



Portable O₂-Analyser BA 4510

The portable analyser BA 4510 is used to measure traces of oxygen in inert gas. At the core of this unit is a tried and tested, maintenance-free zirconium dioxide measuring cell.

This oxygen-ion conductor combines the advantage of high selectivity with high mechanical stability and consistency. As the oxygen content drops in inert gases, the voltage zirconium oxide cells supply increases, making it particularly easy to measure traces.

An internal processor converts the measuring signal to oxygen concentration, displays it on the LCD screen, and can be output as an analogue current signal. An internal switchable gas pump provides the necessary flow rate if the primary pressure of the sample gas is too low.

The unit is menu-driven using membrane keys at the front.

A special version (BA4510 KIZ) is available for measuring gases with flammable components.

calibration- and virtually drift-free measuring cell

4 – 20 mA output signal

RS 232 interface

internal, switchable pump

easy to navigate menu

programmable limits

no test gas required



Technical Data

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Measuring components

Measuring component:	Oxygen
Measuring range	0 Vol.-ppm ... 20.9 Vol.-% O ₂
Measuring principle:	Zirconium dioxide

Measuring Data

Accuracy:	< 5 % (from measured value)
Reproducibility:	< 1.5 % O ₂
Detection limit:	0.1 vpm O ₂
Response time (T ₅₀)	< 5 s
Linearity deviation	< 0.4 vpm O ₂
Zero drift	< 0.2 vpm O ₂ per week
Sensitivity drift	< 0.02 % from measured value per week or 200 vpb per week, whichever is higher

Gas inlet conditions

Gas temperature:	+5 °C to 80 °C
Gas overpressure:	max: 20 mbar
Gas flow without pump:	5 ... 10 L/h (regulated to 7 L/h when using the internal pump)

Sample gas conditioning

Dew point:	at least 5 °C below ambient temperature
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Climatic conditions

Ambient temperature:	+10 °C to 45 °C
Transport and storage temperature:	-20 °C to 60 °C
Relative humidity:	< 80 % at 20 °C

Signal outputs

Current signal:	0/4 ... 20 mA (on error near 0 mA); scalable
Alarm relay:	1x limit, 200 VDC, 0.5 A, 10 W
Serial port:	RS 232

Keyboard and displays

Measurement display:	LCD plain text display
Keyboard:	3 keys

Power supply

Voltage:	100 - 240 V AC, 47 - 63 Hz
Power input:	20 VA

Construction

Housing:	Aluminium housing with handle
Dimensions (h x w x d):	135 x 100 x 240 mm
Sample gas inlet:	3 mm screw-in connection
Sample gas outlet:	Stainless steel hose nipple for hose with 4 mm inside diameter
Housing protection class:	IP40
Weight:	approx. 3 kg

Ordering instructions

Device model

Item no.	Description
55 15 000	BA 4510
55 15 001	BA 4510 KIZ