Certificate No.: 8504-UKCA-CPR-UKCSP10170

CERTIFICATE OF CONSTANCY OF PERFORMANCE

Issued by DBI Certification-UK, approved body No. 8504.

In compliance with UK STATUTORY INSTRUMENT 2020 No. 1359 Construction Products Regulation 2011 (retained EU law EUR 305/2011) as amended by the Construction Products (Amendment etc.) (EU Exit) Regulations 2019 and the Construction Products (Amendment etc.) (EU Exit) Regulations 2020, this certificate applies to the construction product

Optical smoke detector - AUTRONICA BHH-300 with integrated short-circuit isolator

The product fulfils the essential characteristic:

See Annex 1

Intended use: Applications related to automatic fire alarm systems

Placed on the market under the name or trade mark of:

Autronica Fire and Security AS
Bromstadvegen 59
NO-7047 Trondheim
Norway

and produced in the manufacturing plant:

CPA10058

This attests that all provisions concerning the performance described in Annex ZA of the standard(s)

EN 54-7:2018	:	**Fire detection and fire alarm systems — Part 7: Smoke detectors — Point smoke detectors that operate using scattered light, transmitted light or ionization**
EN 54-17:2005	:	**Fire detection and fire alarm systems — Part 17: Short circuit isolators**

under system 1 for the performance set out in this certificate are applied and that the factory production control conducted by the manufacturer is assessed to ensure the

CONSTANCY OF PERFORMANCE OF THE CONSTRUCTION PRODUCT.

This certificate was first issued on 2022-08-09 and will remain valid as long as neither the harmonised standard, the construction product, the AVCP methods nor the manufacturing conditions in the plant are modified significantly, unless suspended or withdrawn by the notified product certification body.

The attached annexes form part of this certificate.

Date of issue: **2022-08-09**.

Steen Nilsson
Responsible for evaluation

Merete Poulsen
Responsible for certification decision

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No. 23333

Annex 1

EXTENT

Type:
Optical smoke detector - AUTRONICA BHH-300 with integrated short-circuit isolator

Kit BH-XXX = BHH-XXX and BWA-100

Variants:

Optical Smoke detector	
Brand	**Type**
Autronica	BHH-200
Autronica	BHH-500
Autronica	BHH-500/N
Autronica	BHH-500/EX

Base:
BWA-100 (Conventional)

Performance

Essential characteristics	Clauses in EN 54-7:2018	Regulatory classes	Performance
Operational reliability:			
Individual alarm indication	4.2.1		The visual indicator(s) are visible from a distance of 6 m in an ambient light intensity up to 500 lx.
Connection of ancillary devices	4.2.2		Open or short circuit failures of connection to ancillary device did not prevent the correct operation of the detector
Monitoring of detachable detectors	4.2.3		A fault condition is signaled when the detector is removed from the mounting base.
Manufacturer´s adjustments	4.2.4	None	It is not possible to adjust the detector settings without the use of a special tool to access into the detector or use of a code to enabling entry into the panel programming software.
On site adjustment of response behavior	4.2.5		The mode(s) of operation are adjustable from the Control and Indicating Equipment by use of a loop communication protocol. Access to enable mode changes is by software control of the protocol communication.
Protection against the ingress of foreign bodies	4.2.6		The chamber is designed so that a sphere of diameter (1,3±0,05) mm cannot pass into the sensor chamber.
Response to slowly developing fires	4.2.7		The provision of "drift compensation" (e.g. to compensate for sensor drift due to the build-up of dirt in the

			detector), does not lead to a significant reduction in the detectors sensitivity to slowly developing fires.
Software controlled detectors	4.2.8		The software documentation and the software design complies with the requirements of EN 54-7:2018.
Nominal activation conditions/sensitivity:			
Repeatability	4.3.1		Ratio of response values $m_{max}:m_{min} \leq 1.6$ Lower response value, $m_{max}:m_{min} \geq 0.05$ dB m^{-1}
Directional dependence	4.3.2		Ratio of response values $m_{max}:m_{min} \leq 1.6$ Lower response value, $m_{max}:m_{min} \geq 0.05$ dB m^{-1}
Reproducibility	4.3.3		Ratio of response values $m_{max}:\overline{m} \leq 1.33$ Ratio of the response values $\overline{m}: m_{min} \leq 1.5$ Lower response value, $m_{min} \geq 0.05$ dB m^{-1}
Response delay (response time):			
Air movement	4.4.1		Ratio is > 0.0625 and < 1.60 and the point smoke detector did not emit a fault nor alarm signal during the test with aerosol-free air
Dazzling	4.4.2		The specimen did not emit neither an alarm nor a fault signal and Ratio of response thresholds $m_{max}:m_{min} \leq 1.6$
Tolerance to supply voltage:			
Variation in supply parameters	4.5		Ratio of response values $m_{max}:m_{min} < 1.6$ Lower response value, $m_{min} \geq 0.05$ dB m^{-1}
Performance parameters under fire conditions:			
Fire sensitivity	4.6		Evaluated as meeting the requirements of TF2 toTF5
Durability of nominal activation conditions/Sensitivity:			
temperature resistance			
Cold (operational)	4.7.1.1		The specimen did not emit neither an alarm nor a fault signal and Ratio of response values $m_{max}:m_{min} \leq 1.6$
Dry heat (operational)	4.7.1.2		The specimen did not emit neither an alarm nor a fault signal and Ratio of response values $m_{max}:m_{min} \leq 1.6$
Humidity resistance			
Damp heat, steady-state (operational)	4.7.2.1		The specimen did not emit neither an alarm nor a fault signal and ratio of response values $m_{max}:m_{min} \leq 1.6$

Damp heat, steady-state (endurance)	4.7.2.2		No fault signal, attributable to the endurance conditioning was given on reconnection of the specimen and Ratio of response values m_{max}:m_{min} ≤ 1.6
Corrosion resistance			
Sulphur dioxide (SO_2) corrosion (endurance)	4.7.3		No fault signal, attributable to the endurance conditioning was given on reconnection of the specimen and Ratio of response values m_{max}:m_{min} ≤ 1.6
Vibration resistance			
Shock (operational)	4.7.4.1		No fault signal given from the specimen during the conditioning period or the additional 2 min. and Ratio of response values m_{max}:m_{min} ≤ 1.6
Impact (operational)	4.7.4.2		No fault signal given from the specimen during the conditioning period or the additional 2 min. and Ratio of response values m_{max}:m_{min} ≤ 1.6
Vibration, sinusoidal (operational)	4.7.4.3		No fault signal given from the specimen during the conditioning and Ratio of response values m_{max}:m_{min} ≤ 1.6
Vibration, sinusoidal (endurance)	4.7.4.4		No fault signal, attributable to the endurance conditioning was given on reconnection of the specimen and Ratio of response values m_{max}:m_{min} ≤ 1.6
Electrical stability EMC immunity (operational) a) Electrostatic discharge (operational) b) Radiated electromagnetic fields (operational) c) Conducted disturbances(operational) d) Fast transient bursts (operational) e) Slow high energy voltage surge (operational)	4.7.5		No alarm or fault signal given during the conditioning and Ratio of response values m_{max}:m_{min} ≤ 1.6

Essential characteristics	Clauses in EN 54-17:2005	Performance
Performance under fire conditions	5.2[1)]	Pass
Operational reliability	4	Pass
Durability of operational reliability; temperature resistance	5.4, 5.5	Pass
Durability of operational reliability; vibration resistance	5.9 to 5.12	Pass
Durability of operational reliability; humidity resistance	5.6, 5.7	Pass
Durability of operational reliability; corrosion resistance	5.8	Pass
Durability of operational reliability; electrical stability	5.3, 5.13	Pass
1) This is assuming that the effect of the fire is to cause a short circuit in the transmission path that is protected by these devices		

Annex 2

TEST DOCUMENTATION

Accredited Laboratory	Report no.	Date
DNV	99-1491 Revision: 02	1999-12-03, Rev. 02: 2000-01-04
DNV	2000-1178 Revision: 02	2000-02-15, Rev. 02: 2000-03-13
ANPI	BFS/DE/1057	2007-06-29
ANPI	BFS/REDI/154	2005-06-03 Addendum nr. 1: 2008-06-20 Addendum nr. 2: 2009-04-22
ANPI	BFS/REDI/234	2009-01-28
NEMKO	E18217.00	2018-11-15

TECHNICAL BASIS

File Number	Title
BoM BHH-200	Bill of Materials Report
BoM BHH-300	Bill of Materials Report
BoM BHH-500	Bill of Materials Report
BoM BHH-500 N	Bill of Materials Report
BoM BHH-500 EX	Bill of Materials Report