Certificate No.: 2531-CPR-CSP10968

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

Orbis Optical Smoke Detector Range

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 54-7:2018 : **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 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 2019-10-09 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product, the AVCP methods nor the manufacturing conditions in the plant are modified significantly, unless suspended or withdrawn by the notified product certification body.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: **2022-07-13**

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

Merete Poulsen
Responsible for evaluation

Steen Nilsson
Responsible for certification decision

DANAK
Prod. Reg. Nr. 7023

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Annex 1

EXTENT

Type:
Orbis Optical Smoke Detector Range

Variants:
ORB-OP-12001-APO Orbis Optical Smoke Detector with SensAlert, FasTest and DirtAlert
ORB-OP-12003-APO Orbis Optical Smoke Detector with Flashing LED, SensAlert, FasTest and DirtAlert

Bases:
OB: ORB-MB-00001-APO TimeSaver base
OL: ORB-MB-00002-APO TimeSaver base LX (without continuity checking link)
OD: ORB-DB-00003-APO TimeSaver diode base
OR: ORB-RB-10004-APO TimeSaver relay base
XL: ORB-MB-00012-APO & OEX-MB-00016-APO LX bases
EB: ORB-MB-00019-APO TimeSaver deep base

Ancillaries:
ORB-BA-10008-APO Orbis Adaptor base (to be used in conjunction with the following bases only: 45681-200 & 45681-201)

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.

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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 $m_{max}:\bar{m} \leq 1.33$ Ratio of the response values $\bar{m}: m_{min} \leq 1.5$ Lower response value, $m_{min} \geq 0.05$ 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	Threshold	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} ≤ 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

Annex 2

TEST DOCUMENTATION

Accredited Laboratory	Report no.	Date
BRE	210362	2004-01-05
BRE	TE210362BSW	2003-11-18
BRE	210362-SW	2003-06-09
BRE	TE 245417	2008-10-13
BRE	TE 252615	2009-10-08
BRE	TE-P105642-1001	2019-03-21

TECHNICAL BASIS

File Number	Title
400-OP-00005	Build Standard
400-OP-00006	Build Standard
ORB-MB-00001	Build Standard no. 300-MA-00003
ORB-MB-00002	Build Standard no. 300-MA-00006
ORB-DB-00003	Build Standard
ORB-RB-10004	Build Standard no. 400-RB-00007
ORB-MB-00012	Build Standard
OEX-MB-00016	Build Standard
ORB-MB-00019	Build Standard no. 300-MA-00012