GfG Instrumentation overview of fixed system products

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GfG Instrumentation, Inc.

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GfG Instrumentation
World-wide manufacturer of gas detection solutions

One of the World’s Leading Manufacturers of Gas Detection Products
**GfG Instrumentation, mbH**

Worldwide headquarters in Dortmund, Germany

An industry leader in development and production of gas measurement technology for over 54 years

Founded in 1961

Over 300 employees worldwide in 2016

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**GFG Instrumentation, Inc.**

Headquarters in Ann Arbor, Michigan, USA

Responsible for manufacturing, design, and sales support for North America and South America

Originally founded in 1963 as Dynamation, Inc.
GfG Instrumentation
Exceptional designs with best cost of ownership in the gas detection industry

GfG Instrumentation
Technological leadership
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GfG Instrumentation
Certified quality

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Portable gas detectors

- Micro IV single-gas detector
- G450 4-gas detector
- G460 1-6 gas detector
GfG Instrumentation
Fixed Gas Detection Systems:
Technology based solutions for unique applications

Fixed gas detection systems
Controllers
Transmitters
Stand-alone systems
Fixed gas detection systems
Comprehensive line of fixed transmitters and controllers able to detect over 500 gases

Fixed System
Gas Measurement Transmitters
Combustible gases
Toxic gases
Oxygen
Able to detect over 500 gases

Transmitters for toxic gases

- Electrochemical (EC)
- Charge Carrier Injection (CI)
- Chemosorption (CS)
- Infrared (IR)
Flexible “smart sensor” approach allows use of widest range of available sensors from multiple sensor manufacturers.

GfG proprietary combustible (pellistor) sensors offer unrivalled accuracy, stability and longevity.

EC-22 Series for O₂ and toxic gas measurement

Cost effective solution for non-hazardous location applications.

Available for use with wide range of O₂ and substance-specific electrochemical toxic gas sensors.

Available with or without display and push-button interface.

Connect with controller via 4-20mA or RS-485 / MODBUS.
**CC-22 LEL combustible gas transmitter**

Cost effective solution for non-hazardous location applications

GfG proprietary combustible (pellistor) sensors offer unrivalled accuracy, stability and longevity

GfG LEL sensors available in optimized versions for specific combustible gases

Optional backlit easy-to-read display changes color to indicate alarm

**EC-22 and CC-22 Series for LEL, O₂ and toxic gas measurement**

Cost effective solution for non-hazardous location applications

EC-22 and CC-22 transmitters available with or without display and control interface

Optional display and push-button interface at transmitter simplifies calibration

Optional LED status lights indicate power-on (green) and alarm (amber / red) alarm conditions
**Proprietary sensor technology**

GfG CI-21 Ammonia and ZD-21 Oxygen transmitters provide spectacular performance based on unique, proprietary long-lived sensor technology.

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**EC-30 Series**

O$_2$ and electrochemical toxic gas transmitters

- Backlit easy-to-read display
- Non-intrusive “AutoCal” automatic calibration
- Linear 4-20mA output signal
- Available with optional relay for activation of local alarms and peripheral devices
- NEMA 4X, heavy duty, corrosion resistant, explosion proof aluminum housing
- Available for wide range of toxic gases
EC-28 Toxic gas transmitters (TOX)
EC-28 Series of highly configurable toxic gas transmitters can be equipped with exactly the right sensors, displays, relays and local alarms needed for the application.

CC-28 Catalytic LEL Transmitters
Combustible gases
IR-29 transmitters for LEL gases

Proprietary infrared technology provides readings based on up to four different wavelengths at the same time.

Intrinsically safe IR-29 infrared sensors are extremely sensitive, stable, and cannot be harmed by sensor poisons.

Able to measure wide variety of combustible gases including aromatic VOCs, alcohols and acetylene as well as saturated gases such as methane, butane and hexane.

Intrinsically safe IR-29 transmitters can measure heavy LEL range vapors such as diesel and jet fuel that are not measurable by any other technology.

DIN rail mounted controllers

GMA 40 Series controllers are flexible, cost-effective control units for one to four transmitter systems.

GMA 40 Series can be mounted directly onto standard DIN rails in switchgear cabinets.
Series 25 Integrated Control Panels

Complete 1-4 gas measuring point control system in NEMA 4X weatherproof enclosure

Includes GMA-40 Series controller, power supply, integral high intensity horn (105 dB), and strobe

Stand-alone systems

GfG Dynaguard systems include the transmitter and controller in a single integrated easy to install, cost-effective wall-mounted unit
19” Rack mount controller cabinets

GMA100 II Series controllers are rack-mounted microprocessor-based control and monitoring systems for all measurement tasks.

Single channel (GMA101) and four channel (GMA104) cards available.

Each GMA104 controller card can handle the input from four gas measurement points.

Wall-mount controllers

Complete control systems for wall mounting.

Switchgear cabinets or additional housings are not necessary.

GMA 200 controllers provide complete fixed system solution for a wide range of flammable and toxic gases, and oxygen.

Up to 16 measuring points can be monitored at the same time.

All GfG transmitter types supported.
**GMA200-MGSS**
Compact gas sampling system integrated in GMA200 housing

Efficient, single-inlet alternative to high-priced sampling systems and individually wired fixed point gas transmitters

*Built-in* motorized sampling pump with fully automated flow control

Up to 3 sensors for LEL, O₂ and toxic gas measurement

Optional condensate (water) trap, hydrophobic barrier filter, flame arrestor and sample cooling coil

**GMA200-MGSS**
Modular approach lets you choose the features you need

- Motorized sampling pump
- Electronic bypass valve switch
- Flame arrestor (gas inlet)
- Bypass inlet (calibration)
- Hydrophobic barrier filter
- Condensate (water) trap
- Single gas inlet for all installed sensors
- 8 fully programmable relays for alarm and error
- Terminal blocks
- Gas outlet
- Cooling coil
Multiple sampling inlets allows the same sensors to be used to sample the atmosphere in multiple locations.

Each gas inlet samples from a different location.

Programmable electronic switching solenoid allows assignable sampling times per inlet.

Optional bypass inlet with electronic valve allows for simple, easy AutoCal calibration.

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**GMA200-MGSS**
Available in 1 - 6 gas inlet versions

**GM200-MW4**
Compact 1 – 4 gas measurement system in compact wall mounting enclosure
Fixed gas detection systems
GMA 200 Programmable Logic Controller

GMA200-MT/16 DIN Rail Mounted Controller
Connection of up to 16 transmitters with analog interfaces

Star cabling from transmitter to controller via analog 4-20mA connection
GMA200-MT available in versions to control up to 16 gas measurement transmitters
**GMA200-MT/16 DIN Rail Mounted Controller**  
*Connect controller via 4-20mA or RS-485 BUS with additional modules*

- RS-485 GMA-Bus can be used to connect GMA-200 controller with additional control or relay modules, or with a remote terminal display.
- GMA200-RT relay module can be used to add 16 additional programmable relays to system.

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**GMA200-MT/16 DIN Rail Mounted Controller**  
*Connection via digital interfaces*

- Loop cabling at digital transmission

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Lines cabling via digital transmission

GMA200-MT/16 DIN Rail Mounted Controller
Connection via digital interfaces

GMA

Bus

TRM-Bus 1

TRM

Bus

1

TRM-Bus 2

Connection via digital interfaces

GMA200-MT/16 DIN Rail Mounted Controller
Connection via digital interfaces

GMA-Bus

TRM-Bus 1

Touchscreen PC with GfG Visualization Software

TRM-Bus 2

Lines cabling via digital transmission
GMA200-MT/16 DIN Rail Mounted Controller
Connection via digital interfaces

Loop cabling via digital transmission

GMA200-MT/16 DIN Rail Mounted Controller
Connection via GMA-bus to Ethernet gateway

Lines cabling via digital transmission
**GMA200-MT/16 DIN Rail Mounted Controller**
Connection via GMA-bus to Profinet (Ethernet) or Profibus gateway

Star cabling (connection via 4-20mA analog signal)

**GMA200 Gateway with Profinet**
Ethernet-Interface
Remote data communication via digital gateway

Polling of measuring values and status information (every second)

Reading of measuring points- and transmitter configuration (MR, AL)

Reset of alarms (optional)
GMA200 configuration with GMA200Config-software

Technical system support for GfG customers from anywhere in the world!
Connection to remote terminal via GfG Visualization Software

GMA200 Visualization Software
Comprehensive system information via digital gateway – Overall system view
GMA200 Visualization Software
Overall system view with high alarm (alarm 2) condition

GMA200 Visualization Software
Single view – GMA with no alarm conditions
**GMA200 Visualization Software**

Single view – GMA with high alarm (alarm 2) condition

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System includes 2 GMA200-MT/16 control modules, and 2 GMA200-RT relay modules

GfG Visualization Software allows touch screen PC or laptop to be used as remote terminal for display of comprehensive system information

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32 point GMA200 system in cabinet with touch screen terminal display
50 point GMA200 system in cabinet with 2 touch screen terminal displays

System includes 4 GMA200-MT control modules, and 5 GMA200-RT relay modules

GfG Visualization Software allows splitting information for convenience between two PC terminal displays

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Questions?

Thank you!