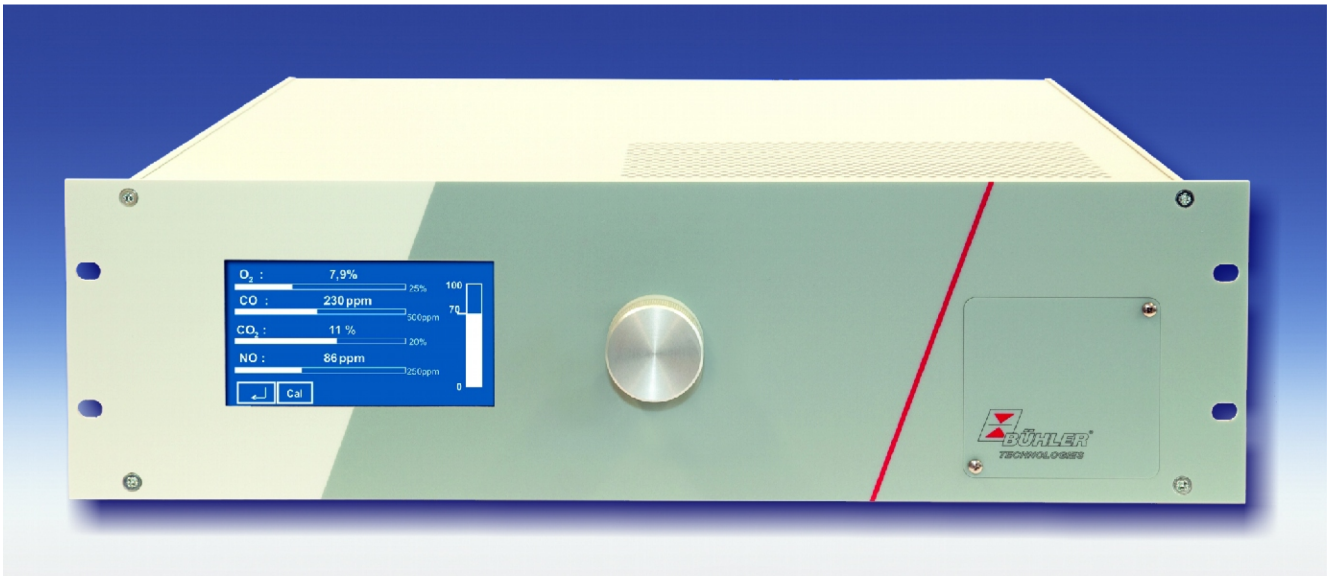
Multi-channel - Gas Analyser
BA 3 select



The BA 3 select is a gas analyser for 19” rack-mounting. Its modular design provides configurations from simple oxygen- up to multi-component devices. This enables the simultaneous measurement of up to four gas components.

Due to its outstanding advantage of the modular design concept, measuring cells can easily be added on-site. This allows the user to adapt the device to changed measurement requirements at low cost.

The analyser is equipped with a touchscreen. In combination with a well-arranged menu structure, intuitive and user-friendly operation is assured.

All necessary status-, threshold-, and alarm messages for effective monitoring are provided as analogue and digital signals. Comprehensive analysing functions (as for example correction of interfering gas components and graphic display of measurement curves) complete the user-friendly interface.

- Measurement of up to four gas components
- O_2-measurement: paramagnetic, electrochemical or/and ZrO_2
- IR-measuring cells (NDIR)
- Modular design, easy to maintain
- User-friendly touchscreen
- Graphical flow display
- Tested on the basis of EN 15267-3
- All relevant threshold and status alarms
- 4-20 mA output signal for each channel
- RS-232 interface
- Integrated pumps optional
- Pressure and temperature compensation optional

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Uniform Design and Scalability:
No matter if the configuration consists of a simple electrochemical cell for oxygen measurement or of a complex multi-component device with calibration functions and interface, the user gets an analyser based on a uniform design and menu structure.

Flexibility:
Measurement cells can be combined in any user-defined configuration. The BA 3 select even allows subsequent upgrading of measurement cells on-site, if additional measurement requirements occur. In addition, flow meters, filters, pressure and temperature compensation as well as NOx converter can be integrated.

Widespread Field of Application:
From **A**mbient air monitoring **to** analy**z**ing combustion processes, the BA 3 select is applicable to a large range of applications.

Cost Efficiency:
Based on the standardised basic design, the documentation is unified which saves cost with respect to system and plant documentation as well as for training of operators and maintenance personnel.

Easy servicing:
The modular design of the analyser results in easy maintenance, which reduces costs in this field as well.

Basic Data

4,7” graphic display with touchscreen

- Options and modules are listed and can be managed
- Self-diagnotics function
- Selection of language
- Automatic calibration

Supply

Voltage . . . . 90 to 264 V AC, 50-60 Hz / 127 to 370 V DC

Ambient conditions

Ambient temperature (T_a) . . . . . +5 °C to +50 °C
Transportation and storage temperature . . . . -5 °C to +65 °C
Humidity . . . . < 75% rel. humidity

Gas inlet conditions

Gas inlet temperature . . . . +5 °C to +40 °C
Sample gas pressure . . . . 100 to 200 mbar
Sample gas flow . . . . approx. 60 to 70 l/h
Sample gas conditioning . . . . . dry, clean sample gas with dew point of 5 K below T_a

Materials

Medium wetted parts . . . . stainless steel 1.4571 / 1.4301, platinum iridium PTFE, PVDF, Viton zirconium dioxide, glass, epoxy resin

Signals

Analogue output. 0-20 mA; 4-20 mA for each measuring component
Threshold relay (change over contact) . . 2x for each measuring component (125 V AC; 0,5 A / 30 V DC; 1 A)
Status relay (change over contact) . . . . . error/operation and service/operation, calibration/measurement (125 V AC; 0,5 A / 30 V DC; 1 A)
Serial interface. RS-232

Oxygen Measurement

Three different measurement cells for oxygen measurement are available.

The cost-effective electrochemical oxygen cell is recommended for measurements in the range of %O_2. The basic device comprises all quality aspects of the series. The cell is easily accessible for maintenance via a maintenance cover on the front panel. This reduces maintenance costs and efforts.

Maintenance cover

Furthermore, a high precision paramagnetic cell with long life time is available for %-O_2 measurement as well.

For exact measurement of traces of oxygen, a zirconium dioxide (ZrO_2) cell is available. As an option, this cell is provided in catalytic inactive design.

Available Options

At the moment, the following options are available:

- integrated pump(s)
- Pressure- and temperature compensation, thermal stabilisation
- Filters

	paramagnetic cell	**ZrO_2-cell**	**EC-cell**
Largest measuring range	0-100%	0-20900 vppm	0-100 %
Smallest measuring range	0-5%	0-10 vpm	0-25 %
Surpressed measuring range	adjustable	-	-
Pressure compensation	option	option	option
Thermal stabilisation	option	regulated heating	-
Deviation from linearity	< 0,2 Vol% O_2	< 1% FS	<1% FS
Zero drift	< 0,2 Vol% / week	< 1% FS / week	< 2 % FS / week
Sensitivity drift	< 0,2% MV / week	< 1% MV / week	< 2 % FS / week
Reproducibility	< 0,7% FS	<1% FS	< 2 % FS
Detection limit	0,1 Vol%	> 1% FS	0,2 Vol%
Rise time t_{90}	< 5 s at 70l/h	< 4 s at 70 l/h	< 15 s at 70l/h
Accuracy after calibration	0,1 Vol% absolute	< 5% r.e.	± 1% FS

Abbreviations used:

	FS	... of full scale
	MV	... of the measured value
	r.e.	relative error

IR-Cells

Almost all relevant gases for process and emission monitoring can be detected with aligned accuracy. Examples are CO, CO_2, SO_2, NO, CH_4. A combination with an integrated NOx converter is intended. This allows indirect NO2 measurement and direct NO measurement with a single device.

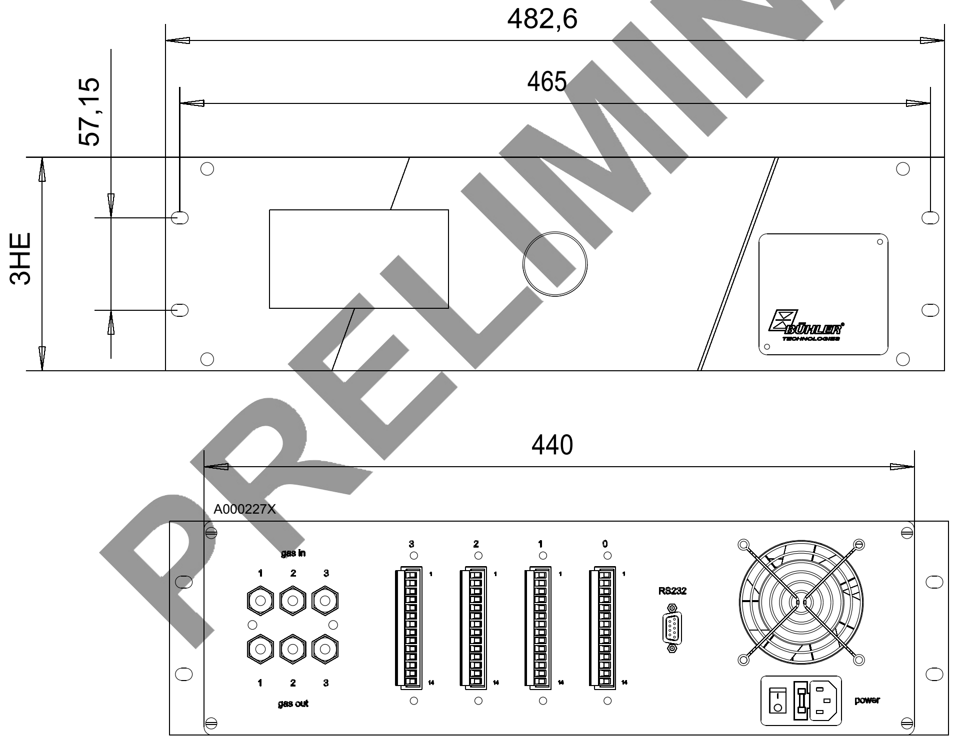
Please ask Buhler Technologies GmbH for specified information.

Housing

19" rack, HU . . . . approx. 132 mm x 440 mm x 425 mm (HxWxD)
Protection class IP20
Weight . . . . approx. 7 kg

Connections

Gas inlet . . . . up to 3x Swagelock ∅6 mm
Gas outlet . . . . up to 3x Swagelock ∅6 mm



Ordering advice

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