

PolyGard® Gas Controller MGC-04

Description

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

The Gas Controller series MGC-04 can monitor up to 24 analog gas transmitters with 4 to 20 mA signal. Five alarm thresholds are adjustable to each channel. For activating the alarm up to 20 relays with changeover contacts are available.

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

The configuration, parameter settings and operation is easy to do without programming knowledge.

The Gas Controller MGC-04 is equipped with a self monitoring system and with a power supply monitoring. The analog inputs are monitored to detect short-circuit and wire break.

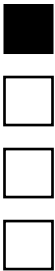
Additionally the gas controller is available with emergency power supply.

Application

The MGC-04 gas controller is used for monitoring and warning of toxic and combustible gases as well as of Freon refrigerant.

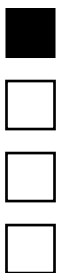
The MGC-04 gas controller fulfils the functions of monitoring Carbon monoxide (CO) in garages and tunnels etc. in accordance with VDI 2053 and ÖNORM. Additionally ammonia (NH₃) refrigerant can be monitored in accordance with the requirements for ammonia refrigerant plants.

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



Features

- Up to 24 analog inputs, 4 to 20 mA
- Suitable for monitoring CO, CO₂, NO, NO₂, NH₃, O₂, SO₂, H₂S, CL₂, ETO, combustible and refrigerant gases
- Simple and comfortable commissioning due to configuration with standard parameter
- Logical system menu in different languages
- Flexible configuration by programmable parameters and set points
- Five adjustable alarm thresholds for each channel
- Up to 20 alarm relays with SPDT, potential-free, max. 250 VAC, 5A.
- Failure relay with SPDT, potential-free, max. 250 VAC, 5A
- Max. 12 analog outputs, 4 mA to 20 mA
- Conform to VDI - 2053
- Shapely, durable housing
- Housing lockable (optional)
- Emergency power supply integrated (optional)
- Integrated buzzer (optional)



Specifications

Electrical	
Power supply	110/230 VAC 50/60Hz; 24 VAC/DC -10% + 20%
Power consumption (incl. max. AT)	
MGC-04-04-04	13 VA
MGC-04-12-XX	27 VA
MGC-04-20-XX	55 VA
MGC-04-24-XX	65 VA
Option EPS	Supply duration 60 minutes
Analog input (max. 24)	4 to 20 mA, overload- and short-circuit-protected, input resistor 200 Ω
Power supply for ext. analog transmitters	24 VDC max. 50 mA / per channel
Analog output max 12, free adjustable to each channel	4 to 20 mA, overload- and short-circuit-protected, max. load 500 Ω
Alarm relay (max. 20)	250 VAC, 5 A, potential-free, SPDT
Failure relay (1)	250 VAC, 5 A, potential-free, SPDT
Option buzzer - Acoustic pressure	87 dB (distance 1000 mm)
- Frequency	3,5 kHz
Visualization	
Display LCD	Two lines, each 16 characters, illumination
Status LED	Red = Status Alarm; Yellow = Failure
Operation	6 push-buttons
Gases ¹	
External gas transmitter	CO, CO ₂ , NO, NO ₂ , NH ₃ , O ₂ , combustible gases and Freons
Environmental	
Humidity	15 – 95 % RH non-condensing
Working temperature	-5 °C to + 40 °C
Storage temperature	0 °C to + 40 °C
Physical	
Enclosure	Plastic housing with transparent cover
Colour	RAL 7035 (gray)
Protection class	IP 65
Weight ²	
MGC-04-04-04	Approx. 2,7 kg (6.0 lbs.)
MGC-04-12-XX	Approx. 4,0 kg (9.0 lbs.)
MGC-04-20-XX	Approx. 6,0 kg (13.5 lbs.)
MGC-04-24-XX	Approx. 7,5 kg (16.5 lbs.)
Mounting	Wall mounting
Cable entry	M 16; M 20; M 25
Wire connection: Power supply	Screw type: 2,5 mm ² (14 AWG)
Relay	2 x 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 ²	
MGC-04-04-04	298 x 260 x 140 mm (11.7 x 10.2 x 5.5 in.)
MGC-04-12-XX	298 x 420 x 140 mm (11.7 x 16.5 x 5.5 in.)
MGC-04-20-XX	298 x 570 x 140 mm (11.7 x 22.5 x 5.5 in.)
MGC-04-24-XX	410 x 655 x 140 mm (16.1 x 25.8 x 5.5 in.)
Guidelines	
	EMC Directives 89/336/EEC; CE Low Voltage Directive 73/23/EEC VDI 2053
Warranty	
	One year on material

¹ Other gases on request ² Data for plastic enclosure

Order Information

MGC-04-00-00-00000

Options	
1XXXX	Emergency power supply
XX1XX	Housing lockable
XXX1X	Integrated buzzer
XXXX0	Language German
XXXX1	Language English
XXXX2	Language USA
XXXX3	Language Netherlands
XXXX4	Language Danish
XXXX5	Language Czech
XXXX6	Language French

Number of MP / monitored sections	
04	04 MP / 1 MS
08	08 MP / 2 MS (1 x EP-04)
12	12 MP / 3 MS (2 x EP-04)
16	16 MP / 4 MS (3 x EP-04)
20	20 MP / 4 MS (4 x EP-04)
24	24 MP / 4 MS (5 x EP-04)

Version (max. modules)	
04	GC-04
12	GC-04 + 2 x EP-04
20	GC-04 + 4 x EP-04
24	GC-04 + 5 x EP-04

Enclosure	
04	Plastic enclosure (standard)
14	Metal enclosure

Example: MGC-04 with 12 measuring points, 1 MS, language English, buzzer.
Order No. **MGC-04-12-12-00011**

Connecting diagram

(Example MGC-04-04-04-01000)

