OXY 3610 MP, OXY 3690 MP, GT1-CO, GT10-CO2-1R Газоанализаторы GHM MESSTECHNIK

Технические характеристики

Analysis O2, CO, CO2

Characteristics

System
Analysis oxygen, carbon monoxide and carbon dioxide

Measurands
O_2, CO, CO_2 in air / gases

O_2 (dissolved O_2) in liquids

Applications

● Air monitoring

- Underground and parking garages
- Factory and office rooms
- Storage rooms
- Garages
- Green houses

● Measurement in liquids

- Aquaristics
- Fish farming
- measurement of spring and well water

Analysis O2, CO, CO2

Function

Oxygen (O_2), carbon monoxide (CO) and carbon dioxide (CO_2) measurements are mainly used for ambient air monitoring.

CO_2 and O_2 are important indicators for ambient air quality and therefore important for modern climate control.
The recommended CO_2 limit for indoor air is 1000 ppm. Concentrations considerable above this limit causes fatigue and poor concentration. At values considerably lower than that limit there is a high energy saving potential at the climate control with optimized air change rates.

Air is composed of approximately 21% O_2 and 78% nitrogen, beyond that it contains approximately 0.04% CO_2 and other components.

CO is a toxic gas that is produced by incomplete combustion of fossil fuels. This gar is normally measured in underground and parking garages and motor vehicle workshops.

The oxygen measurement in liquids serves the monitoring of spring and well water quality as well as checking the water quality for fish farming.

Advantages

- Robust ABS housing
- Suitable for wall mounting
- On-site display and operating buttons
- Electric connection via elbow-type plug
- Transmitter incl. electrode, sensor or measuring cell
- Extensive range of accessories and spare parts

Device Overview

Type	Measurand	Description	Measuring range	Page
OXY 3690 MP	O_2	Air oxygen transmitter incl. sensor	Oxygen concentration: 0.0..100.0 % O_2	**3**
OXY 3610 MP	O_2	Transmitter incl. sensor for dissolved oxygen in liquids	Oxygen concentration: 0.00..25.00 mg/l (dissolved)	**4**
GT1-CO	CO	CO-transmitter	Carbon monoxide: 0..300 ppm CO	**5**
GT10-CO2-1R	CO_2	CO_2-transmitter	Carbon dioxide: 0..2000 ppm CO_2 or 0..5000 ppm CO_2	**6**

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Product Information

Analysis O2, CO, CO

Air Oxygen Transmitter incl. Electrode OXY 3690 MP

- **O_2-sensor element exchangeable**
- **Appropriate to air with high CO_2-concentrations**
- **Input electrically isolated**

Characteristics

The OXY 3690 MP measures the oxygen concentration in air. Depending on the selected design type the device is appropriate to either pure oxygen (i.e. low CO_2 concentration) or to air with very high CO_2 concentration.

Technical data

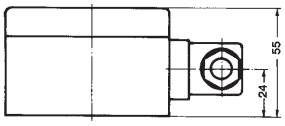
Measuring range		
Oxygen concentration	:	0.0..100.0 % O_2
Temperature	:	-20.0..+50.0 °C
Accuracy (transmitter)		at 20.9 % O_2, 1000 mbar abs.
Oxygen	:	±0.1 % ± 1 digit
Temperature	:	±0.1 °C ±1 digit
Output signal (only O_2)	:	4..20 mA (2-wire) 0..10 V (3-wire)
Electrical isolation	:	input electrically isolated
Working temperature	:	0..50 °C
Power supply	:	12..30 V DC at 4..20 mA 18..30 V DC at 0..10 V
Permissible impedance	:	R_A [Ω] = (U_V [V] - 12 V) / 0.02 mA
Permissible load	:	R_L > 3000 Ω
Reverse voltage protect.	:	50 V permanent
Display	:	10 mm high, 4-digit LCD display
Electric connection	:	elbow-type plug (EN 175301-803/A), max. wire cross-section: 1.5 mm², wire diameter from 4.5..7.0 mm
Sensor connection	:	5-pole screw-able diode socket
Calibration	:	1-point-calibration at atmospheric air
Air pressure compensat.	:	500..2000 hPa abs., manual input
Over- / under-pressure	:	max. 0.25 bar
Housing	:	ABS

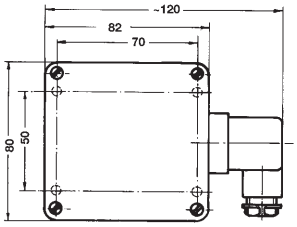
O_2-sensor element

	GOEL 370
Measuring range	0.0..100.0 % O_2
Response time T_{90}	< 10 s
Application	for air or pure oxygen or for air or air with high CO_2-concentration
	GOEL 380
Measuring range	0.0..25.0 % O_2
Response time T_{90}	< 5 s
Application	for air with little CO_2-concentration, response time shoots

Temp. compensation	:	integrated in oxygen sensor
Connection cable	:	1.3 m with 5-pole screw-able diode plug
Working pressure	:	500..2000 hPa (static) for air or gas inflow option GOO (oxygen probe GOO … / MU) is needed

Dimensions





Measuring probe : Ø 40 x 103 mm
(153 mm incl. bend protection)

Ordering code

OXY3690MP - 1. - 2. - 3. - 4.

1.	**O_2-sensor element**	
	0	GOEL 370 for air and pure oxygen
	1	GOEL 380
2.	**Sensor design**	
	GGO	closed sensor design (suited for over- and under- pressure, used at gas-tight systems)
	GOO	open sensor design (e.g. suitable for air or gas inflow, pressure cannot be built up)
3.	**Output signal**	
	A1	4..20 mA (2-wire)
	V2	0..10 V (3-wire)
4.	**Cable length**	
	L01	1.3 m cable
	L10	10 m cable

Ordering example: OXY3690MP-0-GGO-A1-L01

Accessories / Spare parts

GOEL 370

Spare sensor element

Transmitter incl. Electrode for Dissolved Oxygen in Liquids OXY 3610 MP

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- **O_2-electrode exchangeable**
- **Electrode: active diaphragm type with integrated NTC resistance**
- **Input electrically isolated**

Characteristics

The OXY 3610 MP measures the oxygen concentration in liquids. The device can be used in aquaristics, fish farming as well as for the measurement of spring water and well water.

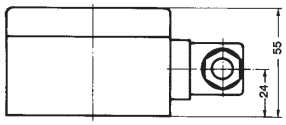
Technical data

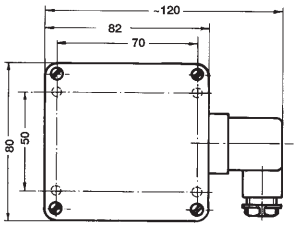
Measuring range		
Oxygen concentration	:	0.00..25.00 mg/l (solved)
Temperature	:	0.0..50.0 °C
Accuracy (transmitter)		
Oxygen	:	±1.5 % of meas. value ±0.2 mg/l
Temperature	:	±0.1 °C ±1 digit
Output signal (only O_2)	:	4..20 mA (2-wire) 0..10 V (3-wire)
Electrical isolation	:	input electrically isolated
Working temperature	:	0..50 °C
Power supply	:	12..30 V DC at 4..20 mA 18..30 V DC at 0..10 V
Permissible impedance	:	R_A [Ω] = (U_V [V] - 12 V) / 0.02 mA
Permissible load	:	R_L > 3000 Ω
Reverse voltage protect.	:	50 V permanent
Display	:	10 mm high, 4-digit LCD-display
Electric connection	:	elbow-type plug (EN 175301-803/A), max. wire cross-section: 1,5 mm², wire diameter from 4.5..7.0 mm
Sensor connection	:	5-pole screw-able diode socket
Calibration	:	1-point-calibration at atmospheric air
Housing	:	ABS

O_2-electrode (GWO 3600 MU)

Electrode	:	active diaphragm type with integrated NTC resistance
Response time	:	95 % in 10 s, depending on temperature
Working pressure	:	max. 3 bar
Inflow velocity	:	min. 30 cm/s
Connection cable	:	4 m with 5-pole screw-able diode plug

Dimensions





Oxygen probe	:	diameter Ø: 12.0 ±0.2 mm installation length: 110 mm overall length: 220 mm incl. bend protection

Ordering code

OXY3610MP - 1. - 2.

1.	**Output signal**	
	A1	4..20 mA (2-wire)
	V2	0..10 V (3-wire)
2.	**Cable length**	
	L04	4 m cable
	L10	10 m cable
	L30	30 m cable

Ordering example:
OXY3610MP-A1-L04

Accessories / Spare parts

GWO 3600 MU

Spare electrode with 4 m cable

GSKA 3600

Protection cab for measuring in great depths

GWOK 01

Spare diaphragm head

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Product Information

Analysis O2, CO, CO

CO Transmitter GT1-CO

- **TÜV certification according to VDI 2053**
- **Long-lasting electrochemical measuring cell**
- **Automatic zero calibration**

Characteristics

The GT1-CO is a high-quality and TÜV certified CO transmitter (incl. measuring cell) for detection of carbon monoxide in underground and parking garages, boiler plants, heating systems, garages as well as in ambient air.

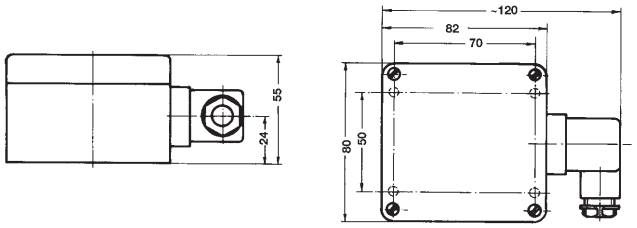
The GT1-CO has a very long-lasting electrochemical measuring cell. It can be easily integrated in existing CO surveillance systems (without loss of validity of existing TÜV certificates).

Displays, controller and alarm devices can be connected via 2-wire system without difficulty.

Technical data

Measuring range	:	0..300 ppm CO (carbon monoxide)
Measuring principle	:	electrochemical, permanent measuring
Reproducibility	:	< 3 ppm according to VDI 2053
Response time T_{90}	:	< 60 s
Cross sensitivity	:	≤ 2 % of 300 ppm CO
Linearity error	:	≤ 2 % of 300 ppm CO
Offset adjustment	:	automatic
Output signal	:	4..20 mA, 2-wire
Working temperature	:	-10..+40 °C
Power supply	:	12..28 V DC (at option VO: 16..26 V DC)
Permissible burden	:	R_A [Ω]=(U_V [V] - 12 V or 16 V) / 0.02 A
Electric connection	:	elbow-type plug (EN 175301-803/A), max. wire cross section: 1.5 mm², wire diameter from 4.5..7.0 mm
Housing	:	ABS

Dimensions



Ordering code

	1.	
GT1-CO -		

1.	Option	
	00	without option
	VO	on-site display

Ordering example:
GT1-CO-00

Accessories

GZ-01

Test gas cap GT (for controlled flow with test gas)

GZ-02

Gas bottle with 12l test gas: 30 ppm CO

GZ-03

Gas bottle with 12l test gas: 300 ppm CO

GZ-04

Gas valve unit MiniFlo for 12l gas bottles

CO2 Transmitter GT10-CO2-1R

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Sensors and Instrumentation

- **Excellent long term stability**
- **Auto-calibration procedure**
- **Output signal freely scalable**

Characteristics

The high-quality and precise CO_2 transmitter works according to the infrared principle (NDIR). An auto-calibration procedure compensates aging effects. This ensures the the excellent long-term stability of this transmitter.

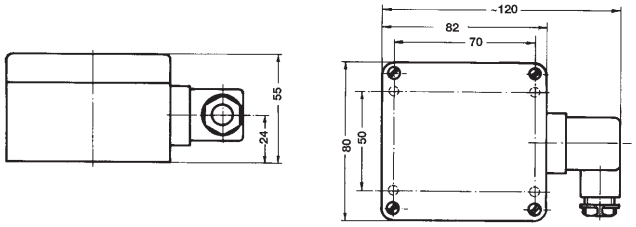
Due to the fact that CO_2 is an important indicator for air quality in rooms, it is very important for modern climate control to measures the CO_2 content.

Due to the freely adjustable output signal the transmitter can be used for nearly each existing controller input.
Additionally, there is an on-site display which shows beside the current CO_2 concentration the minimum and maximum values as well as an optical alarm.

Technical data

Measuring range		
MB1	:	0..2000 ppm CO_2
MB2	:	0..5000 ppm CO_2
Measuring principle	:	infrared principle (NDIR)
Accuracy		
MB1	:	±50 ppm ± 2 % of meas. value
MB2	:	±50 ppm ± 3 % of meas. value
Output signal (only O_2)	:	4..20 mA, 0..1 V, 0..10 V (3-wire)
Working temperature	:	-10..+50°C
Power supply	:	12..30 V DC at 4..20 mA and 0..1 V 18..30 V DC at 0..10 V max. 600 mA
Permissible burden	:	R_A < 200 Ω
Permissible load	:	R_L > 3000 Ω
Display	:	10 mm high, 4-digit LCD-display
Electric connection	:	elbow-type plug (EN 175301-803/A), max. wire cross section: 1.5 mm², wire diameter from 4.5..7.0 mm
Housing	:	ABS

Dimensions



Ordering code

GT10-CO2-1R - 1. - 2.

1.	**Measuring range**	
	MB1	MB1: 0..2000 ppm CO_2
	MB2	MB2: 0..5000 ppm CO_2
2.	**Output signal**	
	A1	4..20 mA (3-wire)
	V1	0..1 V (3-wire)
	V2	0..10 V (3-wire)

Ordering example:
GT10-CO2-1R-MB1-A1