

Portable O₂-Analyzer BA 4000



The portable Bühler O₂ Analyzer is suitable for various applications in non-hazardous areas.

As an option the BA4000 can be equipped with an integrated sample gas pump. The optional sampling pump is required for applications at atmospheric pressure or light vacuum and is switched on and off by an intergated switch in the front panel.

Alarm set points can be adjusted individually to indicate deviations from predetermined values. The continuous output can be configured either as 0-1 V or 0/4-20 mA.

The calibration can be done easily with N₂ as zero gas and ambient air as the span gas. The calibration points can be adjusted using the potentiometers on the front panel.

An easily accessible fine filter protects the measurement cell from particulate contamination. If the unit must be used for wet sample gas, a portable sample conditioning system (Model TGAK) is required

The BA 4000 is powered by an integrated high capacity battery allowing it operate independently from a power supply for at least 14 hours.

- **Paramagnetic operating principle**
- **4-20 mA analog output**
- **Reliable, durable measuring cell**
- **Simple operation**
- **Fast accurate O₂ analysis**
- **Various ranges available**
- **Housing in IP 20**
- **Battery operated**

Technical Data

Measurement Parameter Oxygen

Range	0 ... 10 Vol.% O ₂
(indicate with order)	0 ... 25 Vol.% O ₂
(custom ranges avail.)	0 ... 100 Vol.% O ₂

Measuring Principle Paramagnetic

Performance Characteristics

Accuracy	0.1% O ₂ absolut
Repeatability	± 0.05 % O ₂
Response time	T ₉₀ <10 s
Zero-drift	± 0.1 Vol.% O ₂ per week
Span drift	± 1% range per week

Sample Requirements

Inlet temperature +5°C to 40°C

Inlet pressure min.: 10 mbar
max.: 1,5 bar
w/internal pump -5 mbar

Sample Flow

without pump approx. 120 ml/min
@ min. pressure

with internal pump approx. 30 l/h

Sample Conditioning

Dew point at least 5 °C below ambient temperature

Particulates 8µ disposable filter fitted as standard

Calibration Requirements

Zero gas Nitrogen

Span gas Air or bottled cal. gas

Environmental Conditions

Ambient temperature + 10 °C to 45 °C

Storage temperature - 25 °C to 65 °C

Relative humidity <75% in average

Analogue Outputs

Signal output	4...20 mA (max. 400 Ω)
	0...1 V (min. 1kΩ) optional

Readings

Display	LCD 3½ digits
Flow	Flow meter
Range	0 - 10 NI/h air

Power Supply

Power supply 230 V, 50/60 Hz
115 V, 50/60 Hz

Internal battery 12 V, 2.7 Ah (operating time
appr. 14 hrs. without options)

Physical Characteristics

Case construction Aluminium alloy

Protection degree IP20 (standard)

Dimensions (H x W x D) 145 x 182 x 240 mm
(standard housing)

Weight approx. 4.5 kg

Gas inlet filter with glass fibre element

Gas connections 6 mm OD
4 mm ID tube, push-on

Sample wetted parts PVDF, glass, SS 1.4571,
gold, viton, platinum-iridium,
epoxy resin

please indicate with order

(incl. power supply)

Analyzer Models	Part No.
BA 4000 0 - 25%	55 11 099
BA 4000 0 - 100%	55 11 098

Options for all analyzers	Part No.
Internal pump	55 11 0991
Power supply 230 V, 50/60 Hz, 12 VDC	55 11 0992
Power supply 115 V, 50/60 Hz, 12 VDC	55 11 0993
Back pressure regulator ARP	46 00 999