

# Multi Component Gas Analyser BA 3500



The central processing unit of BA 3500 communicates with up to three measuring modules, equipped with diverse measuring cells.

Different measurement combinations are possible. One channel may be equipped with a paramagnetic cell, measuring %-range Oxygen, while the second channel measures ppm-Oxygen using a Zirconia cell. Another combination may consist of IR-measuring cells, either on each measuring channel or combined with paramagnetic or Zirconia cell.

The whole unit is mounted in a 19" housing. Menu-guided operation of the BA3500 via a front-panel keypad and illuminated display allows easy configuration for various industrial process measurement applications.

- **Multi-component analyser**
- **Modular design**
- **State-of-the art technology**
- **Paramagnetic cell**
- **Zirconia cell**
- **Infra red (IR) cell**
- **19" housing, 3 HU**
- **4-20 mA output signal**
- **RS-232 interface**
- **Easy operation according to NAMUR**
- **Internal pump optional**
- **Flow control optional**
- **Automatic calibration optional**
- **High performance measurement technology**

## Technical Data

### Typical applications

#### Gas component

O <sub>2</sub>	Paramagnetic dump-bell cell
O <sub>2</sub>	Zirconia cell
CO	NDIR - cell
CO <sub>2</sub>	NDIR - cell
CH <sub>4</sub>	NDIR - cell
SO <sub>2</sub>	NDIR - cell

Send us your inquiry for other components.

#### Measuring principle

### Specification

	Paramagnetic	Zirconia	NDIR
Largest range	0 - 100 Vol.-%	0 - 210,000 vpm	Depends on component
Smallest range	0 - 2 Vol.-%	0 - 10 vpm	Depends on component
Zero suppression	Programmable	-	-
Accuracy	0.1 Vol.-% (absolute)	< 3 % (of measured value)	± 2 % of full scale value
Linearity fault	≤ 0,5% of range	< 0.4 vpm O <sub>2</sub> <sup>1)</sup>	< 2 % of full scale value
Repeatability	± 0.03% O <sub>2</sub>	< 1.5 % O <sub>2</sub> <sup>1)</sup>	Zero ± 0.2 % Full scale value ± 1%
Detection limit	0.1% O <sub>2</sub>	0.1 vpm O <sub>2</sub>	< 1% of full scale value
Response time (T <sub>90</sub> )	< 10 sec.	< 5 sec.	10 - 15 sec.
Zero drift	< ± 0.05 Vol.-% O <sub>2</sub> per week	< 0.2 vpm O <sub>2</sub> per week	< 2% of full scale value per week
Span drift	< ± 0.15 % of range per week	< 0.02% of range per week or 200 vpb per week <sup>2)</sup>	< 2% of full scale value per week
		<sup>1)</sup> range 0 - 1000 ppm <sup>2)</sup> whichever is larger	

### Sample Conditions

Temperature	+5 °C to +40 °C
Pressure	10 - 200 mbar
Flow rate	10 ... 90 l/h (~ 30 l/h with internal pump)
Other requirements	dry, clean sample gas necessary

### Environmental Conditions

Operating temperature	+10 °C to +45 °C
Storage temperature	-10 °C to +65 °C
Relative humidity	< 75 % rel. as annual average
Warm up time	~ 1 hour

### Signal Outputs

Signal output	0 / 4 ... 20 mA for each component (load: 500 Ω)
Alarm relays	2 x limit and 1 x fault for each component (125 V AC / 2 A, 60 V DC / 2 A)
Serial interface	RS 232

### Design

Case	19" housing, 3HU
Protection class	IP 21 (IP 40 optional)
Weight	ca. 10 kg
Gas input	tube nipple 1/4" NPT
Gas output	tube nipple 1/4" NPT
Power supply	110-230 V - 50/60 Hz
Display	illuminated LCD

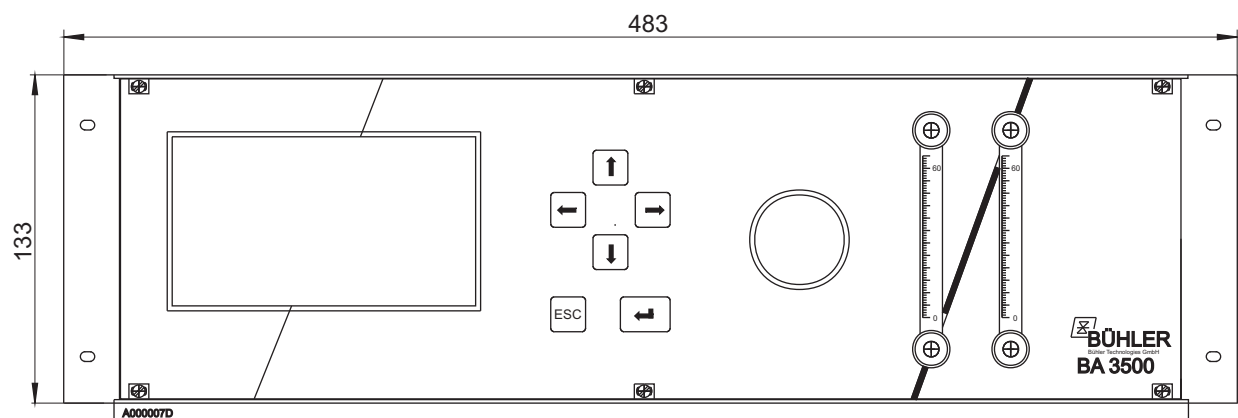
## Sample wetted parts

Material	O <sub>2</sub> -%	O <sub>2</sub> -Traces	NDIR
PVDF	✓		
Glass	✓		
Stainless steel 1.4571	✓	✓	
Stainless steel 1.4301		✓	✓
Gold	✓		
Viton	✓	✓	✓
Platinum-Iridium	✓		
Epoxy resin	✓	✓	
Zirconia dioxid		✓	
Aluminium			✓

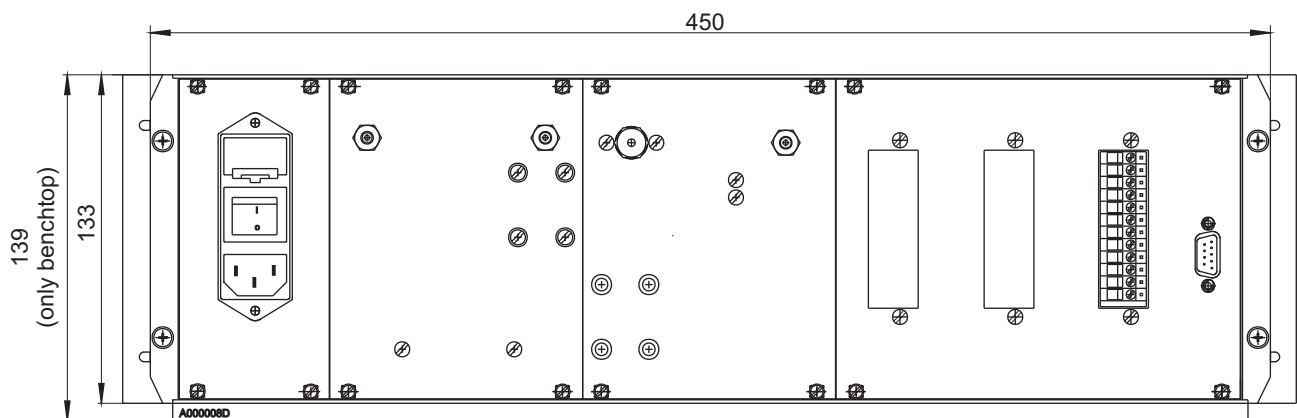
## Options

- Barometric pressure compensation for paramagnetic module
- Pressure compensation for NDIR
- Flow meter
- Internal pumps
- Separated sample gas channels
- Automatic calibration for max. 2 modules

## Drawings



Front view



Rear view