

PolyGard® 2-channel Gas Controller MGC-03

DESCRIPTION

Gas measuring and monitoring controller based on state-of-the-art micro-technology with integrated buzzer 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-circuits. Up to four alarm thresholds are free programmable per input. Two alarm relays and one open collector output are available for the alarm messages.

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



Standard enclosure

APPLICATION

The MGC-03 is suitable for a wide range of commercial and industrial applications. Free programmable parameters and set-points 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, refrigerants, 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 transmitters with standard current/ voltage signals
- Two alarm relays, potential-free, max. 30 VAC/DC, 0,5 A
- One open collector output, max. 30 VDC, 50 mA
- (0) 4 – 20 mA / (0) 2 – 10V analog signal output, freely configurable
- IP 65 version
- Enclosure fire-resistant according to UL 94V2
- Integrated warning buzzer with reset function
- Approved according to EN 61010-1; ANSI/UL 61010-1; CAN/CSA-C22.2 No. 61010-1
- 230 VAC operating voltage (option)
- Up to three power relays (potential-free, max. 250 VAC, 5 A) (option)
- Uninterruptible emergency power supply (option)
- LED flash light red (option)
- 3 x warning lights, colours green – red – orange selectable (option)
- External warning horn (87 dB) mounted on the housing (option)
- External multi-sound horn mounted on the housing (option)
- Heating (option)



SPECIFICATIONS

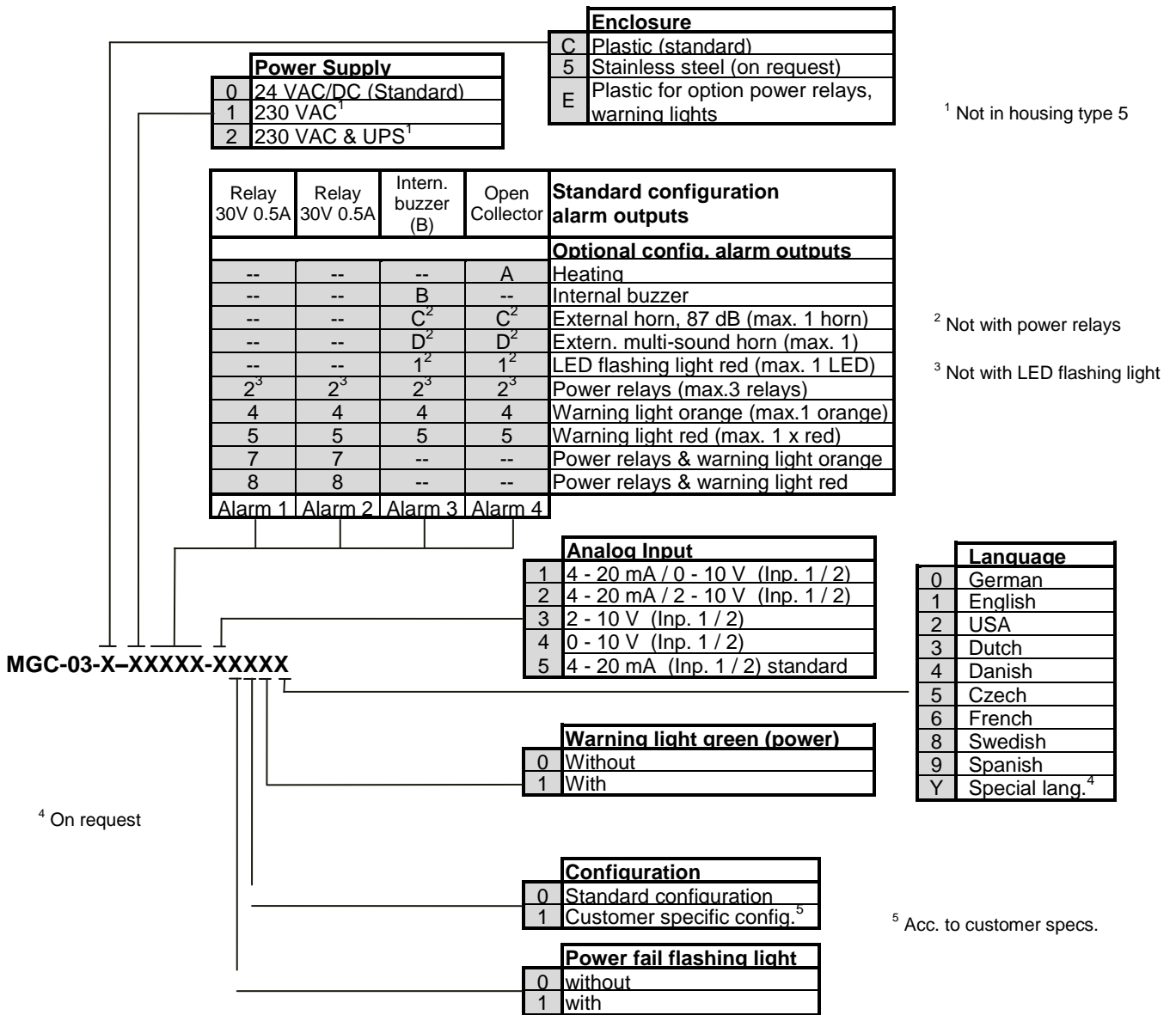
Electrical	
Power supply	18 - 28 VDC/AC, reverse polarity protected ¹
Power consumption (without options)	100 mA, max. (2.5 VA)
Analog input (2)	4 – 20 mA, input resistance 200 Ω, (0) 2 – 10V, input resistance 25 kΩ, overload-proof and short-circuit-proof
Tension for external analog transmitter	24 VDC 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 (1)	30 VDC /50 mA open collector output
Visualisation	
Display	Two lines, 16 characters each
Status LED (4)	Normal operation- Fault- Alarm1- Alarm 2
Operation	4 push-buttons – menu-driven
Buzzer	
Acoustic pressure	83 dB (A) (distance 200 mm/ 0.6 ft)
Frequency	2300 Hz
Monitored medium	
Toxic, combustible, refrigerant gases and vapours, oxygen, temperature, humidity, pressure, etc.	with 4 -20 mA / (0) 2 -10 V signal
Operating environment	
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 %
Physical	
Enclosure: Type C and E	Polycarbonate
Flammability	UL 94 V2
Enclosure colour	RAL 7032 (light grey)
Dimensions (W x H x D) type C	130 x 130 x 75 mm (5.12 x 5.12 x 2.95 inch.)
Dimensions (W x H x D) type E	130 x 130 x 99 mm (5.12 x 5.12 x 3.90 inch.)
Weight	Approx. 0.6 kg (1.32 lbs.)
Protection class	IP 65
Installation	Wall mounting
Cable entry	Standard 6 x M 20
Wire connection	Screw type terminal, min. 0.25 mm ² (24 AWG) max. 2.5 mm ² (14 AWG)
Guidelines	
EMC Directives 2004/108/EC	
Low Voltage Directive 2006/95/EC	
EN 61010-1:2010	
ANSI/UL 61010-1	
CAN/CSA-C22.2 No. 61010-1	
CE	
Warranty	1 year on material

¹For option heating only VDC!

GAS ALARM SYSTEMS

Options	
Supply voltage 230 VAC	90 -250 VAC 50/60 Hz
Emergency power supply	Supply duration 60 min. (only measuring system)
Power relay	250 VAC, 5 A, potential free, change-over cont.
LED flashing light	IP65, LED, red, 3500 lm.
Warning light	
Power supply	18 -28 VDC/AC
Consumption	45 mA, max. (1.1 VA)
Protection class	IP 65
External horn	
Acoustic pressure	87 dB (A) (distance 1000 mm)
Frequency	3500 Hz
Power supply	18 – 28 VDC
Consumption	8 mA, max. (0.15 VA)
External multi-sound horn	
Acoustic pressure	85 - 100 dB (A) (depending on sound type)
Sound types	28
Power supply	18 – 28 VDC
Consumption	30 mA, max. (depending on sound type)
Heating	
Temperature controlled	3 °C ±2°C (37.5 °F ± 3.6°F)
Ambient temperature	- 30 °C (- 22 °F)
Power supply	18 - 28 VDC
Power consumption	0.5 A; 12 VA
Enclosure stainless steel, type 5	
Material	V2A steel, 1 mm, material 1.4301 corrosion resistant
Colour	Natural, brushed
Dimensions (B x H xD)	113 x 135 x 45 mm (4.45 x 5.31 x 1.77 inch.)
Weight	ca. 0.5 kg (1.1 lbs.)
Protection class	IP 65
Mounting	Wall mounting, pillar mounting
Cable entry	Standard 2 x M 20

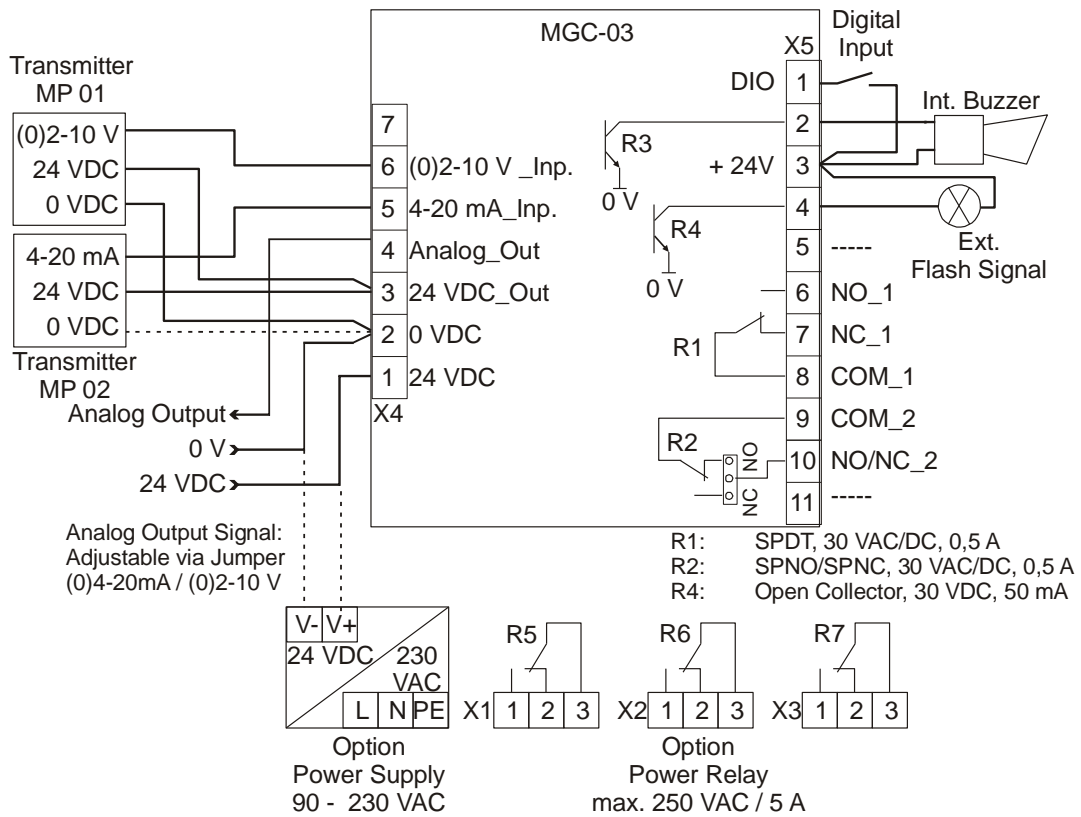
ORDERING INFORMATION



Example: Gas Controller MGC-03, plastic housing, 230 VAC supply, power relay at alarm 1 and 2, internal buzzer, input 2 x 4-20 mA, power fail flashing light, standard configuration, language English

Ordering number: MGC-03-E-122B0-51001

CONNECTING DIAGRAM



Note:

The alarm outputs R3 and R4 are designed as open collector outputs. Warning lamps / horn combination units with common ground can therefore not be connected!