

**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

**58000-500 Discovery Analogue Addressable Ionisation Smoke 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 P09 1JR  
United Kingdom**

and produced in the manufacturing plant:

**Apollo Fire Detectors Ltd.  
36 Brookside Road  
Havant, Hampshire 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 54-7:2018** : **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: **2022-02-10**

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product, the AVCP methods nor the manufacturing conditions in the plant are modified significantly unless suspended or withdrawn by the notified product certification body.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 2020-01-23)

This certificate was first issued 2019-10-09.



Steen Nilsson  
Responsible for evaluation



Allan Laursen  
Responsible for certification decision

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Annex 1

**EXTENT**

**Type:**

58000-500 Discovery Analogue Addressable Ionisation Smoke Detector

**Variants:**

58000-500SIL Discovery Analogue Addressable Ionisation Smoke Detector  
58000-500MAR Discovery Analogue Addressable Ionisation Smoke Detector

**Bases:**

45681-210 XP95 Mounting Base  
45681-209 XP95/Discovery Standard Deep Mounting Base

**Note:**

1. Meets the requirements of EN54: Part 7 for modes 1, 2, 3, 4, 5 and conventional mode
2. Certificated with Apollo, Discovery, XP95 and S90 digital communication protocols that have been configured for the Discovery ionisation smoke detectors in accordance with manufacturer's instructions.

**Performance**

| Essential characteristics                        | Clauses in EN 54-7:2018 | Regulatory classes | Performance  |
|--|-------------------------|--------------------|--|
| <b>Operational reliability:</b>                  |                         |                    |  |
| 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   |

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|   |         |  |  |
|---|---------|--|--|
|   |         |  | 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.   |
| <b>Nominal activation conditions/sensitivity:</b>               |         |  |  |
| Repeatability   | 4.3.1   |  | Ratio of response values<br>$m_{max}:m_{min} \leq 1.6$<br>Lower response value,<br>$m_{max}:m_{min} \geq 0.05 \text{ dB m}^{-1}$   |
| Directional dependence  | 4.3.2   |  | Ratio of response values<br>$m_{max}:m_{min} \leq 1.6$<br>Lower response value,<br>$m_{max}:m_{min} \geq 0.05 \text{ dB m}^{-1}$   |
| Reproducibility   | 4.3.3   |  | Ratio of response values<br>$m_{max}:\bar{m} \leq 1.33$<br>Ratio of the response values<br>$\bar{m}:m_{min} \leq 1.5$<br>Lower response value, $m_{min} \geq 0.05 \text{ dB m}^{-1}$ |
| <b>Response delay (response time):</b>                          |         |  |  |
| 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 $m_{max}:m_{min} \leq 1.6$  |
| <b>Tolerance to supply voltage:</b>                             |         |  |  |
| Variation in supply parameters                                  | 4.5     |  | Ratio of response values<br>$m_{max}:m_{min} < 1.6$<br>Lower response value, $m_{min} \geq 0.05 \text{ dB m}^{-1}$   |
| <b>Performance parameters under fire conditions:</b>            |         |  |  |
| Fire sensitivity  | 4.6     |  | Evaluated as meeting the requirements of TF2 to TF5  |
| <b>Durability of nominal activation conditions/Sensitivity:</b> |         |  |  |
| 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   |

Threshold

|  |         |   |
|--|---------|---|
|  |         | 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 <sub>2</sub> ) 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 $m_{max}:m_{min} \leq 1.6$ |
| 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 90374                 | 1998-12-30 |
| BRE                   | TE 260875                | 2011-03-09 |
| BRE                   | TE P111208 Issue: 1      | 2018-06-22 |
| BRE                   | TE-P105641-1001 Issue: 1 | 2018-10-31 |
| BRE                   | TE-P117352-1000 Issue 1  | 2021-09-22 |
| BRE                   | AB-P118559               | 2022-01-20 |

**TECHNICAL BASIS**

| File Number                         | Title  |
|-------------------------------------|--|
| 58000-500<br>45681-210<br>45681-209 | Build Standard<br>Build Standard<br>Build Standard |

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