Optical smoke detector - BH-500

Interactive fire detection systems
Product datasheet

Features

- Interactive
- **Different sensitivity settings possible**
- Comprises the DYFI+ adaptive and self learning functions
- SelfVerify functions for reduced maintenance/testing and increased reliability
- Additional PCB coating, ideal in humid environments
- Detection of visible smoke
- Built-in thermistor for reading of temperature at the detector point
- Short circuit isolator in each detector
- Comprises a built-in alarm indicator (LED)
- Automatic addressing
- Proven technology
- Immune to electromagnetic disturbance
- EN 54-7/EN 54-17
- Designed to meet the requirement of the major maritime classification societies

Applications

BH-500 is a point smoke detector for detection of combustion gases mainly consisting of visible particles. The detector has a built-in thermistor and is designed for use with Autronica's interactive fire detection systems, which can provide temperature information from the detector point. The SelfVerify function ensures the highest grade of reliability because all units comprising this function are tested with a calibrated test once every 24 hours.

The DYFI+ intelligence combined with the SelfVerify functions and the allround smoke sensitivity of BH-500 makes this detector the obvious choice for demanding applications such as industrial, maritime and offshore installations. The additional PCB coating makes this detector ideal in corrosive and humid environments.

Optionally there is a BH-500/N version for use in hazardous area zone 2. It must be connected to the BSD-310/N loop driver, but does not require an isolator/barrier unit.

Principle

Photoelectric, operating on the light scatter principle.

SelfVerify: The detectors ability to initiate alarm at correct amount of smoke is regularly checked.

Versions

- BH-200   Smoke detector without SelfVerify
- BH-300*   Smoke detector with SelfVerify
- BH-500*   Smoke detector with SelfVerify, environmentally protected
- BH-500/S*   Smoke detector with SelfVerify, environmentally protected, with extra high sensitivity
- BH-500/Ex*   Smoke detector with SelfVerify, EExia-version for use in all zones.
- BH-500/S/Ex   Smoke detector with SelfVerify, EExia-version for use in all zones, with extra high sensivity
- BH-500/N   Smoke detector with SelfVerify, Eexn-version for use in zone 2 only
- BH-500/S/N   Smoke detector with SelfVerify, and extra high sensivity, Eexn version for use in zone 2 only
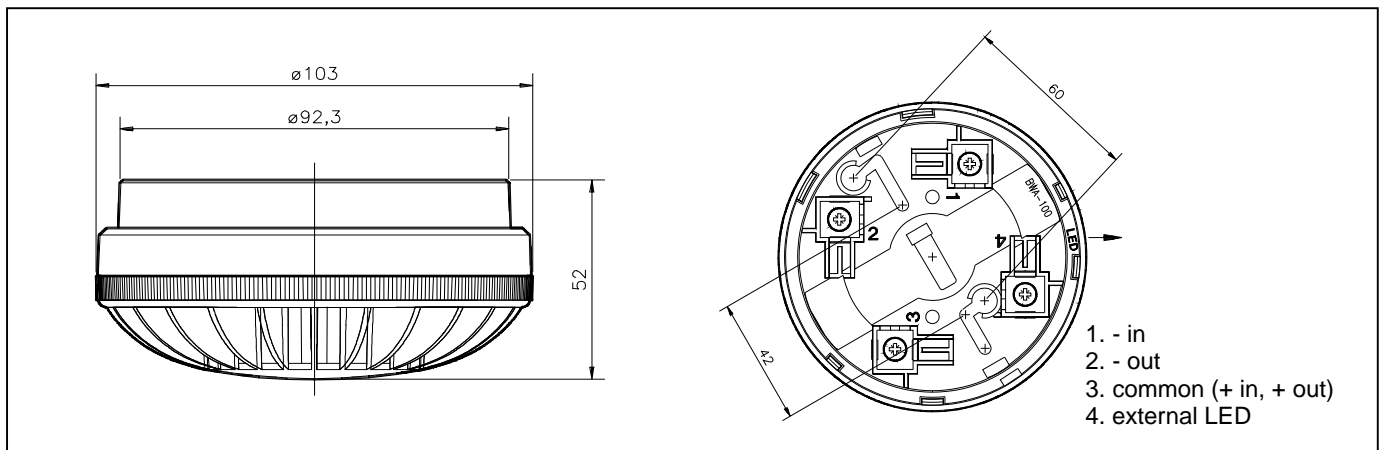
* See separate data sheet.

Table 1 – Performance classes

Performance class	Typical application
Clean	Computer rooms
Normal	Offices
Normal 2	Restaurants
Industry	Workshops

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Technical specifications

Weight	150 g
Materials	PC/ABS
Colour	White
Sensitivity	Ref. Table 1
Voltage	10 – 27 VDC
Current consumption Stand by: External alarm indicator	< 0,3mA 6mA
CPD certificate	1134-CPD-016
Degree of protection	IP44D
Working temperature	- 20 - + 70°C
Humidity (non condensing)	Max. 95% RH
Maintenance	None
Service	Replace if faulty
Approvals	See web site

Dimensions/Connections

1. - in
2. - out
3. common (+ in, + out)
4. external LED

Use of LED output

When LED or other equipment is connected to the LED output, a varistor - Siemens SIOVS07K25 (39V) - Autronica part. no. 116-8464-003.5039, is required between terminals 1 and 4 in base.
The LED is connected between terminals 3 and 4, terminal 3 being the positive terminal.

Part number	Description
116-BWA-100	Detector base
116-BHH-500	Detector head
116-BHH-500/N	Detector head certified for use in zone 2
116-BWP-100/20	Optional conduit box for M20 glands
116-BWP-100/25	Optional conduit box for M25 glands
116-BBR-52	Optional audible indicator – SmartBuzzer