

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

45681-700 Discovery Sounder Visual Alarm Device Base (White) with 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:

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

EN 54-17:2005/AC:2007 : **Fire detection and fire alarm systems - Part 17: Short-circuit isolators**
EN 54-23:2010 : **Fire detection and fire alarm systems - Part 23: Fire alarm devices – Visual alarm devices**
EN 54-3:2001/A1:2002/A2:2006 : **Fire detection and fire alarm systems - Part 3: Fire alarm devices - Sounders**

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 2019-11-28 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product, the AVCP methods nor the manufacturing conditions in the plant are modified significantly, unless suspended or withdrawn by the notified product certification body.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: **2023-10-26**

(This certificate supersedes the previous version of this certificate issued 2021-10-05)



Chris Ellis
Responsible for evaluation



Steen Nilsson
Responsible for certification decision

Annex 1

EXTENT

Type:

45681-700 Discovery Sounder Visual Alarm Device Base (White) with Isolator

Notes:

1. The VAD is rated as open class: (Refer to installation guide).
2. The VAD operating voltage range 17-28V DC (24V nominal).
3. The VAD Light mode (light pattern details): 0.5Hz mode only.
4. The VAD includes a short circuit isolator.
5. The VAD is a Type A device and includes synchronisation.
6. Meets the requirements of EN 54-3: 2001 at the following tone settings:
 - Tone 1 Apollo evacuation Tone – 567Hz for 0.5s, 85Hz for 0.5s
 - Tone 12 Alternating – (Hochiki & Fulleon) – 925Hz for 0.25s, 626Hz for 0.25s
 - Tone 14 Medium Sweep – 800Hz to 970Hz at 1 Hz
 - Tone 3 Dutch Slow Whoop (sweep) – 500Hz – 1200Hz for 3.5s, off for 0.5s
 - Tone 4 DIN Tone (sweep) – 1200Hz – 500Hz for 1s
 - Tone 18 Swedish Fire Tone – 660 Hz, 150ms on, 150ms off
 - Tone 0 Apollo Alert Tone – 1s off, 1s 850Hz
 - Tone 11 Continuous (Hochiki & Fulleon) – 925Hz
 - Tone 13 Continuous – 970Hz
 - Tone 2 Continuous - 850Hz
 - Tone 17 Swedish all clear signal – Continuous – 660Hz
7. Approved for sounder volumes 2-7 only.

Accessories:

- 45681-292 White Cap (Lockable)
- 45681-293 Red Cap (Lockable)

Performance

Essential characteristics	Clauses in EN 54-3:2001	Performance
Performance under fire conditions	4.2, 4.3, 5.2, 5.3	Pass
Operational reliability	4.4, 4.5, 4.6, 5.4, C4	Pass
Durability of operational reliability and response delay; temperature resistance	5.5, 5.6, 5.7, 5.8, 5.9	Pass
Durability of operational reliability; humidity resistance	5.8, 5.9, 5.10	Pass
Durability of operational reliability; corrosion resistance	5.11	Pass
Durability of operational reliability; vibration resistance	5.12 to 5.15	Pass
Durability of operational reliability; electrical stability	5.16	Pass
Durability of operational reliability; resistance to ingress	5.17	Pass

5.6 and 5.10 applies only to outdoor sounders or outdoor voice sounders.
 5.16 applies only to sounders or voice sounders with active electronic components

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			
Essential characteristics	Clauses in EN 54-23:2010	Level(s) or class(es)	Notes
Operational reliability: Duration of operation Provision for external conductors Flammability of materials Enclosure protection Access Manufacturer's adjustments On-site adjustment of behaviour Requirements for software controlled devices	4.2.1 4.2.2 4.2.3 4.2.4 4.2.5 4.2.6 4.2.7 4.2.8		Pass Pass Pass Pass Pass Pass Pass Pass
Performance parameters under fire condition: Coverage volume Variation of light output Minimum and maximum light intensity Light colour Light temporal pattern and frequency of flashing Marking and data Synchronization (option with requirements)	4.3.1 4.3.2 4.3.3 4.3.4 4.3.5 4.3.6 4.3.7		Pass Pass Pass Red/White Pass/Hz Pass Pass
Durability: Temperature resistance: Dry heat (operational) Dry heat (endurance) Cold (operational) Humidity resistance: Damp heat, cyclic (operational) Damp heat, steady state (endurance) Damp heat, cyclic (endurance) Shock and vibration resistance: Shock (operational) Impact (operational) Vibration (operational) Vibration (endurance) Corrosion resistance: SO2 corrosion (endurance) Electrical stability: EMC, immunity (operational)	4.4.1.1 4.4.1.2 4.4.1.3 4.4.2.1 4.4.2.2 4.4.2.3 4.4.3.1 4.4.3.2 4.4.3.3 4.4.3.4 4.4.4 4.4.5	None	Pass Pass Pass Pass Pass Pass Pass Pass Pass Pass Pass Pass

Annex 2

TEST DOCUMENTATION

Accredited Laboratory	Report no.	Date
BRE	TE 281812	2014-01-09
BRE	TE 281812 Revision 2	2015-09-24
BRE	TE 286206	2013-12-10
BRE	TE 286206 Revision 1	2014-01-09
BRE	TE-P118556-1000 Revision 1	2021-05-06
BRE	P118556/1.1	2020-05-21
BRE	TE-P110938-1001 Issue: 1	2019-03-25

TECHNICAL BASIS

File Number	Title
45681-700	Build Standard