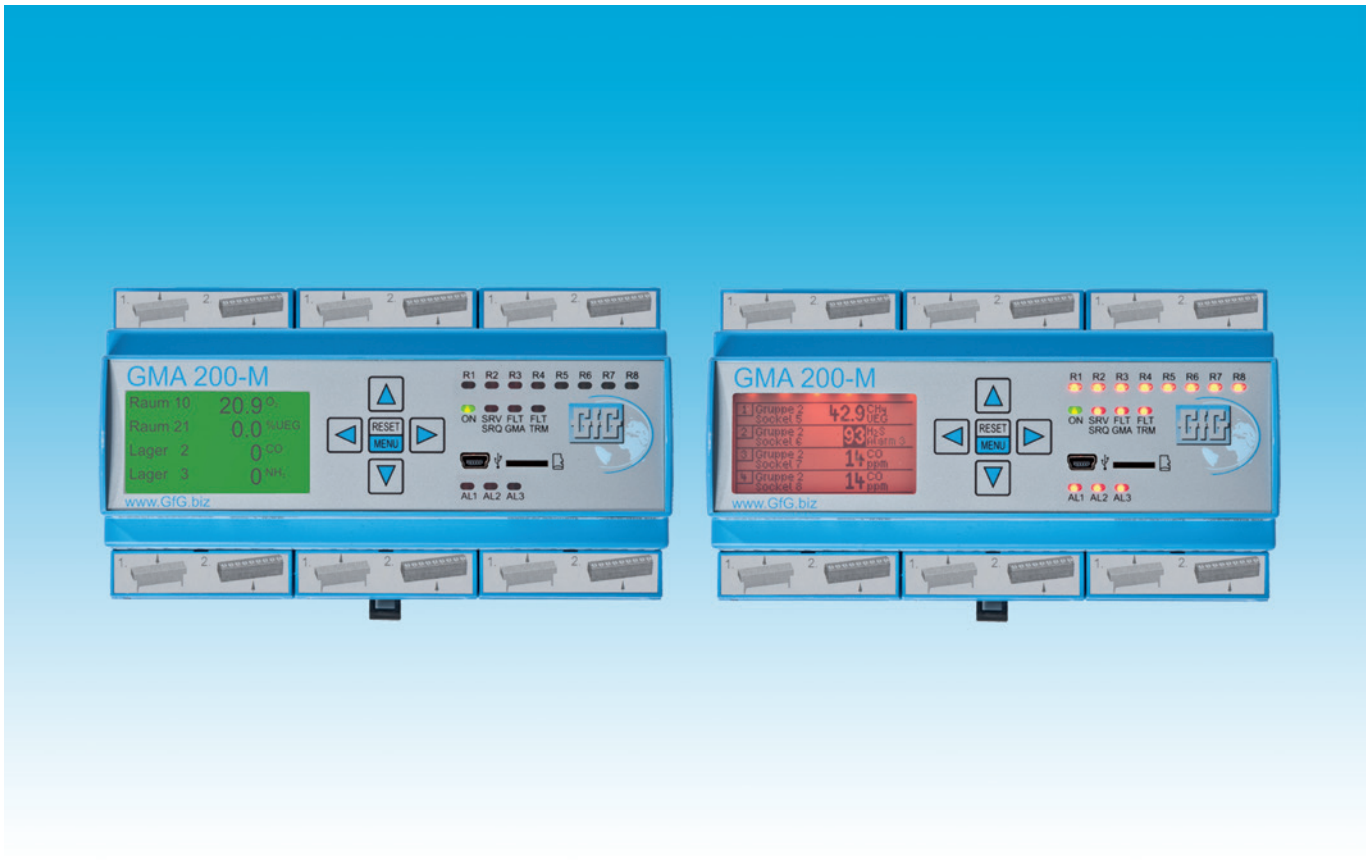
GMA200-MT Controller

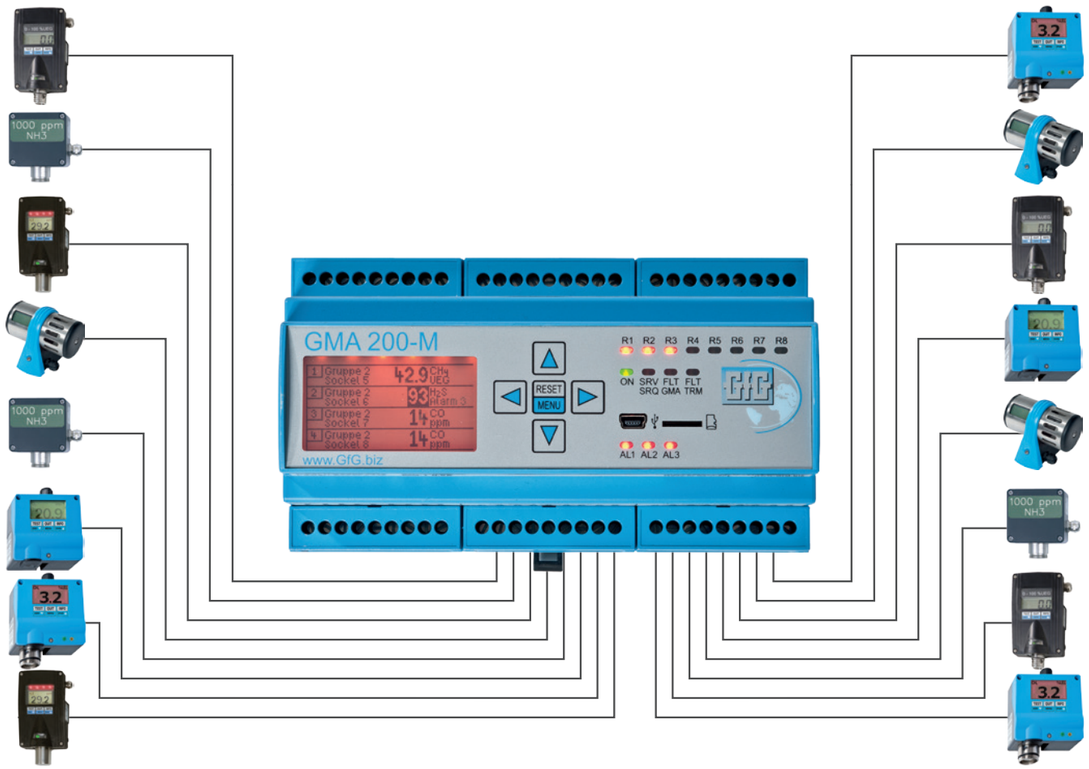
Gas detection PLC



- Connect 16 analog or 16 digital transmitters
- Detect combustible, oxygen and toxic gases
- 6 programmable relays
- PLC functionality
- Built-in audible and visual alarms
- DIN-rail mounting
- Connect any 4-20mA measuring device

smart
GasDetection
Technologies

Decisive Safety Advantage



Up to 16 transmitters for the measurement of combustible, oxygen and toxic gases can be connected to the GMA200-MT

Conception
The GMA200 control systems are designed for commercial and industrial applications for the detection of oxygen, combustible and toxic gases.

Flexibility
1-4 analog and/or 16 digital transmitters can be connected to the GMA200-MW4 and monitored simultaneously. The detection range, transmitter location, transmitter type along with 3 alarm set points per transmitter can be configured with PLC functions.

Easy to configure
Easy-to-use, menu driven GMA200-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 GMA200-MW continuously evaluates the analog input signals of the connected detectors.

Integrated Relays
Dedicated "Fault" and "Service" relays. 6 programmable relays ensure system safety requirements can be achieved.

Relay modules
The GMA200-RT or GMA200-RTD have a further 16 programmable relays. A maximum of 4 relay modules can be connected via the digital interface RS485 and allows a decentralized installation of the relay modules, offering greater flexibility and reducing installation costs.

System functions:
LED status of the controller, healthy, fault, service due and relays activated.

Graphic display
Real-time values are shown continuously. Red backlight on alarm indication.

Alarm 1,
Alarm 2 and
Alarm 3

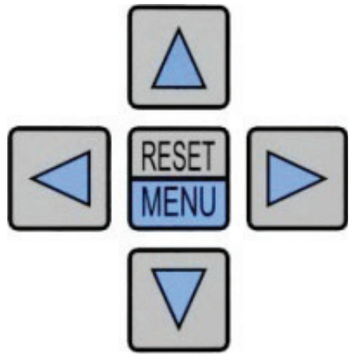
The integrated storage allows the display of the alarm stages along with the minimum and maximum concentrations on the LCD-display for the first alarm.

Data logger
Storage of system data can be made via a Micro SD memory card. Measurement values, averages, alarm events and errors can be saved and evaluated if required.

Keypad
5 button operation of the controller

Connect & Control

main functions of the keyboard are the acknowledgement of alarms and the operation menu, The status of the controller, transmitters and relays can be accessed.



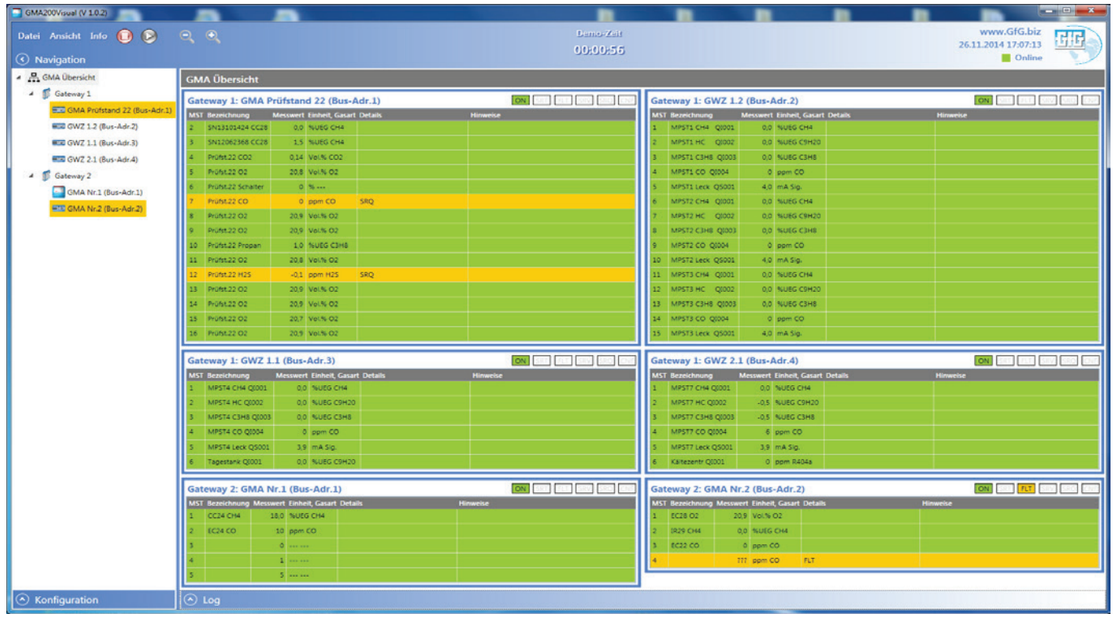
Configuration
The GMA200 configuration software is connected via USB interface to a PC.

Digital Interfaces (RS485)
The GMA200-MW4 has 3 x RS485 interfaces.

Digital Interface TRM BUS
The TRM BUS allows the connection of 1-16 GfG digital transmitters. Connected in loops or lines. In addition each TRM BUS can also support the GMA200-RT or GMA200-RTD.

Digital Interface GMA BUS
Besides the option to use this BUS for the connection of the GMA200-RT or GMA200-RTD, this interface offers the possibility to integrate the GMA200-MT into a network. A Modbus protocol transmitted via the GMA BUS allows the system status transmission to a PC. Additional gateways (Profibus, ProFinet) can be supplied by GfG to enable the digital status monitoring and data processing via further external modules (e.g. PLC)

GMA200-Visual
Complex gas detection systems with multiple controllers and numerous transmitters need a central overview point call to ensure complete safety and control. GfG's PC based visualization Software, "GMA200-Visual" evaluates the status of the complete gas detection system, displaying real-time values clearly, in case any alarm is activated. Concentration values and the gas type are immediately visible, ensuring appropriate measures can be taken promptly.



GMA200-Visual

Technical data

GMA200-MT

Transmitters:
Combustible, oxygen and toxic gases

Dimensions:
160 x 90 x 65 mm (W x H x D)

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

Power consumption:
GMA200–MT6 - 30W
(with transmitters)
GMA200–MT16 - 5W
(without transmitters)
GMA200-RT - 6W

Display:
LCD (33 x 53 mm/132 x 65 pixels)
5 button keypad
LED system status indication

Inputs:
16 analogue 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 for connection of 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 analogue outputs:
4-20mA / 600 Ohm max. resistance, freely configurable

External relay module:
16 relays per module; up to 4 relay modules per GMA200-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

Alarms:
3 independent threshold alarms per measuring point (AL1, AL2, AL3)
Gas alarms can be freely set in the measuring range

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

Data logger (optional):
2GB microSD memory with
FAT (FAT16) formatting

Ambient temperature:
Operation: -20 °C to + 50 ºC
Storage: -30 °C to + 60 °C

Housing:
IP20 plastic

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

Functional Safety:
SIL 2/3 requested

Controller GMA200-MT, product brochure, English
The information in this brochure is subject to technical changes due to further development. GMA200-MT/EN/07-2016/1-200

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