



**Construction Products Regulation:  
EU (No) 305/2011**

This Declaration has been drawn-up in accordance with Commission Delegated Regulation (EU) No. 574/2014 which amends Annex III of Regulation (EU) No 305/2011.

## **DECLARATION OF PERFORMANCE**

**No. E0084**

**1. Unique identification code of the product-type:**

**Model number and Description:**

ORB-HT-11001-APO Orbis Class A1R Heat Detector with SensAlert and FasTest  
ORB-HT-11013-APO Orbis Class A1R Heat Detector with Flashing LED, SensAlert and FasTest

**Approved Accessories:**

Bases: ORB-MB-00001-APO, ORB-MB-00002-APO, ORB-DB-00003-APO, ORB-RB-10004-APO, ORB-MB-00012-APO, ORB-MB-00019-APO

Ancillary: ORB-BA-10008-APO Adaptor Base (to be used in conjunction with the following bases only 45681-200, 45681-201)

**Harmonised Product Type(s):**

Heat Detectors – Point Detectors

**2. Intended use/es:**

Point detectors for use in fire detection and fire alarm systems installed in and around buildings

**3. Manufacturer:**

Apollo Fire Detectors Ltd,  
36 Brookside Road, Havant, Hampshire, PO9 1JR, United Kingdom

**4. Authorised representative:**

Apollo Gesellschaft für Meldetechnologie mbH  
Am Anger 31  
33332 Gütersloh  
Deutschland

**5. System of AVCP**

System 1

**6a. Harmonised Standard(s)**

EN 54-5:2017 + A1:2018

**6b. Notified Body:**

DBI Certification A/S (Notified Body 2531)

A HALMA COMPANY



**Apollo Fire Detectors Limited**

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Apollo Fire Detectors Ltd. Registered in England No. 1483208

Registered Office: 36 Brookside Road, Havant, Hampshire, PO9 1JR VAT Registration No. GB 339 0553 54

## 7. Declared performance

**Table 1**

| Detector Category (Heat Class): | Typical Application Temperature | Maximum Application Temperature °C | Minimum Static Response Temperature °C | Maximum Static Response Temperature °C |
|---------------------------------|---------------------------------|------------------------------------|----------------------------------------|----------------------------------------|
| A1R                             | 25                              | 50                                 | 54                                     | 65                                     |

**Table 2- Response time limits**

| Rate of rise of air temperature<br>K min <sup>-1</sup> | Cat A1R     |    |             |    |
|--------------------------------------------------------|-------------|----|-------------|----|
|                                                        | Lower limit |    | Upper limit |    |
|                                                        | Min         | S  | Min         | S  |
| 1                                                      | 29          | 0  | 40          | 20 |
| 3                                                      | 7           | 13 | 13          | 40 |
| 5                                                      | 4           | 9  | 8           | 20 |
| 10                                                     | 1           | 0  | 4           | 20 |
| 20                                                     |             | 30 | 2           | 20 |
| 30                                                     |             | 20 | 1           | 40 |

### Performance

| Essential characteristics                     | Clauses in EN 54-5:2017/ A1:2018 | Regulatory classes | Performance                                                                                                                                                                                                                                                                        |
|-----------------------------------------------|----------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Operational reliability:</b>               |                                  | A1R                |                                                                                                                                                                                                                                                                                    |
| Position of heat sensitive element            | 4.2.1                            |                    | The heat sensitive element(s) or at least part of it, except elements with auxiliary functions (e.g. characteristic correctors), are a distance $\geq 15$ mm from the mounting surface of the point heat detector.                                                                 |
| Individual alarm indication                   | 4.2.2                            |                    | Category A1R<br>The heat detector is provided with an integral red visual indicator and can remain identified until the alarm is reset. The visual indicator is visible from a distance of 6 m directly below the point heat detector, in an ambient light intensity up to 500 lx. |
| Connection of ancillary devices               | 4.2.3                            |                    | Open or short circuit failures of connection to ancillary device do not prevent the correct operation of the detector                                                                                                                                                              |
| Monitoring of detachable point heat detectors | 4.2.4                            |                    | A fault condition is signaled when the detector is removed from the mounting base.                                                                                                                                                                                                 |
| Manufacturer's adjustments                    | 4.2.5                            |                    | It is not possible to change the manufacture's settings except by special means (e.g. a special code or tool, or by breaking or remove a seal).                                                                                                                                    |

|                                                     |                                     |  |                                                                                                                                                                                                                                                                                                                                                                                                           |                              |                                     |     |      |
|-----------------------------------------------------|-------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------------|-----|------|
|                                                     |                                     |  |                                                                                                                                                                                                                                                                                                                                                                                                           |                              |                                     |     |      |
| Onsite adjustments of response behavior             | 4.2.6                               |  | N/A                                                                                                                                                                                                                                                                                                                                                                                                       |                              |                                     |     |      |
| Software controlled detectors (when provided)       | 4.2.7                               |  | The software documentation and the software design complies supplied by the manufacturer with the requirements of this standard.                                                                                                                                                                                                                                                                          |                              |                                     |     |      |
| <b>Nominal activation conditions/Sensitivity:</b>   |                                     |  |                                                                                                                                                                                                                                                                                                                                                                                                           |                              |                                     |     |      |
| Directional dependence                              | 4.3.1                               |  | The response time of the point dectetor do not unduly depend on the direction of airflow around the point heat detector.                                                                                                                                                                                                                                                                                  |                              |                                     |     |      |
| Static response temperature                         | 4.3.2                               |  | The response temperatures of the point heat detectors lie between the minimum and maximum static response temperatures, according to the category of the point heat detector in Table 1 above.                                                                                                                                                                                                            |                              |                                     |     |      |
| Response times from typical application temperature | 4.3.3                               |  | The response times of the point heat detector lie between the lower and upper response time limits for the appropriate point heat detector category in Table 2 above.                                                                                                                                                                                                                                     |                              |                                     |     |      |
| Response times from 25 °C                           | 4.3.4                               |  | The response time at 3 K min <sup>-1</sup> exceeds 7 min 13 s and the response time at 20 K min <sup>-1</sup> exceeds 1 min 0 s.                                                                                                                                                                                                                                                                          |                              |                                     |     |      |
| Response times from high ambient temperature        | 4.3.5                               |  | No alarm or fault signal was given at high ambient temperatures appropriate to the anticipated service temepratures.<br>A1R<br>3 K min <sup>-1</sup> , Lower limit, 1 min 20s and upper limit 13 m 40s.<br>20 K min <sup>-1</sup> , Lower limit, 12 s and upper limit 2 m 20 s.                                                                                                                           |                              |                                     |     |      |
| Reproducibility                                     | 4.3.6                               |  | The response times of the point heat detectors lie between the lower ad upper response time limits specified in Table 2 above.                                                                                                                                                                                                                                                                            |                              |                                     |     |      |
| <b>Response delay (response time):</b>              |                                     |  |                                                                                                                                                                                                                                                                                                                                                                                                           |                              |                                     |     |      |
| Additional test for suffix S point heat detectors   | 4.4.1                               |  | N/A                                                                                                                                                                                                                                                                                                                                                                                                       |                              |                                     |     |      |
| Additional test for suffix R point heat detectors   | 4.4.2                               |  | Suffix R, the point heat detector maintains the response requirements of its category, in table 2 above, for high rates of rise of temperature from an initial temperature below the typical application temperature applicable to the category marked on it. <table><tr><td>Point heat detector category</td><td>Initial conditioning temperature °C</td></tr><tr><td>A1R</td><td>5 ±2</td></tr></table> | Point heat detector category | Initial conditioning temperature °C | A1R | 5 ±2 |
| Point heat detector category                        | Initial conditioning temperature °C |  |                                                                                                                                                                                                                                                                                                                                                                                                           |                              |                                     |     |      |
| A1R                                                 | 5 ±2                                |  |                                                                                                                                                                                                                                                                                                                                                                                                           |                              |                                     |     |      |
| <b>Tolerance to supply voltage:</b>                 |                                     |  |                                                                                                                                                                                                                                                                                                                                                                                                           |                              |                                     |     |      |
| Variation in supply parameters                      | 4.5                                 |  | The point heat detector does not unduly depent on variation in the supply parameters and lie between the lower and upper response time limits specified in Table 2 above.                                                                                                                                                                                                                                 |                              |                                     |     |      |

|                                                                 |         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------|---------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Durability of nominal activation conditions/Sensitivity:</b> |         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| temperature resistance                                          |         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Cold (operational)                                              | 4.6.1.1 |  | <p>No alarm or fault signal was given during the transition to the conditioning temperature or during the period at the condition temperature</p> <p>Response time at 3 K min<sup>-1</sup> was not less than 7 min 13 s and did not exceed 2 min 40 s compared with the time obtained in 4.3.6.</p> <p>A1R: 20 K min<sup>-1</sup> was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6</p>                                                                                        |
| Dry heat (endurance)                                            | 4.6.1.2 |  | <p>No fault signal was given on reconnection attributable to the endurance conditioning</p> <p>Response time at 3 K min<sup>-1</sup> was not less than 7 min 13 s and did not exceed 2 min 40 s compared with the time obtained in 4.3.6.</p> <p>A1R: 20 K min<sup>-1</sup> was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6</p>                                                                                                                                              |
| Humidity resistance                                             |         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Damp heat, cyclic (operational)                                 | 4.6.2.1 |  | <p>No alarm or fault signal was given during the conditioning.</p> <p>Lower temperature: (25±3) °C<br/>Upper temperature: (40±2) °C</p> <p>Relative humidity:<br/>At lower temperature : ≥ 95 %<br/>At upper temperature : (93 ±3) %</p> <p>Response time at 3 K min<sup>-1</sup> was not less than 7 min 13 s and did not exceed 2 min 40 s compared with the time obtained in 4.3.6.</p> <p>A1R: 20 K min<sup>-1</sup> was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6</p> |
| Damp heat, steady-state (endurance)                             | 4.6.2.2 |  | <p>No fault signal was given on reconnection attributable to the endurance conditioning.</p> <p>Conditioning<br/>Temperature : 40 ±2 °C<br/>Relative Humidity: 93 ±3 %<br/>Duration : 21 days</p> <p>Response time at 3 K min<sup>-1</sup> was not less than 7 min 13 s and did not exceed 2 min 40 s compared with the time obtained in 4.3.6.</p> <p>A1R: 20 K min<sup>-1</sup> was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6</p>                                        |
| Corrosion resistance                                            |         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Sulphur dioxide (SO <sub>2</sub> ) corrosion (endurance)        | 4.6.3   |  | <p>No fault signal was given on reconnection attributable to the endurance conditioning.</p>                                                                                                                                                                                                                                                                                                                                                                                                                         |

|                                     |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     |         | <p>Conditioning</p> <p>Temperature : 25 ±2 °C</p> <p>Relative Humidity: 93 ±3 %</p> <p>SO2 concentration: 25 ±5 ppm (by volume)</p> <p>Duration : 21 days</p> <p>Response time at 3 K min<sup>-1</sup> was not less than 7 min 13 s and did not exceed 2 min 40 s compared with the time obtained in 4.3.6.</p> <p>A1R: 20 K min<sup>-1</sup> was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6</p>                                                                                                                                                                                                 |
| Vibration resistance                |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Shock (operational)                 | 4.6.4.1 | <p>No alarm or fault signal was given during the conditioning period or an additional 2 min.</p> <p>For specimen with a mass ≤ 4,75 kg :</p> <p>Shock pulse type: Half sine</p> <p>Pulse duration : 6 ms</p> <p>Peak acceleration: 10X (100-20M) ms<sup>-2</sup> (M is specimen mass in Kg)</p> <p>Number of directions: 6</p> <p>Pulses per direction: 3</p> <p>Response time at 3 K min<sup>-1</sup> was not less than 7 min 13 s and did not exceed 2 min 40 s compared with the time obtained in 4.3.6.</p> <p>A1R: 20 K min<sup>-1</sup> was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6</p> |
| Impact (operational)                | 4.6.4.2 | <p>No alarm or fault signal was given during the conditioning period or an additional 2 min.</p> <p>Conditioning:</p> <p>Impact energy: 1,9 ±0,1 J</p> <p>Hammer velocity: 1,5 ±0,13 ms<sup>-1</sup></p> <p>Number of impacts: 1</p> <p>Response time at 3 K min<sup>-1</sup> was not less than 7 min 13 s and did not exceed 2 min 40 s compared with the time obtained in 4.3.6.</p> <p>A1R: 20 K min<sup>-1</sup> was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6</p>                                                                                                                          |
| Vibration, sinusoidal (operational) | 4.6.4.3 | <p>No fault signal was given during the conditioning</p> <p>Conditioning:</p> <p>Frequency range: 10 to 150 Hz</p> <p>Acceleration amplitude: 5 ms<sup>-2</sup> (≈0,5 g<sub>n</sub>)</p> <p>Number of axes : 3</p> <p>Sweep rate: 1 octave min<sup>-1</sup></p> <p>Number of sweep cycles: 1 per axis</p> <p>Response time at 3 K min<sup>-1</sup> was not less than 7 min 13 s and did not exceed 2 min 40 s compared with the time obtained in 4.3.6.</p> <p>A1R: 20 K min<sup>-1</sup> was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6</p>                                                     |

|                                                 |         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------|---------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vibration, sinusoidal (endurance)               | 4.6.4.4 |  | <p>No fault signal was given on reconnection attributable to the endurance conditioning.</p> <p>Conditioning:<br/> Frequency range: 10 to 150 Hz<br/> Acceleration amplitude: <math>10 \text{ ms}^{-2} (\approx 1,0 \text{ g}_n)</math><br/> Number of axes : 3<br/> Sweep rate: 1 octave <math>\text{min}^{-1}</math><br/> Number of sweep cycles: 20 per axis</p> <p>Response time at <math>3 \text{ K min}^{-1}</math> was not less than 7 min 13 s and did not exceed 2 min 40 s compared with the time obtained in 4.3.6.</p> <p>A1R: <math>20 \text{ K min}^{-1}</math> was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6</p> |
| Electrical stability EMC immunity (operational) | 4.6.5   |  | <p>Compliance in EN 50130-4:2011 and No fault signal was given during the conditioning.</p> <p>Response time at <math>3 \text{ K min}^{-1}</math> was not less than 7 min 13 s and did not exceed 2 min 40 s compared with the time obtained in 4.3.6.</p> <p>A1R: <math>20 \text{ K min}^{-1}</math> was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6</p>                                                                                                                                                                                                                                                                         |

## 8. Online Display Location

This document can be viewed online at [www.apollo-fire.co.uk](http://www.apollo-fire.co.uk)

The performance of the product identified above is in conformity with the set of declared performance/s.  
This declaration of performance is issued, in accordance with Regulation (EU) No. 305/2011, under the sole responsibility of the manufacturer identified above

Signed for and on behalf of Apollo Fire Detectors Limited by:



Mr. David Robbins  
Technical Director  
Havant - 21.03.2025

(v7)