



Fine dust monitor BDA 15

Regardless of the emitter, fine dust particles hazardous for people and the environment. Particles in the submicron range can enter the respiratory tract and are hazardous to the health, regardless of the substance. A number of directives and standards, such as DIN EN 481, require monitoring the surrounding atmosphere.

The BDA 15 fine dust monitor will determine the dust content in shops, factory buildings, offices and public building such as schools and hospitals, as well as private areas.

The compact unit is an autonomous functional unit and can be operated as a stand-alone device or with a linked monitoring system.

The BDA 15 fine dust monitor employs the scattered light principle.

Device made in Germany

Sturdy construction

Quiet operation

Active suction

Two sensors for long-term stability

Multiple BDA 15 can be connected

Network compatible, WLAN

Easy to install without speciality tools

Low operating costs

Excellent price-performance ratio



Description

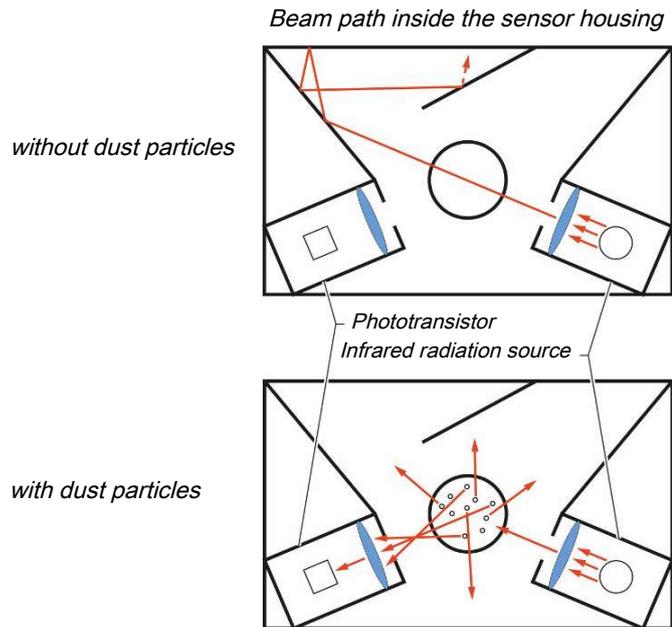
The BDA 15 fine dust monitor is an optical sensor to continuously measure and monitor fine particle concentrations. It can be built into various applications.

The BDA 15 will determine the current fine particle load in the surrounding area and detect a health hazard.

Application examples:

- Monitoring fine dust particles in the production area (shops, factory buildings, etc.),
- Monitoring the indoor air quality in offices and public buildings (hospitals, schools, etc.) or private areas,
- Monitoring the ambient air,
- Add-on for weather stations.

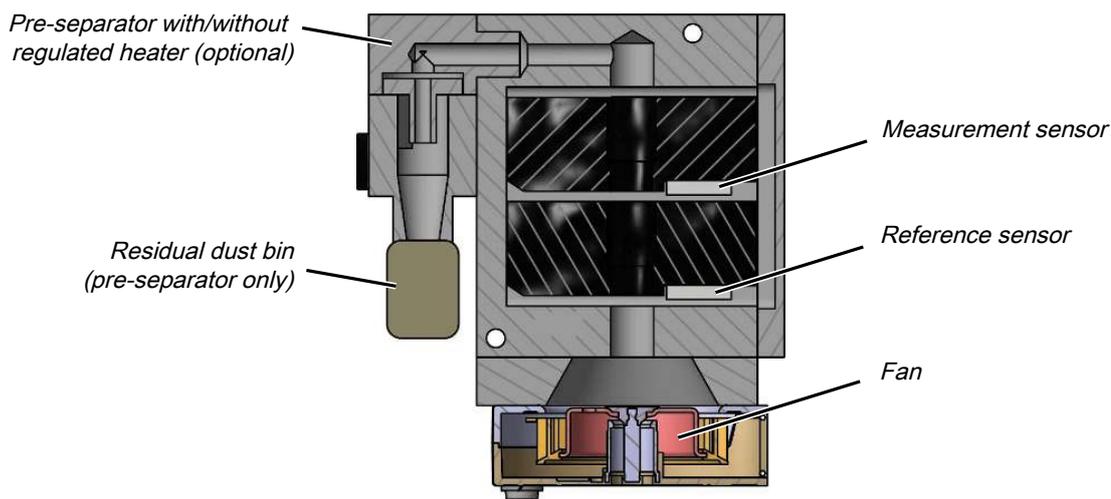
Functional principle



The BDA 15 determines the dust content based on the principle of light-scattering measurement. The incoming air is preheated to 50 °C. A built-in fan ensures a forced flow (2 L/min). The sample gas is set to a speed which allows representative particle detection.

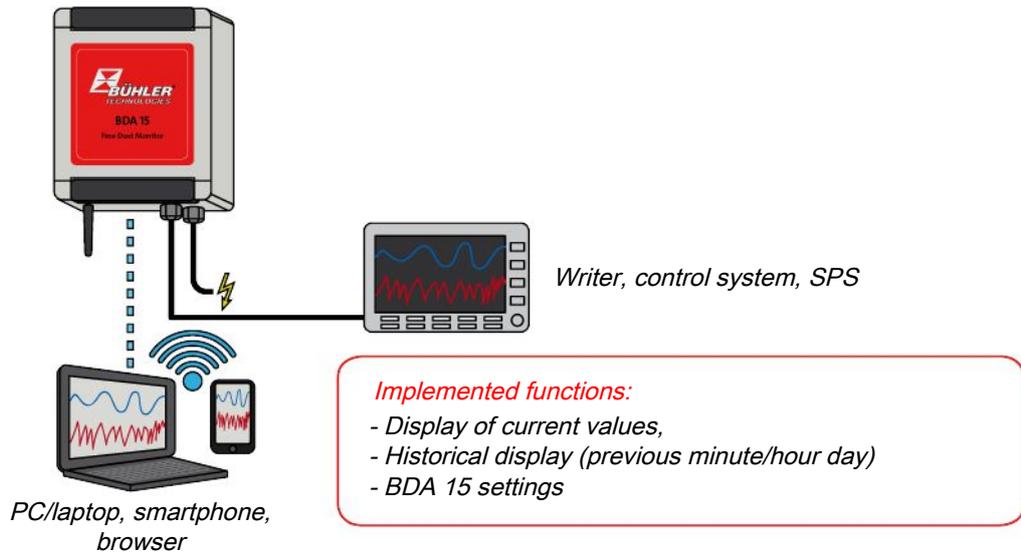
The BDA 15 periodically analyses and corrects the zero point and reference point. Analysis of the internal measurement signals ensures high zero point stability.

Layout

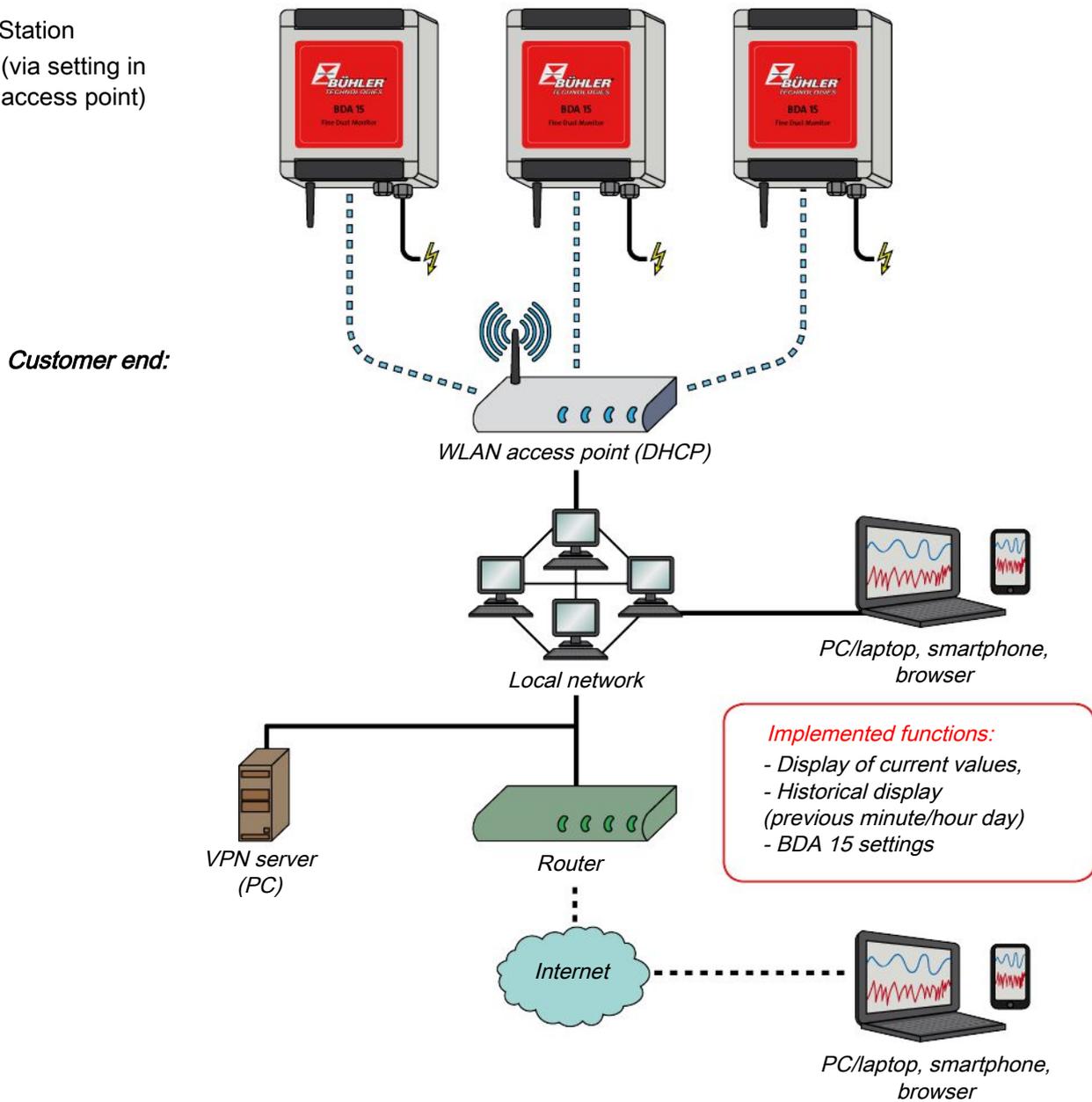


Application WLAN module (including 4-20 mA output)

a: Access Point
(Standard)



b: Station
(via setting in access point)



Technical Data

Technical Data

Housing:	compact aluminium sensor housing
Dimensions:	130 mm x 160 mm x 90 mm (W x H x D)
Weight:	approx. 2 kg
Degree of protection:	IP 33
Voltage:	100-240 V AC, 0.7 A, 50-60 Hz (optional 12 V DC, 2.1 A); prefuse min. 5 A
Ambient temperature:	-20...+50 °C
Relative humidity:	0...95 %
Measuring principle:	Light-scattering measurement
Sensors:	2 x optical sensor; separate control and signal analysis
Volume flow:	2 L/min
Port:	RS485 (modbus), WLAN
Clip contacts:	max. 0.5 mm; Voltage supply connection: max. 2.5 mm
Fan:	for forced flow
Heater:	for sample gas conditioning (maintaining the dew point difference)
Average dust contents:	up to 200 µg/m ³ (with electrostatic filter 500 µg)
Detection limit:	3 µg/m ³
Outlet:	4...20 mA current loop
Optional:	<ul style="list-style-type: none"> - Pre-separator with regulated heater (aerosols) - Electrostatic filter (for zero point control in high fine dust pollution) - Built-in pre-separator for measuring fine particles (PM_{2.5})

Dimensions

