

CERTIFICATE OF CONSTANCY OF PERFORMANCE

Issued by DBI Certification, notified body No. 2531.

In compliance with *Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011* (the Construction Products Regulation or CPR), this certificate applies to the construction product

58000-700 Discovery Analogue Addressable Mult-Sensor Detector

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:

**Apollo Fire Detectors Ltd.
36 Brookside Road,
Havant, Hampshire GB-P09 1JR
United Kingdom**

and produced in the manufacturing plant:

**Apollo Fire Detectors Ltd.
36 Brookside Road,
Havant, Hampshire GB-P09 1JR
United Kingdom**

This certificate attests that all provisions concerning the assessment and verification of constancy of performance described in Annex ZA of the standards

EN 54-5:2000/A1:2002 : **Fire detection and fire alarm systems - Part 5: Heat detectors - Point detectors**
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**

under system 1 for the performance set out in this certificate are applied and that the performance of the construction product is assessed to remain constant.

The attached annexes form part of this certificate.

Date of issue: 2020-07-01.

This certificate will remain valid as long as neither the harmonized 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product, the AVCP methods nor the manufacturing conditions in the plant are modified significantly unless suspended or withdrawn by the notified product certification body.

(This certificate supersedes the previous version of this certificate issued 2019-10-09)

This certificate was first issued 2019-10-09.



Thomas Anthony Wilson
Responsible for evaluation



Merete Poulsen
Responsible for certification decision

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Annex 1

EXTENT

Type:

58000-700 Discovery Analogue Addressable Multit-Sensor Detector

Variant:

58000-700SIL Discovery Analogue Addressable Multit-Sensor Detector

Sensitivities:

- Mode 1 – High sensitivity smoke detector with standard heat enhancement
- Mode 2 – Smoke detection only
- Mode 3 – Medium sensitivity smoke detector with standard heat enhancement
- Mode 4 – Low sensitivity smoke detector with high heat enhancement

Heat Classifications:

- Mode 5 – Class A1 heat detector
- Also Certified in conventional alarm modes 1, 2, 3, 4 and 5

Bases:

- 45681-210 XP95 mounting base
- 45681-209 XP95/Discovery standard deep mounting base

Performance

Essential characteristics	Clauses in EN 54-5:2000	Performance
Nominal activation conditions/Sensitivity, Response delay (response time) and Performance under fire conditions	4.2, 4.3, 5.2 to 5.6, 5.8, 6.1, 6.2 (6.1 only Suffix S det./6.2 only Suffix R det.)	Pass
Operational reliability	4.4 to 4.11	Pass
Tolerance to supply voltage	5.7	Pass
Durability of operational reliability and response delay; temperature resistance	5.9, 5.10	Pass
Durability of operational reliability; vibration resistance	5.14 to 5.17	Pass
Durability of operational reliability; humidity resistance	5.11, 5.12	Pass
Durability of operational reliability; corrosion resistance	5.13	Pass
Durability of operational reliability; electrical stability	5.18	Pass

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Essential characteristics	Clauses in EN 54-7:2018	Regulatory classes	Performance
Operational reliability:			
Individual alarm indication	4.2.1	None	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		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 (when provided)	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	Threshold	Ratio of response values $m_{max}:m_{min} \leq 1.6$ Lower response value, $m_{max}:m_{min} \geq 0.05 \text{ dB m}^{-1}$
Directional dependence	4.3.2		Ratio of response values $m_{max}:m_{min} \leq 1.6$ Lower response value, $m_{max}:m_{min} \geq 0.05 \text{ dB m}^{-1}$

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Reproducibility	4.3.3	Ratio of response values $m_{max}:\bar{m} \leq 1.33$ Ratio of the response values $\bar{m}: m_{min} \leq 1.5$ Lower response value, $m_{min} \geq 0.05 \text{ dB m}^{-1}$
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, $m_{min} \geq 0.05 \text{ dB m}^{-1}$
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 $m_{max}:m_{min} \leq 1.6$
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 $m_{max}:m_{min} \leq 1.6$

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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 $m_{max}:m_{min} \leq 1.6$
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 $m_{max}:m_{min} \leq 1.6$
Vibration, sinusoidal (operational)	4.7.4.3		No fault signal given from the specimen during the conditioning and Ratio of response values $m_{max}:m_{min} \leq 1.6$
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 $m_{max}:m_{min} \leq 1.6$
Electrical stability EMC immunity (operational)	4.7.5		No alarm or fault signal given during the conditioning and Ratio of response values $m_{max}:m_{min} \leq 1.6$
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)			

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Annex 2

TEST DOCUMENTATION

Accredited Laboratory	Report no.	Date
LPC	TE 90373	29 December 1998
BRE	TE 209309	23 May 2002
LPC	TE 93009	12 October 1999
BRE	TE 238037-SW	29 January 2008
BRE	TE301792 Issue: 1	09 June 2015
BRE	TE 238037	28 January 2008
BRE	TE 288681 Issue: 1	19 December 2016
BRE	TE-P117352-1000 Issue: 1	09 June 2020

TECHNICAL BASIS

File Number	Title
58000-700	Build Standard
45681-210	Build Standard
45681-209	Build Standard

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