

## PolyGard® 2-channel Gas Controller MGC-03

### Description

Gas measuring and monitoring controller based on state-of-the-art microtechnology for continuous monitoring of the ambient air and detecting toxic and combustible gases and vapours as well as oxygen and Freon refrigerants. Other physical values with analog output signal can be connected as well.

The MGC-03 is equipped with two analog inputs for the connection of external transmitters including detection of wire break and short-circuit. Up to four alarm thresholds per input are free programmable. Two alarm relays and two open collector outputs are available for the alarm messages.

Configuration and operation are possible via the logical, simple system menu structure without specific programming knowledge.



Stainless steel housing

### Application

The MGC-03 is suitable for a wide range of commercial and industrial applications. Free programmable parameters and setpoints enable the individual adaptation to a variety of possible applications in the field of gas measuring and monitoring.

### Features

- Suitable for toxic and combustible gases and vapours, oxygen, Freons, temperature, pressure, humidity etc.
- Logical menu structure in different languages
- Simple, fast commissioning due to pre-configuration with standard parameters and set-points
- Comfortable calibration and maintenance
- Four free programmable alarm thresholds per channel
- Modular design (plug-in technology)
- Two analog inputs for standard current/ voltage signals
- Two alarm relays, potential-free, max. 30 VAC/DC, 0,5 A
- Two open collector output, max. 24 VDC, 100 mA
- (0) 4 – 20 mA / (0) 2 – 10V analog signal output
- Different housing versions
- 230 VAC / 24 VDC power module with two power relays (option)
- 230 VAC / 24 VDC wall power supply (option)
- Uninterruptible emergency power supply (option)
- Integrated warning buzzer with reset function internal/external (option)
- Heating (option)
- Serial interface (option)
- IP 65 version (option)



Standard housing

## Specifications

<b>Electrical</b>	
Power supply	18 - 28 VDC/AC, reverse polarity protected
Power consumption (without options)	100 mA, max. (2,5 VA)
Analog input (2)	4 – 20 mA, input resistance 200 Ω, (0) 2 – 10V, input resistance 25 kΩ, overload-proof and short-circuit-proof
Tension for external analog transmitter	24 VDC max. charge 50 mA
Analog output, current or voltage selectable	(0) 4 – 20 mA, charge ≤ 500 Ω (0) 2 – 10 V, charge ≥ 50 kΩ overload-proof and short-circuit-proof
Alarm relay (1)	30 VAC/DC 0,5 A, potential-free, SPDT
Alarm relay (1)	30 VAC/DC 0,5 A, potential-free, SPNO/SPNC
Binary output (2)	30 VDC /0,1 A open collector output
<b>Visualisation</b>	
Display	Two lines, 16 characters each
Status LED (4)	Normal operation- Fault- Alarm1- Alarm 2
Operation	4 push-buttons – menu-driven
<b>Monitored medium</b>	
Toxic, combustible gases and vapours, Freons, oxygen, temperature, humidity, pressure, etc.	with 4 -20 mA / (0) 2 -10 V signal
<b>Operating environment</b>	
Humidity	15 – 90 % RH non-condensing
Working temperature	-10 °C to + 50 °C (14 °F to 122 °F)
Storage temperature	5 °C to 30 °C (41 °F to 86 °F)
Pressure range	Atmospheric ± 10 %
<b>Physical</b>	
Enclosure stainless steel type 5	Stainless steel V2A
Enclosure colour	Natural, brushed
Dimensions (W x H x D)	ca. 113 x 135 x 45 mm (5.35 x 4.5 x 1.8 in.)
Weight	Ca. 0,6 kg (1.3 lbs.)
Protection class	IP 55
Installation	Wall mounting, pillar mounting
Enclosure plastic version type 0 / 7	Plastics GWPLAST
Enclosure colour	RAL 7032 (light grey)
Dimensions type 0 (W x H x D)	87 x 127 x 56 mm (3.4 x 5.0 x 2.2 in.)
Dimensions type 7 (W x H x D)	114 x 156 x 75 mm (4.5 x 6.1 x 2.9 in.)
Dimensions type 9 (W x H x D)	150mm x 196 x 75 mm (5.9 x 7.7 x 2.9 in.)
Weight	ca. 0,4 kg (0.9 lbs.)
Protection class	IP 55
Installation	Wall mounting
Cable entry	Standard 2 x M 20
Wire connection	Screw type terminal, 0,25 to 2,5 mm <sup>2</sup> 24 to 14 AWG
<b>Guidelines</b>	EMC Directive 89/336/EEC
	CE
<b>Warranty</b>	1 year on material



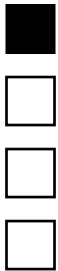
**Options**

<b>Buzzer</b>	
Acoustic pressure	83 dB (A) (distance 200 mm/ 0.6 ft )
Frequency	2300 Hz
<b>Serial interface</b>	
Transceiver	RS 485 / 19200 Baud
<b>Heating</b>	
Temperature controlled	3 °C ±2°C (37.5 °F ± 35,5 °F)
Ambient temperature	- 40 °C (- 40 °F)
Power supply	18 - 28 VDC/AC
Power consumption	0,3 A; 8 VA

For the technical specifications and ordering information of the options:  
 -230 V power pack with power relay, 230 V power supply and emergency power supply. Please refer to the data sheet MGC03-Power.

**Ordering Information**

**MGC-03-0202-X-XXXXXXXXXX**



<b>Options</b>	
X1XXXXXXXX	Warning buzzer int.
XX1XXXXXXXX	Heating
XXX1XXXXX	Analog output
XXXX2XXXX	Data output, Modbus
	Analog input (2)
XXXXX1XXX	4 - 20 mA and 0 - 10 V
XXXXX2XXX	4 - 20 mA and 2 - 10 V
XXXXX3XXX	2 x 2 - 10 V
XXXXX4XXX	2 x 0 - 10 V
XXXXX5XXX	2 x 4 - 20 mA
XXXXXXXX1X	Configuration
XXXXXXXX0	Menu language German
XXXXXXXX1	Menu language English
XXXXXXXX2	Menu language USA
XXXXXXXX3	Menu language Dutch
XXXXXXXX4	Menu language Danish
XXXXXXXX5	Menu language Czech
XXXXXXXX6	Menu language French
<b>Enclosure</b>	
0	Plastic (standard)
1	Duct mounting <sup>2</sup>
4	IP 65 protection <sup>2</sup>
5	Stainless steel
7	Plastic (comfort)
9	Plastic (For option Power supply)

<sup>2</sup> See data sheet "PolyGard AT/DT Enclosures"

**Example:** Gas Controller MGC-03 plastic comfort housing, warning buzzer integrated, analog output, 4-20 mA / 2-10 V input, factory calibration, language English

**Ordering number: MGC-03-0202-7-X1XX12X11**

## Connecting diagram

