



Portable O₂-Analyzer 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

Technical Data	
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:	41 °F to 176 °F
Gas overpressure:	max: 0.29 psig
Gas flow without pump:	0.08 ... 0.17 lpm (regulated to 0.12 lpm when using the internal pump)
Sample gas conditioning	
Dew point:	at least 41 °F below ambient temperature
Climatic conditions	
Ambient temperature:	50 °F to 113 °F
Transport and storage temperature:	-4 °F to 140 °F
Relative humidity:	< 80 % at 68 °F
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):	5.31 x 3.94 x 9.45 in
Sample gas inlet:	3 mm (0.12 in) screw-in connection
Sample gas outlet:	Stainless steel hose nipple for hose with 4 mm (0.16 in) inside diameter
Housing protection class:	IP40
Weight:	approx. 6.6 lb

Ordering instructions

Device model

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