

# PRODUCT DATA SHEET

## BAUER B-DETECTION PLUS m

### Mobile Gas Measuring System for High-Pressure Applications

#### DESCRIPTION

B-DETECTION PLUS m is a compact, portable all-in-one solution that gives you the freedom to perform reliable breathing air measurement wherever and whenever you need to.

Like the stationary models, the B-DETECTION PLUS m delivers completely reliable, ultra-precise readings to monitor compliance with DIN EN 12021:2014 limits for CO, CO<sub>2</sub>, O<sub>2</sub> and – optionally – absolute humidity and total oil values (VOC)<sup>1</sup>.

B-DETECTION PLUS m offers an array of measurement options. The gas sampling unit supplied as standard is used to measure air quality in breathing air cylinders. Optionally, measurement can also be performed directly at the compressor. As a further option, intake air can be measured before it enters the compressor with the optional ambient air pump.

The control unit allows a tailored measurement profile to be selected for measuring air directly from the compressor or air cylinder. If limit values are exceeded, the B-DETECTION PLUS m control unit activates visual alarm signals. Solid legal certainty is ensured by an integrated data logger with SD card function for performing defined individual measurements. These can be read out and displayed separately via an BAUER Excel macro.

The transport case offers IP65-rated protection against dust and water jet ingress and withstands harsh environmental conditions.

<sup>1</sup> Absolute humidity and oil (VOC) monitoring optional. Oil measurement based only on volatile organic compounds (VOCs). Sensor calibration based on isobutene.

#### ADDITIONAL FEATURES

More features of breathing air and gas measuring systems for high-pressure compressors:

- **NO WAITING TIME I:** The patented special design of the dewpoint sensor delivers an extra-rapid response for virtually instantaneous humidity measurement.
- **NO WAITING TIME II:** The quick exhaust allows a quick separation of the gas extraction unit from the coupling point for the air extraction.
- **BEST SERVICEABILITY:** Sensors are rapidly and easily accessible, simplifying maintenance.
- **PUREAIR:** Suitable as a measuring instrument for the PureAir Silver certification.



## TECHNICAL DATA

### B-DETECTION PLUS m online breathing air and gas measuring systems

MEASUREMENT VALUES	
	Carbon dioxide (CO <sub>2</sub> ), carbon monoxide (CO), oxygen (O <sub>2</sub> ), absolute humidity <sup>1</sup> , VOC <sup>1</sup>
SYSTEM LIMITATIONS	
Maximum system pressure	350 bar
Maximum permissible charging rate compressor	850 l/min
Permissible operating temperature	+5°C... +45°C
MEASUREMENT METHOD	
CO <sub>2</sub>	Nondispersive infrared spectroscopy (NDIR)
CO, O <sub>2</sub>	electrochemical
Absolute humidity	Via dew point
VOC (oil)	Photoionization detector (PID)
MEASUREMENT VALUES AND MEASUREMENT ACCURACY <sup>3</sup>	
CO <sub>2</sub>	0... 2.000 ppm ± 2.5 % Full scale
CO	0 ... 25 ppm ± 2 % of measurement range final value
O <sub>2</sub>	0 % ... 40 % O <sub>2</sub> ± 1 % of measurement range final value
Dew-point	-70 ... +60°C / 10 ... 40,000 ppm ± 2°C / 1 ppm + 20% of displayed value
VOC (oil)	0 ... 1 ppm (based on isobutene as calibration gas)
FURTHER TECHNICAL SPECIFICATIONS	
Operating voltage	integrated: 24 VDC; stand-alone: 100-250 VAC, 50/60 Hz
Flow rate	1.0 ... 3.0 l/min
Weight	8.9 kg
Dimensions W × H × D [mm]	464 x 366 x 180
SYSTEM TEST/CALIBRATION	
Visual inspection and leak test	Monthly
Functions check 2	Min. 3-monthly
System check	Annually
Calibration	dew point sensor: every 24 months

<sup>1</sup> Optional extra

<sup>2</sup> Includes test with test gas; kit with test gas cylinders and pressure reducer (flow meter) available from BAUER KOMPRESSOREN

<sup>3</sup> Accuracy valid at max. +/- 10 ° C deviation from calibration temperature.

## EQUIPMENT OPTIONS

### Battery operation

The integrated rechargeable battery enables measurement to be performed independently of external power sources. Its capacity covers a minimum of 5 hours of measurement. The long-life lithium-iron phosphate cell guarantees an extra high number of charging cycles.

### Filling hose adapter

When connected to the system filling hose, enables air to be measured directly from the compressor.

### Nitrox adapter

With an additional adapter, the connection to Nitrox cylinder 200/300 bar is possible.

### Ambient air pump

An additional pump installed in the measurement system enables the gas composition of the intake air to be analysed.

Where the CO<sub>2</sub> content of the intake air is permanently at levels of 450 ppm or over, we recommend using an AEROGUARD CO<sub>2</sub> Absorber.

### B-CLOUD & B-APP

With the BAUER B-CLOUD, all current gas measurement data can be accessed remotely via a computer or smartphone with B-APP so you can see at any time what air quality your breathing air cylinders are being filled with.

