sensorbee SB3516 Air Quality Front Sensor Module User Manual

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sensorbee SB3516 Air Quality Front Sensor Module

The Front module have multiple sensors built in. A high-performance particle sensor capable of measuring particles from 0.1uM to 10 uM in 7 bins. There are an option to upgrade using a software licence to add a ambient noise sensor. The front module are used in Sensorbee Air Pro products.

The Sensorbee Air Quality Front Sensor Module is a high-performance particle sensor capable of measuring particles from 0.1uM to 10 uM in 7 bins. It has multiple sensors built-in and is used in Sensorbee Air Pro products. There is an option to upgrade using a software licence to add an ambient noise sensor.

Product Specification:

- **Module SKU:** SB3516
- **Website: www.sensorbee.com**
- **Email: hello@sensorbee.com**

Sensorbee Air Quality Front Sensor Module

Product specification Module SKU SB3516

- **Dimensions** 61 x 56 x 20 mm
- **Weight** 70 gram
- **Material** Polyamide
- **Operating Temperature** -10 °C to +60 °C
- **Operating Humidity** 0 to 95 %RH
- **Particle Sensor Type** Optical particle counter
- **Mass Concentration Range** Pierra 7100
- **Mass size Range 7 Binning output** PC0.1-PC10
- **Particle Count (PC) resolution** 1 #/Liter
- **Particle Count (PC) accuracy** ±10 %
- **Sample Flow Rate** 0.1 LPM
- **Temperature Sensor** Range and Accuracy -40°C to 60°C, ± 0.3°C
- **Humidity Sensor** Range and Accuracy 0…100 %RH, ±3 %RH
- **VOC Sensor Range** 0 to 1,000 ppm (VOC Index 0-500)
- **NOX Sensor Range** 0-10,000 ppb (NOX Index 0-500)
- **Pressure Sensor** 300 … 1250 hPa
- **Accuracy** ±0.50 hPa
- **Module Operational** Life 24 months
- **Noise Meter(extra license required)** Range 55-100 dBA
- **Typical accuracy** ±4 dBA
- **Frequency range** 20 – 12k Hz

Introducing our ambient noise license, specially designed for use with Sensorbee Air Pro and Sensorbee Air Lite units. The license enable you to enjoy uninterrupted Ambient noise service for the full lifespan of your base unit, even if sensor modules are exchanged.

The Sensorbee Ambient noise enhancer is an innovative software upgrade designed to enable your Sensorbee Air Quality Sensors to also measure noise levels in your environment. Built with advanced dBA noise calculation technology, our add-on license allows your existing Sensorbee units to capture, analyze, and report noise pollution data in real-time, along with the air quality metrics.

Our add-on software license integrates seamlessly with your current Sensorbee Air Quality Sensors, turning them into comprehensive air and noise pollution monitors. The license are valid for a base unit over the full use, even if sensor modules are being exchanged during service life. Our license tokens can be braght and installed in three ways. Firstly, you can order the base unit together with a noise license, and the license will be at factory.

Alternatively, you can enable the license through the Sensorbee cloud service or receive a licence token generated specifically for your base unit and install the token to the device using a terminal. The accuracy of the ambient noise sensor are determined by each product. for more information look at Sensorbee Pro front module as well as Sensorbee Lite product specifications.

Sensorbee CO2 Gas Module

- The CO2 gas module has a solid state sensor that detects CO2 concentration.
- The CO2 gas modules are pre-calibrated and easy exchangeable.
- Temperature and humidity compensation by algorithm.

Product specification Type SKU SB3552

- **Gas Module Dimensions** 58 x 21 x 22 mm
- **Weight** 20 gram
- **Enclosure** Polyamide
- **Operating Temperature** -10°C to +60°C
- **Operating Humidity** 0 to 95 %RH
- **Module Sensor** CO2 Sensor type Photoacoustic sensor technology
- **CO2 Measurement Range** 0 ppm – 40'000 ppm
- **CO2 Accuracy ±**(40 ppm + 5 %)
- **Module Operational Life** > 3 years
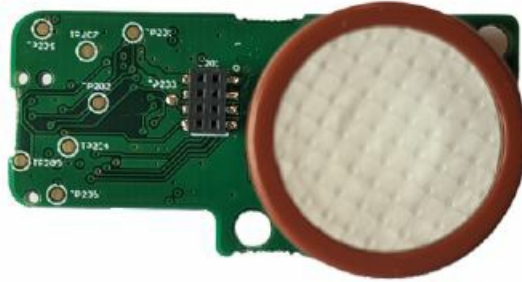
Sensorbee NO2 Gas Module

- The NO2 gas module has a built-in electrochemical sensor that detects NO2 concentration.
- The gas modules are pre-calibrated and easy exchangeable.
- Temperature and humidity compensation by algorithm.

Product specification Type SKU SB3532

- **Gas Module Dimensions** 58 x 21 x 22 mm
- **Weight** 20 gram
- **Enclosure** Polyamide
- **Operating Temperature** -20°C to +40°C
- **Operating Humidity** 15% to 85 %RH
- **Gas Sensor** NO2
- **Type** Electrochemical
- **Measurement Range** 0-5000 ppb
- **Typical Accuracy** ±5ppb
- **Module Operational Life** >12 months

Sensorbee NO Gas Module

- The NO gas module has a built-in electrochemical sensor that detects NO concentration.
- The gas modules are pre-calibrated and easy exchangeable.
- Temperature and humidity compensation by algorithm.

Product specification Type SKU SB3532

- **Gas Module Dimensions** 58 x 21 x 22 mm
- **Weight** 20 gram
- **Enclosure** Polyamide
- **Operating Temperature** -20°C to +40°C
- **Operating Humidity** 15% to 85 %RH
- **Gas Sensor** NO
- **Type** Electrochemical
- **Measurement Range** 0-5000 ppb
- **Typical Accuracy** ±5ppb
- **Module Operational Life** >12 months

Sensorbee CO Gas Module

- The CO gas module has a built-in electrochemical sensor that detects CO concentration.
- The CO gas modules are pre-calibrated and easy exchangeable.
- Temperature and humidity compensation by algorithm.

Product specification Type SKU SB3543

- **Gas Module Dimensions** 58 x 21 x 22 mm
- **Weight** 20 gram
- **Enclosure** Polyamide
- **Operating Temperature** -30°C to +40°C
- **Operating Humidity** 15 to 85 %RH
- **Type** Electrochemical
- **Measurement Range** 0-12000 ppb
- **Typical Accuracy** ±0.08 ppm
- **Module Operational Life** >12 months

Sensorbee O3 Gas Module

- The Ozone gas module has a built-in electrochemical sensor that detects O3 concentration.
- The gas modules are pre-calibrated and easy exchangeable.
- Temperature and humidity compensation by algorithm.

Product specification Type SKU SB3534

- **Gas Module Dimensions** 58 x 21 x 22 mm
- **Weight** 20 gram
- **Enclosure** Polyamide
- **Operating Temperature** -20°C to +40°C
- **Operating Humidity** 15% to 85 %RH
- **Type Electrochemical** Ozone sensor
- **O3 Measurement Range** 0-2000 ppb
- **Typical Accuracy** ±5ppb
- **Module Operational Life** >12 months

Sensorbee SO2 Gas Module

- The SO2 gas module has a built-in electrochemical sensor that detects SO2 concentration.
- The gas modules are pre-calibrated and easy exchangeable.
- Temperature and humidity compensation by algorithm.

Product specification Type SKU SB3542

- **Gas Module Dimensions** 58 x 21 x 22 mm
- **Weight** 20 gram
- **Enclosure** Polyamide
- **Operating Temperature** -20°C to +40°C
- **Operating Humidity** 15% to 85 %RH
- **Gas Sensor** SO2
- **Type** Electrochemical
- **Measurement Range** 0-10000 ppb
- **Typical Accuracy** ±15ppb
- **Module Operational Life** >12 months

Sensorbee External ultrasonic Anemometer

- It measures both wind speed and wind direction. It is an ultrasonic anemometer.
- The unit can be mounted to a pole or a flat vertical surface. Easily connect to Sensorbee Air quality unit using the external connector.

Product specification Type SKU SB3611

- **Wind range** 0.12 to 40 m/s
- **Wind resolution** 0.05 m/s
- **Wind accuracy** 0.12 m/s
- **Weight** 200 gr
- **Direction resolutio**n 1°
- **Direction accurac**y ± 1.5°
- **Operating temperatur**e -15°C to 55°C
- **Dimensions** 300 x Ø16 mm

Sensorbee External Rain Gauge

- The rain gauge are reliable and simple to maintain, it can handle all climates. Proven self-emptying bucket technology to ensure uninterrupted measurement of precipitation regardless of amount and intensity.
- It measures rain by means of a standardised orifice funnel. The design offers a long-term accuracy because of its counterweight is not affected by dirt and dust accumulation. Connect to Sensorbee Air quality unit using the external connector.

Product specification Type SKU SB3631

- **Dimensions** 120 x 55 x 55 mm
- **Weight** 300 gram
- **Material** Polyamide
- **Operating Temperature** -40°C to +60°C
- **Operating Humidity** 0 to 99 %RH
- **Typical accuracy** ±0.2 mm
- **Resolution** 0.2 mm
- **Measuring range** -0°C to +60°C
- **Orifice area** ∅200 cm2
- **Mounting bracket** universal pole bracket Included
- **Bird protection spikes** Included

www.sensorbee.com
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Documents / Resources

sensorbee	**sensorbee SB3516 Air Quality Front Sensor Module** [pdf] User Manual SB3516, SB1101, SB3516 Air Quality Front Sensor Module, SB3516, Air Quality Front Sensor Module, Quality Front Sensor Module, Front Sensor Module, Sensor Module, Module

References

- **Outdoor Air Quality | Sensorbee**