



# Oxygen 0-25% Gas Detector

IP65

MO2

Oct.10



MO2

## Features

- Continuous monitoring
- Low zero point drift
  
- Poisoning stable
- Long life sensor
  
- Easy maintenance/calibration
  
- Reverse polarity protected
  
- Overload protected
  
- 4-20mA loop-powered or 2-10Vdc output signal

## Technical Data

<b>Gas</b>	Oxygen
<b>Detection principle</b>	Electrochemical, diffusion
<b>Stability &amp; resolution</b>	+/- 0,1% vol.
<b>Long term sensitivity</b>	<4%/12 (% reading/month).
<b>Response time</b>	t90 <15 sec.
<b>Storage time</b>	6 months
<b>Mounting height</b>	1,2-1,8 metres above floor
<b>Output signal</b>	
4-20mA	load < 500ohm overload and short circuit proofed
2-10Vdc	load < 50kohm overload and short circuit proofed
<b>Power supply</b>	18-28Vdc (reverse polarity prot.)
<b>Power consumption</b>	22mA, max (0,6VA)
<b>Expected lifetime</b>	>2 years, normal operating environment
<b>Humidity range</b>	
Continuous	15-90% rH non-condensing
<b>Operating range</b>	
Continuous	-10 up to +50C
<b>Rating</b>	IP65 Protection Class
<b>Pressure range</b>	Atmospheric +/-10%

## Application

For detection of oxygen in rooms where changes of the oxygen concentration are possible, such as laboratories and food production etc.

Due to the analogue signal 4-20mA and 2-10Vdc the O2 transmitter is compatible to any electronic analogue control, DDC/PLC control or automation system.

## Ordering Codes

### Wall Mounting

**MO2 025VC**                      0-25% vol.                      4-20mA/2-10Vdc

<b>Stain</b>	Enclosure of stainless steel
<b>Tool</b>	Tool for opening holes in stainless steel enclosure
<b>/GCD</b>	Protocol for CDA-series
<b>GAS 17</b>	Calibration gas 17 liter
<b>REG</b>	Pressure regulator flow adjusted to 0,5 lit/min.
<b>Warning devices</b>	See special datasheet
<b>Warning signs</b>	See special datasheet

### Technical Data continue

#### Physical Characteristics

<b>Enclosure</b>	GW Plast 75 GWT
<b>Flammability</b>	UL94: VO Halogenfree
<b>Enclosure colour</b>	RAL 7032 (light grey)
<b>Dimensions</b>	96 x 130x56mm
<b>Weight</b>	Approx. 0,2kg
<b>Installation</b>	Wall mounting
<b>Cable entry</b>	Standard 3 pieces
<b>Wire connection</b>	Screw type terminal min. 0,25mm <sup>2</sup> and max 2,5mm <sup>2</sup>  Max. loop resistor 500ohm (= wire resistor + controller input resistor)
<b>Guidelines</b>	EMC-Directive 89/336/EWG, CE EMC-Directive 2004/108/EWG, CE

### Maintenance

At commissioning and at periodic intervals determined by the person responsible for the gas detection system (**recommendation every year**).

#### After exchange of the sensor

If in case of operational or climatic influences the sensitivity of the sensor **falls below 30 %** in operation, calibration will not be possible any more.

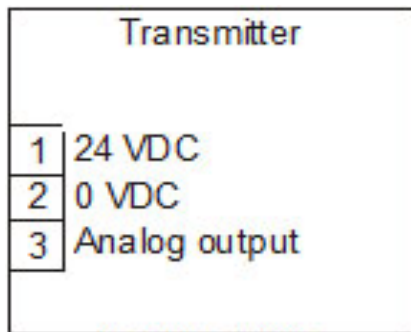
Then the sensor has to be changed.

#### Exchange of sensor element

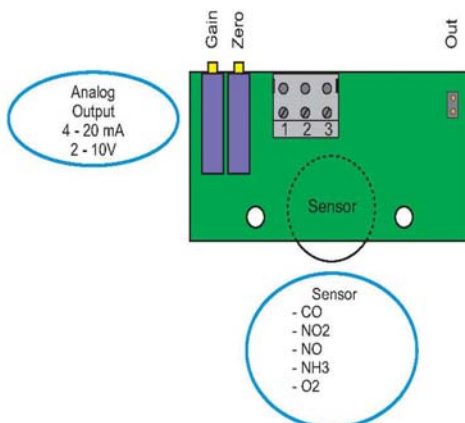
Sensor should always be installed without power applied:

- Unplug basic PCB EC-S carefully from the terminal blocks on the base.
- Unplug old sensor element from the PCB EC-S.
- Plug in sensor element into the PCB EC-S.
- Plug in the PCB EC-S into terminal block carefully.
- Calibrate

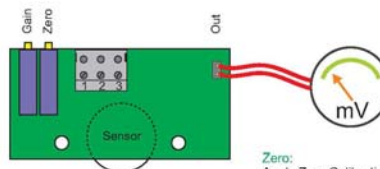
### Connecting Diagram



Terminal 2 is only for 2-10Vdc signal = 3-wire  
4-20mA two-wire loop powered



### Calibration



**Zero:**  
Apply Zero Calibration Gas  
U Out = 40 mV (Adjust with Potentiometer Zero)

**Gain:**  
Apply Calibration Gas  
U Out =  $160 \text{ mV} \times \text{Calibration Gas Concentration (ppm)} + 40 \text{ mV}$   
Measuring range (ppm)  
(Adjust with Potentiometer Gain)