

Portable trace O₂-analyzer BA 4510



The BA4510 is designed for measurements of oxygen traces in inert gases. It is based on an advanced, zirconia measurement cell. The highly selective cell combines high mechanical strength with consistent accuracy. With inert gases, the cell delivers an increasing signal if the partial pressure of oxygen drops thus giving a highly precise measurement of trace oxygen levels. The value is shown on the digital display and a current output is provided.

The BA 4510 has an integrated sample pump which can be switched on if the sample gas is provided at too low pressure.

The unit is operated with menu guided keys on the front panel.

For measurement in gases containing combustible components, a special version (BA4510KIZ) is available.

- **Measurement cell does not require daily or weekly calibration and is nearly drift free**
- **4 - 20 mA analog output**
- **RS 232-Interface**
- **Internal sampling pump**
- **Simple menu-guided operation**
- **Programmable alarm output**

Technical Data

General

Measured component	Oxygen
Measuring range	0 Vol.-ppm ... 20,9 Vol.-% O ₂
Measuring principle	Zirconia dioxide

Performance specification

Accuracy	< 5 % (of measured value)
Repeatability	< 15 % O ₂
Detection limit	0.1 vpm O ₂
Response time (T ₉₀)	< 5 s
Linearity fault	< 0.4 vpm O ₂
Zero drift	< 0.2 vpm O ₂ per week
Span drift	< 0.02% of range per week or 200 vpb per week whichever is larger

Sample conditions

Sample temperature	+ 5 °C to 80 °C
Sample pressure	max: 20 mbar
Sample flow rate (without pump)	5 ... 10 l/h (automatically regulated by internal pump to 7 l/h)

Sample conditioning

Dew point	min. 5 °C below ambient temperature
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Environmental conditions

Ambient temperature	10 °C to 45 °C
Storing conditions.	- 20 °C to + 60 °C
Relative humidity	< 80% @ 20 °C

Signal outputs

Signal output	0/4 ... 20 mA (in error condition going to zero), scalable
Alarm relay	1x limit, 200VDC, 0,5A, 10W
Serial interface	RS 232

Keyboard and readings

Display	LCD-dot matrix
Keyboard	3 buttons

Power supply

Power supply	100 - 240 V AC, 47 - 63 Hz
Power consumption	20 VA

Mechanical data

Housing	Aluminium case with carrying handle
Dimensions (H x W x D)	135 x 100 x 240 mm
Gas inlet	3 mm Swagelok™ screwed union
Gas outlet	Tube nipple 4 mm
Protection class	IP 40
Weight	approx. 3 kg

Please indicate with order

Type	Part No.
BA 4510	55 15 000
BA 4510 KIZ	55 15 001