

Residual oxygen meas. device

for quick and cost-effective measurement of residual oxygen



GMH 3691 GOG

Application:

Essentially there, where delicate products are conserved by low-oxygen atmospheres (protective gas), this instrument is suitable to check the residual oxygen content.

- packaging industry
- food industry

Specification: (summary)

Meas. range: 0,0 ... 100,0 % O₂ (O₂-concentration)

Accuracy: (whole system - during carefully calibration and measuring)

- 1-point-calibration: $\pm 0.2\% \text{O}_2 \pm 1 \text{ digit}$
(for concentrations < 10%)
- 2-point-calibration: $\pm 0.1\% \text{O}_2 \pm 1 \text{ digit}$
(for concentrations < 10%)

Oxygen probe: Oxygen-partial pressure probe, built in external sensor housing

Response time: T₉₀ < 10 sec., depending on temperature

Operation life: warranty for sensor element 12 months (appropriate application and ambient pressure)

Working pressure: 0.5 to 2.0 bar abs.

Over-/under-pressure: max. 0,25 bar

Working temperature: 0 to 50°C (sensor), -20 to 50°C (device)

Relative humidity: 0 to +95%RH (non-condensing)

Storage temperature: -15 to 60°C (sensor), -20 to 70°C (device)

Power supply: 9V battery type IEC 6F22

Dimensions case: approx. 394 x 294 x 106 mm

Weight: approx. 1400g (cpl. set)

for additional technical data refer to GMH3691 and accessory sensors p. 51

Scope of supply:

Instrument GMH3691, hand pump with air tube, GOG oxygen sensor with penetration needle, case GKK3500, spare needle $\varnothing 0,9\text{mm}$, rubber foam sticker (40 pieces), operating manual.

Spare elements, accessories:

GOG-SET Set without instrument

Scope of supply: GOG oxygen sensor with penetration needle, hand pump with air tube, case GKK3500, spare needle and 40 rubber foam sticker

GOEL 370 spare sensor element

GOG-N needle, $\varnothing 0.9\text{mm}$ (5 pieces)

GOG-A rubber foam sticker (40 pieces)

ST-R1 device protection bag with cut-out for probe connection

for add. accessories p.r.t. page 56 - 58

Air oxygen measuring device



- Double display for oxygen and temperature
- Measured units: O₂-concentration and O₂-partial pressure
- Alarm detector with integrated horn
- Automatic temperature compensation
- Min./Max. value memory, Hold function
- Serial interface, device can be connected to bus system (up to 5 devices can be connected to one PC interface)
- Battery and d.c. operation
- Wide range of application
- Most simple calibration in atmospheric air

GMH 3691 Sensor not included - please order separately!

Specification:

Measuring ranges:

Oxygen concentration: 0,0 ... 100,0 % O₂ (gaseous)

Partial oxygen pressure: 0 ... 1100 hPa O₂

Temperature: -5,0 ... 50,0 °C

Accuracy: (device) (at nominal temperature = 25°C)

Oxygen concentration: $\pm 0.1\% \pm 1 \text{ digit}$

Partial oxygen pressure: $\pm 1 \text{ hPa} \pm 1 \text{ digit}$

Temperature: $\pm 0.1^\circ\text{C} \pm 1 \text{ digit}$

Oxygen electrode: for suitable sensores p.r.t. page 51

Sensor connection: 6-pin screened Mini-DIN-socket.

Display: two 4 digit LCDs (12.4mm or 7mm high), as well as additional arrows.

Pushbuttons: 6 membrane keys for ON/OFF-switch, selection of meas. range, min- and max-value memory, hold-function, calibration etc.

Working temperature: 0 to +50°C

Relative humidity: 0 to +95%RH (non-condensing)

Storage temperature: -20 to +70°C

Interface: serial interface, direct connection to RS232 or USB interface of a PC via electrically isolated interface converter GRS3100 or GRS3105 resp. USB3100 (p.r.t. accessories).

Power supply: 9V-battery, type IEC 6F22 (included), as well as additional d.c. connector for external 10.5-12V direct voltage supply. (suitable power supply: GNG10/3000)

Power-Off-function: 1...120min (can also be deactivated).

Power consumption: approx. 1.5 mA

Low battery warning: Δ and 'bAt'

Dimensions: 142 x 71 x 26 mm (H x W x D) Impact-resistant ABS plastic housing, membrane keyboard, transparent panel. Front side IP65, integrated pop-up clip.

Weight: approx. 160 g (cpl. with battery)

Functions:

Min-/Max-value memory: max. and min. values will be memorized.

Hold function: by pressing a button the current meas. value will be memorized.

Alarm: integrated limit detector for min. or max. alarm.

Temperature compensation: automatic via temperature sensor, integrated in probe housing.

Air pressure compensation: The O₂ concentration will be compensated according to the abs. atmospheric pressure set (500...2000hPa).

Calibration: 1-point calibration: extremely simple quick calibration in atmospheric air. (press button to compensate unit to 20.9%).

2-point calibration: first point at atmospheric air (20.9%), second point freely selectable

Application:

Wide range of application for your home, job and hobby! For example:

- **Bio chemistry:** Oxygen monitoring in breeding chambers for cell cultures. Monitoring of fermenting process of fruits in fermentation plants etc.

- **Medicine:** Monitoring of oxygen concentration in respirators; checking of breathing, monitoring of oxygen concentration in incubators, oxygen tents etc.

- **Food technology:** Monitoring of residual oxygen in packages (e.g. coffee, tea, etc.). Monitoring of oxygen content during production processes.

- **Air conditioning and ventilation technology:** Oxygen measurements, air quality monitoring, measuring of oxygen concentration in enclosed air conditioning systems, etc.

- **Sport:** Checking of oxygen content in compressed air breathing apparatuses (diving, etc.), oxygen monitoring for gliding.

The device can only be used to check during these applications. -> no substitute for approved monitoring device!

Accessories:

Suitable sensores p.r.t. page 51

GKK 3000 case (275 x 229 x 83 mm) with punched lining suitable for GMH3xxx

USB 3100 N interface converter, electrical isolated

GRS 3105 interface converter with 5 connection points, electr. isolated, for the connection of 5 GMH3xxx to one PC (RS232).

ST-R1 device protection bag with cut-out for probe connection

for add. accessories p.r.t. pages 56 - 58