

PolyGard® 4-channel Gas Controller GC-04

DESCRIPTION

Four-channel gas measuring controller for continuous monitoring and warning of toxic, combustible and refrigerant gases and vapours.

The Gas Controller GC-04 can monitor up to 4 analog gas transmitters with 4 to 20 mA signal. Five alarm thresholds are adjustable per channel. The alarms are transmitted by up to 5 relays with change-over contact. Two analog outputs (4 to 20 mA) are free adjustable.

Via expander modules EP-04 the Gas Controller can be extended to up to 24 analog gas transmitters, 20 alarm relays and 12 analog outputs.

The free adjustable parameters and alarm thresholds enable a very flexible use in the gas measuring technique. Simple and comfortable commissioning is granted by the factory set parameters.

The configuration parameter, settings and operation is easy to do without programming knowledge thanks to the simple and logical menu structure.

The Gas Controller GC-04 is equipped with a self monitoring system including power supply monitoring as well as detection of short-circuit and wire break of the connected gas transmitters.



GC-04 Module

APPLICATION

The 4-channel Gas Controller GC-04 is used for the monitoring and warning of toxic and combustible gases as well as of Freon refrigerants.

The GC-04 fulfils the functions of monitoring Carbon monoxide (CO) in garages and tunnels etc. in accordance with VDI 2053 and ÖNORM. Additionally ammonia (NH₃) refrigerant plants can be monitored in accordance with the requirements EN 378, VBG 20 and the guideline "Safety regulations for ammonia refrigeration systems".

Due to free configurable parameters and alarm thresholds the GC-04 Gas Controller is suitable for various applications in the range of gas measurement and monitoring.



GC-04 Module for door mounting

FEATURES

- Four analog inputs, 4 to 20 mA
- Available for CO, CO₂, NO, NO₂, NH₃, O₂, SO₂, H₂S, CL₂ combustible gases and Freons
- Simple and fast commissioning by configuration with standard parameters
- Logical system menu in different languages
- Flexible configuration by programmable parameters
- Five free adjustable alarm thresholds for each channel
- Four alarm relays with SPDT, potential-free, max. 250 VAC, 5A
- Fault relay with SPDT, potential-free, max. 250 VAC, 5A
- Two analog outputs, 4 mA to 20 mA
- VDI - 2053 conform
- Mounting on DIN rail (EN 50 022) or in distribution enclosure
- Extension of analog inputs and alarm relays via Expander Modules EP-04
- Door mounting¹ (optional)

¹ Version "Door mounting" is delivered with two modules. Display module for door mounting and relay module for rail mounting.

SPECIFICATIONS

| | |
|---|---|
| Electrical | |
| Power supply | 24 VAC/DC -10% + 20% / 21 to 31 VDC |
| Power consumption | 4 W, 150 mA |
| Analog input (4) | 4 to 20 mA, overload-proof and short-circuit-proof, input resistor 200 Ω |
| Power supply for external analog transmitter | 24 VDC max. 50 mA / channel |
| Analog output (2) free adjustable to each channel | 4 to 20 mA, overload-proof and short-circuit-proof, max. 500 Ω load |
| Alarm relay (4) | 250 VAC, 5 A, potential-free, SPDT |
| Fault relay (1) | 250 VAC, 5 A, potential-free, SPDT |
| Visualization | |
| Display | Two lines, each 16 characters, illumination. |
| Status LED | Red = Status Alarm; Yellow = Failure |
| Operation | 6 push buttons |
| Gases ¹ | |
| Gas transmitter external | CO, CO ₂ , NO, NO ₂ , NH ₃ , O ₂ , SO ₂ , H ₂ S, CL ₂ , ETO, combustible and refrigerant gases |
| Environmental | |
| Humidity | 15 – 95 % RH non condensing |
| Working temperature | -10° C to + 50° C (14 °F to 122 °F) |
| Storage temperature | 0° C to + 50° C (32 °F to 122 °F) |
| Physical Characteristics | |
| Enclosure | Plastic housing |
| Colour | RAL 7035 (gray) |
| Protection class | IP 40 |
| Weight | 0,3 kg (0.66 lbs.) |
| Mounting | DIN rail (EN 50 022) |
| Wire connection | Power supply |
| | Relay |
| | Input |
| | Screw type terminal: 2,5 mm ² (14 AWG) |
| | Spring type: 0,5 to 1,5 mm ² (22 to 16 AWG) |
| | Spring type: 0,5 to 1,5 mm ² (22 to 16 AWG) |
| Dimensions (W x H x D) | 104 x 86 x 56 mm (4.1 x 3.4 x 2.2 in.) |
| Cut-out for door mounting (W x H) | 134 x 125 mm (5.3 x 4.9 in.) |
| Guidelines | EMC Directives 89/336/EEC; CE Low Voltage Directive 73/23/EEC VDI 2053 |
| Warranty | One year / material |

¹ Other gases on request

ORDERING INFORMATION

GC-04-04-04-00000

Options

| | |
|-------|----------------------|
| 1XXXX | Input 0- 10 V |
| XX1XX | Door mounting |
| XXXX0 | Language German |
| XXXX1 | Language English |
| XXXX2 | Language USA |
| XXXX3 | Language Netherlands |
| XXXX4 | Language Danish |
| XXXX5 | Language Czech |
| XXXX6 | Language French |

CONNECTING DIAGRAM

