

# Optical smoke detector with SelfVerify - BH-500/EX

Interactive fire detection systems  
Product datasheet

## Declaration of conformity and instructions

### Features

- Interactive
- Comprises the DYFI+ adaptive and self learning functions
- With SelfVerify function for reduced maintenance/testing and increased reliability
- Selective to misleading environmental phenomena that in a traditional system would lead to an unwanted fire alarm
- Detection of visible smoke
- Built in thermistor for reading of temperature at the detector point
- Short circuit isolator in each detector
- Automatic addressing
- Proven technology
- Immune to electromagnetic disturbance
- Additional coating of PCB
- Designed to meet the requirement of the major maritime classification societies

### Applications

BH-500/EX is a point smoke detector for use in hazardous area zone 0, 1 or 2. It must be connected to the approved barrier BZ.500. 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 automatically tested with a calibrated test once every 24 hours.

Additional coating of PCB combined with the adaptivity of BH-500/EX, is making this detector suitable for industrial, maritime, offshore and other «rough area» applications.

### Principle

Photoelectric, operating on the light scatter principle.

SelfVerify: the detector's ability to initiate alarm at correct amount of smoke is regularly checked.

**Table 1 – Performance classes**

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

#### Schedule Drawing

No modifications permitted without reference to the Notified Body



Technical specifications	
Weight	150 g
Material	Polycarbonate / ABS
Colour	White
Sensitivity	See Table 1
Voltage	10 - 27 VDC
Current consumption stand by:	< 0,3 mA
Environm. requirement	EN 54-7
Degree of protection	IP44D
Working temperature	- 20 - + 70 °C
Storage temperature	- 55 - + 70 °C
Humidity (non condensing)	Max. 95 % RH
Maintenance	None
Service	Replace if faulty
CPD certificate	1134-CPD-016
Certificates	See website
Notified body	Nemko-Oslo-Norway ID No. 0470
Type examination certificate	NEMKO 03ATEX218X IECEX NEM 11.0009X
Directives and Standards	94/9/EC (ATEX) IEC 60079-0:2007 IEC 60079-11:2006 IEC 60079-26:2006 EN 60079-0:2009 EN 60079-11:2007 EN 60079-26:2007 2004/108/EC (EMC) Emission: EN 50081-1:1992 Immunity: EN 50130-4:1995 EN 61000-6-2:1999
Ex parameters	⊕ Ex II 1G Ex ia IIC T5 Ga U <sub>i</sub> = 15,75V I <sub>i</sub> = 63,5mA C <sub>i</sub> = 21,6nF L <sub>i</sub> = 0 P <sub>i</sub> = 0,44W



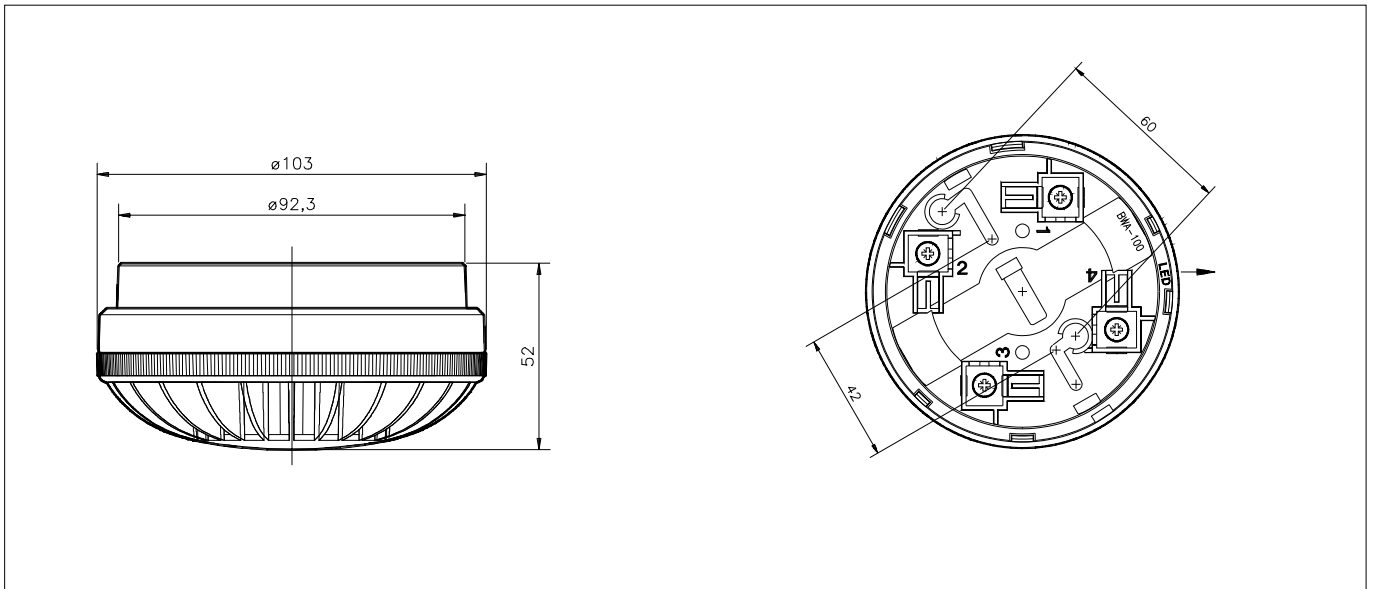
Part number	Description
116-BWA-100	Socket (base)
116-BHH-500/EX	Detector head
116-BWP-100/20	Optional conduit box for M20 glands
116-BWP-100/25	Optional conduit box for M25 glands

**Versions**

- BH-200\* Smoke detector, standard
- BH-300\* Smoke detector with SelfVerify
- BH-500\* Smoke detector with SelfVerify, environment protected
- BH-500/S\* Smoke detector with SelfVerify, environment protected, with extra high sensitivity
- BH-500/EX\* Smoke detector with SelfVerify, Exia-version for use in all zones
- BH-500/S/EX Smoke detector with SelfVerify, Exia-version for use in all zones, with extra high sensitivity
- BH-500/N\* Smoke detector with SelfVerify, Exn-version for use in zone 2 only
- BH-500/S/N\* Smoke detector with SelfVerify, and extra high sensitivity, Exn version for use in zone 2 only

\* See separate datasheet

**Dimensions**



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