Heat detector with SelfVerify – BD-501/EX

Interactive fire detection systems
Product Datasheet

Declaration of conformity and instructions

Features

- Interactive
- Heat detector intended for use in humid areas
- Short circuit isolator in each detector
- Conforms to EMC directive
- Automatic addressing
- Additional coating of PCB circuit for environmental protection
- Proven technology
- Configurable to class A1, A1R, A2S, B, C
- With SelfVerify function for reduced maintenance/testing and increased reliability
- Not influenced by dust, humidity, exhaust gases, electromagnetic fields i.e.: radio transmitters, cellular phones, etc.
- EN 54–5/EN 54-17
- Designed to meet the requirements of the major maritime classification societies

Applications

BD-501/EX is a point heat detector for use in hazardous area zone 0, 1 or 2. It must be connected to the approved barrier unit BZ-500. The detector is designed for use with Autronica's interactive fire detection systems. The SelfVerify function ensures the highest grade of reliability. All units comprising this function are automatically tested with a calibrated test once every 24 hours. Additional coating of PCB and sealing of the sensing element makes this detector suitable for rough areas like heavy industry, maritime and offshore applications.

BD-501/EX is often used in areas where the environment is likely to produce false/unwanted alarms from smoke detectors such as:

- Process areas
- Workshops
- Paint stores, etc.

Principle

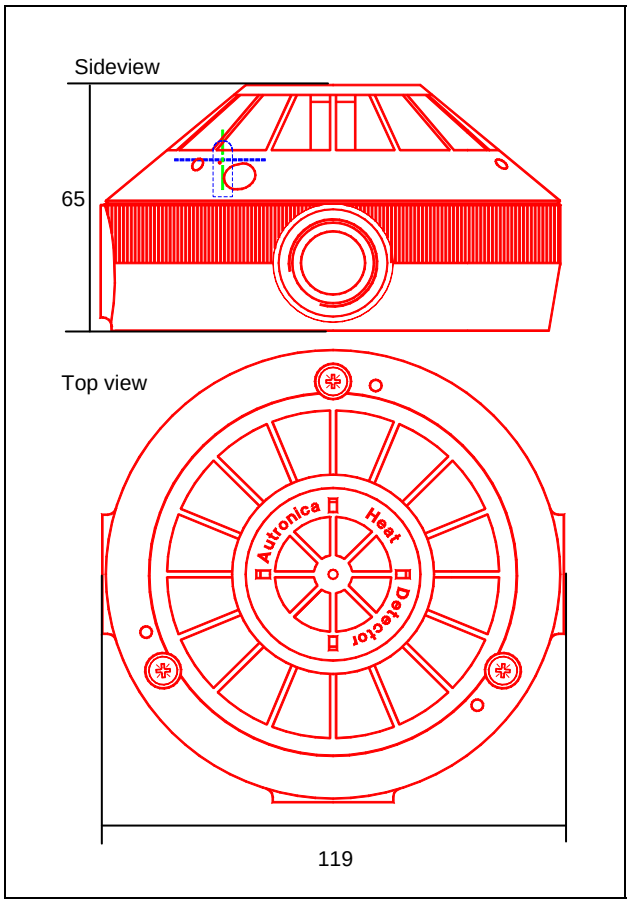
The temperature is measured by means of a thermistor for registration and reading of temperature at the detector point. Alarms at temperature according to configured class (Ref. table 1).

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

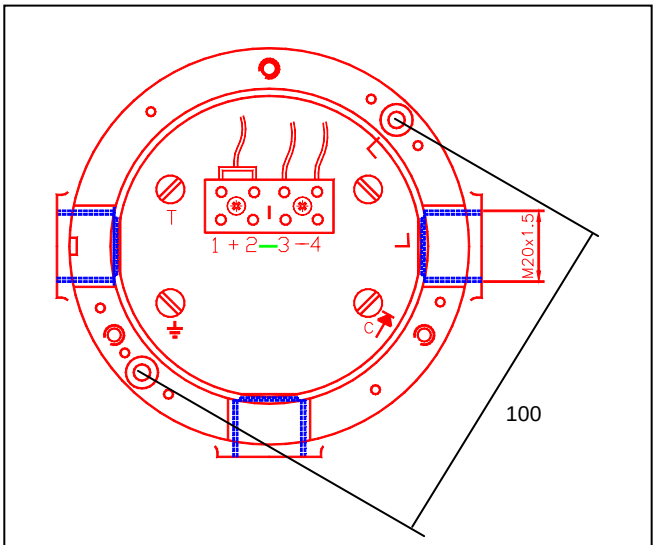
Schedule Drawing
No modifications permitted without reference to the Notified Body

Technical specifications	
Weight	300 g
Material	Polycarbonate
Colour	Light grey
Sensitivity	Ref. table 1
Voltage	10 - 27 VDC
Current consumption, stand-by	< 0,3 mA
Environmental requirements	EN 54-5
Degree of protection	IP56
Working temperature	-20 – +80 °C
Storage temperature	-55 - +80 °C
Maximum application	Ref. table 1
Humidity (non condensing)	Maximum 95 % RH
Maintenance	None
Service	Replace if faulty
CPD certificate	1134-CPD-018
Certificates	See website
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 Ui = 15,75V Ii = 63,5mA Ci = 21,6nF Li = 0 Pi = 0,44W

Dimensions



Connections



1. + in
2. + out
3. – in
4. - out

Part number	Description
116-BD-501/EX	Heat detector, complete

Table 1

Detector class	Typical application temperature °C	Maximum application temperature °C	Minimum static response temperature °C	Maximum static response temperature °C
A1	25	50	54	65
A1R*	5	50	54	65
A2S*	25	50	54	70
B	40	65	69	85
C	55	80	84	100

* R= Rate of rise
* S= (Slow) Does not respond below the minimum static response temperature.

Note: The detector may give pre-warning on a temperature below the max. application temperature

Versions

- BD-501* Standard heat detector with SelfVerify
- BD-501/N* Heat detector with SelfVerify, Exn version for use in zone 2 only
- BD-501/EX Heat detector with SelfVerify, Exia version for use in all zones

* See separate datasheet

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