


GAS CONCENTRATION IN AIR

Carbon Dioxide Sensor, hand-held Type FYA600CO2H

new!



- ▶ Compact sensor for mobile and stationary applications
- ▶ High display resolution (1 ppm)

 When operating more than one CO₂ probe on a single ALMEMO® device, these CO₂ probes will need their own external power supply ! On request we can offer a wide variety of power supply options to suit your particular measuring setup.

Types:

Carbon dioxide sensor,
hand-held including connecting cable,
1.5 m long for measuring CO₂ in air

Order no. FYA600CO2H


Technical Data:

Sensor:	2-channel infra-red absorption principle
Measuring range:	0 to 10 000 ppm (0 to 1 vol% CO ₂)
Accuracy: (under nominal conditions)	0 to 5000 ppm± (50 ppm+ 2% of measured value) 5000 to 10000 ppm ±(100 ppm +3% of meas. value)
Resolution:	1 ppm or 0,0001 vol %
Nominal conditions:	22°C ±2 °C / 50 % rF ± 10 % rF
Ambient temperature:	0 to +50 °C
Storage temperature:	-20 to +50 °C
Ambient atmospheric humidity:	0 to 90 % rF (non-condensing)
Temperature coefficient	0,4% of measured value / °C
Voltage supply:	6.5 to 12 V DC, from the ALMEMO® device Operation with mains supply unit recommended !
Current consumption:	effective approx. 40 mA; max. approx. 80 mA
Connection cable:	1,5 m

Carbon Dioxide Probe Type FYA600CO2



- ▶ Since the gas is supplied by means of free convection, this is especially suitable for climatology measurements.
- ▶ Various measuring ranges up to 25%

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Type:

Carbon dioxide sensor
including connecting cable 1.5m long
for CO₂ measurements in air
(Please specify measuring range !)

Order No. FYA600CO2

Technical Data:

Gas:	CO ₂
Measuring principle:	IR optics
Measuring ranges:	nominal (% CO ₂): 0 ... 0.5%, 0 ... 2.5%, 0 ... 10%, 0 ... 25%
Accuracy:	±2% of fin. val.
Reproducibility:	±1% of final value
Resolution:	(depending on measuring range) 50 ... 100ppm at 5000ppm <200ppm at 2.5%
Voltage output:	0 ... 2V for the selected measuring range
Current output:	referred to GND max. burden (load resist.): 400Ω
Power supply:	6.5 to 12VDC from the ALMEMO® device Operation with mains supply unit recommended !
Current consumpt.	eff. 50mA/ max. 70mA
Settling time t ₉₀ :	< 60s
Temperature coefficient:	typical -0.4% signal/K
Temperature range:	5 to +40°C
Relative humidity:	0 to 95%
Dimensions:	W 96mm x H 36mm x D 64mm
Weight:	241g
Connecting cable:	1.5m long, ALMEMO® connector

Carbon Monoxide Probe Type FYA600CO



- ▶ Applications:
For measurement, control and warnings in garages, for monitoring the air quality with respect to the maximum allowable concentration at work places (MAC value, e.g. in laboratories and engine test benches), for monitoring the outside air or protected air systems in house shelters or large shelter buildings.
- ▶ Particularly suitable for long-term measurements of the carbon monoxide concentration in air, in a range from 0 ... 150ppm to 0 ... 5vol%.

Type:

Carbon monoxide sensor including connecting cable 1.5m long for CO measurements in air **Order No. FYA600CO**

Technical Data:

Gas:	CO
Measuring principle:	electrochemical reaction
Measuring range:	0 ... 150 ppm, 0 ... 300 ppm, 0 ... 5%
Zero point error:	< 10 ppm CO
Gauge reading balance:	< 3 ppm CO
Error of meas. value:	±3% of full scale value
Zero point drift:	< 2% (1 year)
Reproducibility:	< 2% (1 year)
Linearity:	< 2% of full scale value
Settling time t_{90} :	< 60s
Transverse sensitivity:	< 2% by integrated filter
Interface:	ALMEMO®
Voltage supply:	15V ... 24V
max. load, voltage-depend.	100Ω ... 500Ω
Ambient temperature:	-10 to +40°C, sensor temperature compensated in range
Air humidity:	0 to 90% non-condensing
Life span of the meas. cell:	approx. 2 years
Dimensions of meas. head:	Ø 80mm, height 80mm
Weight:	600g
Connecting cable:	1.5m, with ALMEMO® connector

Oxygen Probe Type FYA600O2



- ▶ Examples from the range of applications:
Measurements in air conditioning systems, air purifiers, oxygen rectifiers, greenhouses and oxygen incubators.
- ▶ Approved by PTB and approved for exhaust emission measurements in the automotive industry.



A correction value can be stored in the ALMEMO® connector plug to compensate for the natural ageing of the probes, so optimum output characteristics can be ensured for the whole operating life.

Type:

Oxygen sensor including connecting cable 1.5m long for O₂ measurements in air **Order No. FYA600O2**

For Reordering:

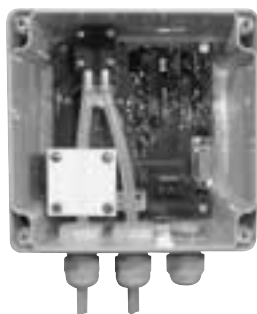
Oxygen sensor **Order No. FY9600O2**
ALMEMO® connecting cable **Order No. ZA9600AKO2**

Technical Data:

Gas:	O ₂
Measuring principle:	electrochemical cell
Measuring range:	1 ... 100% O ₂ , linear
Accuracy :	1% O ₂
Resolution :	0.01% O ₂
Response time:	< 40s
Signal drift:	< 2% signal/month (typ. < 5% over operating life)
Offset voltage at 20°C:	< 20μV
Operating life:	2 years, if operated in 20.9% O ₂
Nominal conditions:	20°C, 50% rH, 1013mbar
Temperature range:	-20 to +50°C
Temperature compensation:	effective in range -10 to +40°C
Pressure range:	atm. pressure ±10%
Relative humidity:	0 to 99% non-condensing
Connecting cable:	adapter cable 1.5m long
Dimensions:	H 43mm x Ø 29.3mm

GAS CONCENTRATION IN AIR

Ozone Measuring Transducer Type FYA60003



- ▶ Suitable for many measuring tasks where ozone measurements for control purposes were too expensive to date, e.g. for leakage tests in industry, for protection of health and safety standards at work, for mobile air quality measurements etc.
- ▶ Each ozone sensor is supplied with a calibration certificate.
- ▶ As a result of the high long-term stability, only small maintenance costs.

Technical Data:

Gas:	O ₃ (ozone)
Measuring principle:	electrochemical three-electrode sensor
Measuring range:	0 ... 300ppb
Accuracy:	after calibration: max. 10% of final value, typ. 5% of final value
Long term accuracy:	up to 12 months typ. 10% of final value
Resolution:	max. 20ppb
Stabilisation time:	typ. 1hr, up to 8hrs after longer periods of intermission (e.g. 1month)
Meas. interval:	pump on: 5min pump off: 10min
Pump flow rate:	500ml/min
Signal output:	0 ... 2V, load resistance > 100kΩ
Power supply:	6 to 14V, stable
Current consumption:	pump on: 70 mA pump off: 45 mA pump blocked: 180 mA
Calibration:	2hrs at 90 to 110ppb
Overload capacity:	5ppm
Operating life:	6 months, typ. approx. 16 months
Nominal conditions:	20°C, 30% r.H., 1013 mbar, no contaminations of the contact surfaces
Temperature range:	-20 to +40°C
Storage temperature:	0 to 20°C, at 30 to 80% non-condensing
Dimensions:	L 180mm x W 125mm x H 90mm
Connecting cable:	1.5m long with ALMEMO® divider connector programmed in ppb or µg/m ³

Type:

Ozone sensor
including connecting cable 1.5m long
for O₃ measurements in air **Order No. FYA60003**

Option:

Pump in continuous operation
(fixed factory setting) **Order No. OY960003D**

Maintenance set :
new electro-chemical measuring cell,
pump replacement,
readjustment, including calibration certificate
Order No. ZB960003S