

PolyGard® Digital Gas Controller Module GC-05 RS-485 Bus

Description

Gas measuring controller module for continuous monitoring and warning of toxic, combustible and refrigerant gases and vapours.

The gas controller GC-05 can monitor up to 98 digital gas transmitters of the DT-05 series via the RS-485 bus, or 48 DT-05 with one analog transmitter each. Five alarm thresholds are adjustable per transmitter. The alarms are transmitted by up to 5 relays with potential-free change-over contact.

Via expansion modules EP-05 the Gas Controller can control up to 30 alarm relays.

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

Configuration, parameterization and operation is easy to do without programming knowledge due to the logical, simple menu structure.

The gas controller GC-05 is equipped with a self monitoring system, with power fail message as well as with a functional control of the registered DT-05 and AT transmitters.

The serial interface permits to load and store the application parameters.

Application

The gas controller GC-05 is used for the monitoring and warning of toxic and combustible gases as well as Freon refrigerants within a wide range of gas measurement technique. Numerous adjustable parameters and set-points permit individual adaptation to many applications.

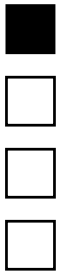
The GC-05 fulfills the functions of monitoring Carbon monoxide (CO) in garages and tunnels and go-kart race courses etc. according to VDI 2053 and ÖNORM. Additionally ammonia (NH₃)-refrigerant plants can be monitored in accordance with the requirements EN 378, VBG 20 and the guideline "safety regulations for ammonia refrigeration systems".



GC-05 module



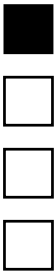
GC-05 module for door mounting





Features

- Up to 98 transmitters DT-05, or 48 DT-05 within in each case one AT transmitter
- For monitoring CO, CO₂, NO, NO₂, NH₃, O₂, combustible and refrigerant gases
- Simple and comfortable commissioning by configuration with standard parameters
- Logical system menu in different languages
- Flexible configuration by programmable parameters
- Five free adjustable alarm thresholds for each transmitter
- Four alarm relays with DPDT, potential-free, max. 250 VAC, 5A
- Fault relay with DPDT, potential-free, max. 250 VAC, 5A
- Extension to up to 30 alarm relays possible by expansion modules EP-05
- Two analog outputs, 4 mA to 20 mA
- VDI - 2053 conform
- Mounting on DIN rail (EN 50 022) or in distribution box
- Serial interface
- Power fail flashing light (optional)
- Door mounting (optional)



Technical Data

Electrical	
Power supply	24 VAC/DC -10% + 20%
Power consumption	5 W, 200 mA
Analog output (2) adjustable to each channel	4 to 20 mA, overload and short-circuit protected, input resistor 500 Ω
Alarm relays (4)	250 VAC, 5 A, potential-free, DPDT
Fault relay (1)	250 VAC, 5 A, potential-free, DPDT
Interface	
Transceiver	RS 485 / 19200 Baud
Visualization	
Display	2 lines, 16 characters each, illuminated
Status LED	Yellow = status alarm; red = fault
Operation	6 push-buttons
Gases¹	
Gas transmitter external	CO, CO ₂ , NO, NO ₂ , NH ₃ , O ₂ , combustible and refrigerant gases
Environmental conditions	
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	
Enclosure	Plastic housing ABS
Color	RAL 7035
Protection class	IP 40
Weight	0,3 kg (0.6 lbs.)
Mounting	Top DIN rail, in distribution box
Wire connection: Power supply	Screw type: 2,5 mm ² (14 AWG)
Output	Spring type: 0,5 to 1,5 mm ² (22 to 16 AWG)
Input	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	EMV - Directive 89/336/EWG; Low voltage directive 73/23/EWG VDI 2053
Warranty	One year material and workmanship

¹ Further gases on request



Ordering Information

GC-05-04-04-00000

Options	
X1XXX	Power fail flashing light
XX1XX	Door mounting
XXXX0	Language German
XXXX1	Language English
XXXX2	Language USA
XXXX3	Language Dutch
XXXX4	Language Danish

Example: GC-05 Module with power fail flashing light, language English

Order Number: **GC-05-04-04-01001**

Wiring Connection

