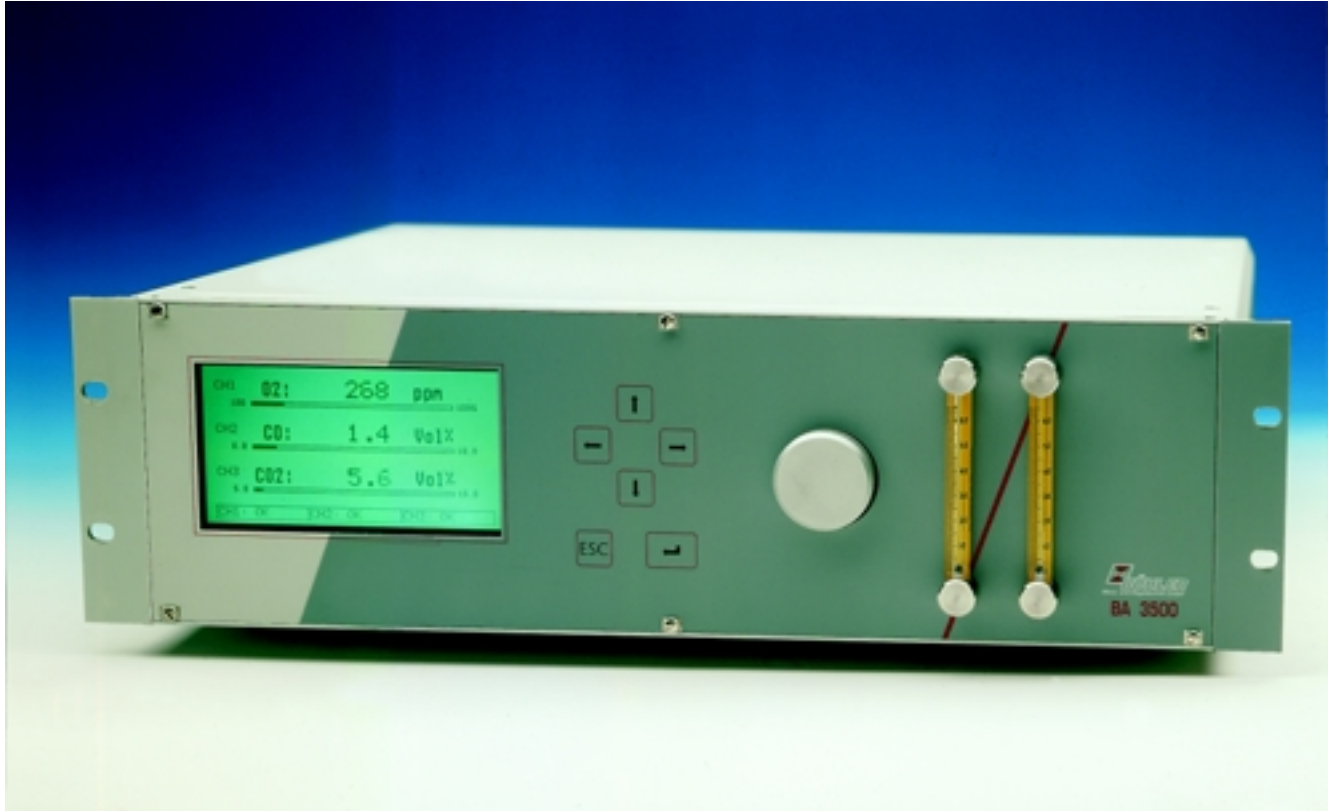


# Multi channel gas analyser BA 3500



The BA 3500 analyser uses a central processing unit, which can communicate with up to 3 measuring modules. The modules can be provided with various measuring cells. It is possible to measure oxygen in the %-range with a paramagnetic dumb-bell cell in one channel and in the other channel in the ppm-range using a Zirconia cell.

Another combination is the use of IR-cells, either on all 3 modules, or in combination with paramagnetic or Zirconia cells.

The analyser is accommodated in a 19", 3 HU housing. The operation is menu guided via a keypad at the front panel.

The configuration of the BA 3500 allows the use in various applications like process controls, air separation units or safety controls.

- **multi-component measuring analyser**
- **modular design**
- **paramagnetic dumb-bell cell**
- **Zirconia dioxide cell**
- **IR-cell**
- **19" housing, 3 HU**
- **4-20 mA outputs**
- **RS-232 interface**
- **easy operation according to NAMUR**
- **internal pump optional**
- **flow control optional**

## technical data:

### gas components to be measured:

at present available measuring modules:

gas component	measuring principle
O <sub>2</sub>	paramagnetic dumb-bell cell
O <sub>2</sub>	Zirkonia dioxide cell
CO	NDIR - cell
CO <sub>2</sub>	NDIR - cell
CH <sub>4</sub>	NDIR - cell
N <sub>2</sub> O	NDIR - cell

send us your inquiry for other hydrocarbons measuring cells

### specification:

	paramagnetic	Zirkonia	NDIR
largest range	0 - 100 Vol.-%	0 - 210000 vpm	depends on component
smallest range	0 - 2 Vol.-%	0 - 10 vpm	depends on component
zero suppression	programmable	-	-
accuracy	0,1 Vol.-% (absolut)	< 0,7% (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>	< 50 vpb 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 year
span drift	< ± 0,15 % of range per week	< 0,02% of range per week or 200 vpb per week <sup>2) 1)</sup>	< 2% of full scale value per year

<sup>1)</sup> range 0 - 1000 ppm

<sup>2)</sup> whichever is greater

### sample conditions:

sample temperature	: +5 °C to +40 °C
sample pressure	: 10 - 200 mbar
sample flow rate	: 10 ... 90 l/h (~ 30 l/h with internal pump)
other requirements	: dew point min. 5 °C below ambient temperature; dry, clean sample gas necessary

### environmental conditions:

operating temperature	: +10 °C to +45 °C
storing 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 (133 x 483 x 350 mm) or benchtop (139 x 450 x 350)
protection degree	: IP 21 (IP 40 on demand)
weight	: ca. 10 kg
gas input	: tube nipple 4/6 mm or swagelok 3 mm
gas output	: tube nipple 4/6 mm
power supply	: 230 V AC - 50 / 60 Hz 115 V AC - 50 / 60 Hz
display	: illuminated LCD

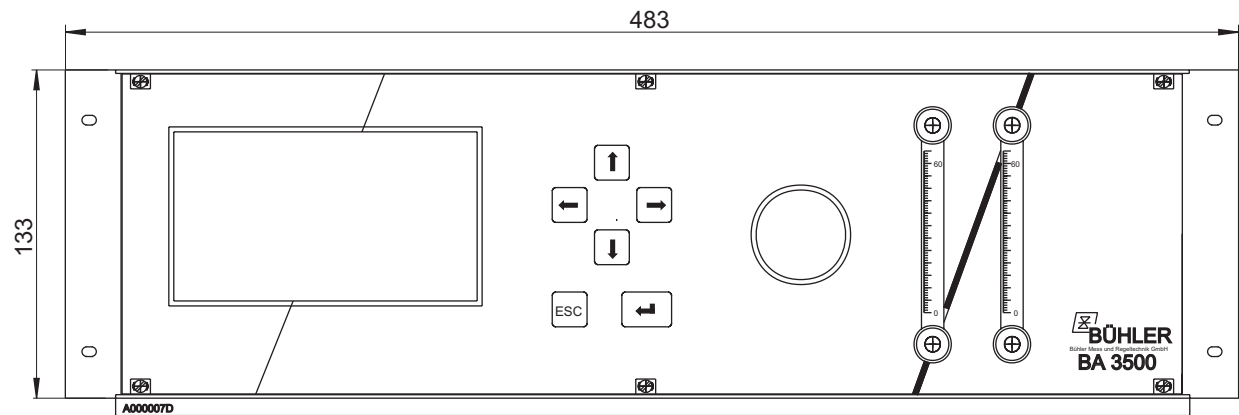
**Sample wetted material:**

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	✓	✓	
Zirkonia dioxide		✓	
Aluminium			✓

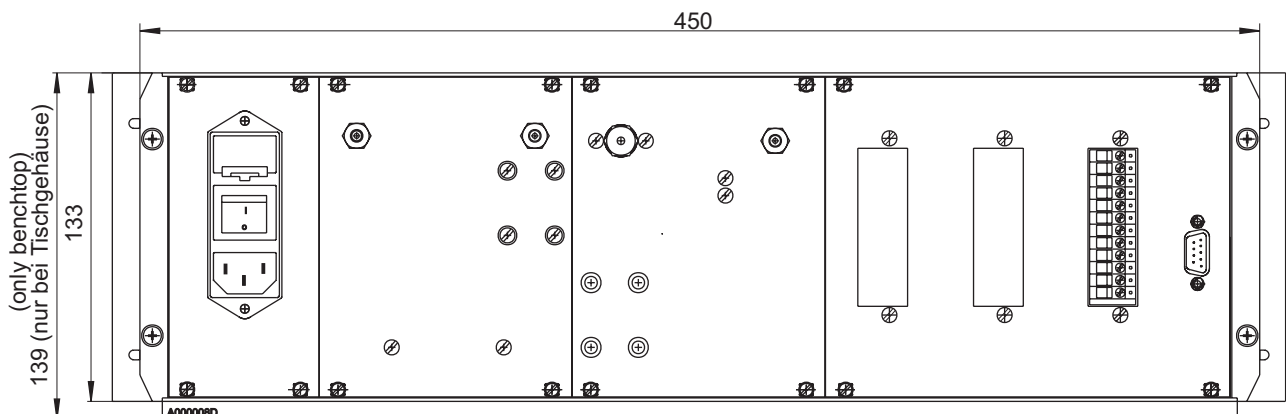
**Options:**

- Pressure compensation for paramagnetic module
- Pressure compensation for NDIR
- Flow meter
- Internal measuring pumps
- Separated sample gas channels

**Drawings:**



front side



back side

**Ordering BA 3500:**

**Company Name Address**


**Phone Fax Application**


**Power supply**

- 230 V, 50 / 60 Hz
- 115 V, 50 / 60 Hz

**Case**

- 19" housing
- benchtop

**Module 1**

**O<sub>2</sub>**

- 0 - 100 %
- traces

**CO**

- 0 - 3 %  0 - 10 %

**pressure compensation**

(not for O<sub>2</sub>-traces)

- yes  no

**CO<sub>2</sub>**

- 0 - 2000 ppm  0 - 5000 ppm
- 0 - 2,5 %  0 - 10 %  0 - 20 %
- 0 - 50 %  0 - 100 %

**CH<sub>4</sub>**

- 0 - 10 %  0 - 20 %  0 - 100 %

**more on inquiry**

- 

**Module 2**

**O<sub>2</sub>**

- 0 - 100 %
- traces

**CO**

- 0 - 3 %  0 - 10 %

**pressure compensation**

(not for O<sub>2</sub>-traces)

- yes  no

**CO<sub>2</sub>**

- 0 - 2000 ppm  0 - 5000 ppm
- 0 - 2,5 %  0 - 10 %  0 - 20 %
- 0 - 50 %  0 - 100 %

**CH<sub>4</sub>**

- 0 - 10 %  0 - 20 %  0 - 100 %

**more on inquiry**

- 

**Module 3**

**O<sub>2</sub>**

- 0 - 100 %
- traces

**CO**

- 0 - 3 %  0 - 10 %

**pressure compensation**

(not for O<sub>2</sub>-traces)

- yes  no

**CO<sub>2</sub>**

- 0 - 2000 ppm  0 - 5000 ppm
- 0 - 2,5 %  0 - 10 %  0 - 20 %
- 0 - 50 %  0 - 100 %

**CH<sub>4</sub>**

- 0 - 10 %  0 - 20 %  0 - 100 %

**more on inquiry**

- 

- |            |  |  |  |
|------------|--|--|--|
| 1. channel | <input type="checkbox"/> pump                            | <input type="checkbox"/> flow meter                      | <input type="checkbox"/> for module number                                       |
| 2. channel | <input type="checkbox"/> yes <input type="checkbox"/> no | <input type="checkbox"/> yes <input type="checkbox"/> no | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
|            | <input type="checkbox"/> yes <input type="checkbox"/> no | <input type="checkbox"/> yes <input type="checkbox"/> no | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |

**further options and notes:**