DECLARATION OF PERFORMANCE

According to Construction Products Regulation EU N° 305/2011

No. DOP-F4860

1. Unique identification code of the product-type:
   FDL242

2. Intended use/es:
   Fire detection and fire alarm systems

3. Manufacturer:
   FFE Ltd, 9 Hunting Gate, Hitchin, Hertfordshire, SG4 0TJ, United Kingdom

4. Authorised representative:
   FFE B.V., J. Keplerweg 10S, 2408 AC, Alphen aan den Rijn, Netherlands

   Note: FFE B.V. has, by issue of written mandate, been authorised by FFE Ltd to act as an Importer for this product, and to carry out the duties required of an Importer within the European Union.

5. System/s of AVCP:
   System 1

6. Harmonised standard:
   EN 54-12: 2015
   EN 54-17: 2005

   Notified body/ies:
   BRE Global Assurance (Ireland) Limited (Notified Body No. 2831)

   Certificate No:
   2831-CPR-F4860

7. Declared performance/s:

Essential Characteristics	**Performance**	**Harmonised Technical Specification**
Operational reliability		EN 54-12
Individual alarm indication	Integral red visible indicator	
Connection of ancillary devices	Complies	
Manufacturers' adjustments	Complies	
On-site adjustment of response value	Complies	
Protection against the ingress of foreign bodies	Sphere of diameter 1.3mm cannot enter optics	
Monitoring of detachable detectors and connections	Correct operation	
Software controlled line detector using an optical beam	Complies	

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Essential Characteristics	Performance	Harmonised Technical Specification
Nominal activation conditions/Sensitivity		
Reproducibility	$C_{min} \geq 0.4dB$, $C_{max} / C_{rep} \leq 1.33$, $C_{rep} / C_{min} \leq 1.5$	
Repeatability	No fault or alarm signals for 3 days, $C_{min} \geq 0.4dB$, $C_{max} / C_{min} \leq 1.6$	
Tolerance to beam misalignment	Correct operation; maximum angle of misalignment is 0.5°.	
Rapid changes in attenuation	Correct operation	
Response to slowly developing fires	Correct operation	
Optical path length dependence	$C_{min} \geq 0.4dB$, $C_{max} / C_{min} \leq 1.6$	
Stray light	No fault or alarm signals during conditioning, $C_{min} \geq 0.4dB$, $C_{max} / C_{min} \leq 1.6$	
Tolerance to supply voltage		
Variation in supply parameters	$C_{min} \geq 0.4dB$, $C_{max} / C_{min} \leq 1.6$	
Performance parameters under fire conditions		
Fire sensitivity	Alarm signal in each test fire, with $m_a < 0.7$ dB m^{-1}	
Durability of nominal activation conditions / sensitivity		
Temperature resistance		
Dry heat (operational)	No fault or alarm signals during conditioning, alarm signal within 30s with 6dB filter in front of receiver, $C_{min} \geq 0.4dB$, $C_{max} / C_{min} \leq 1.6$	
Cold (operational)	No fault or alarm signals during conditioning, alarm signal within 30s with 6dB filter in front of receiver, $C_{min} \geq 0.4dB$, $C_{max} / C_{min} \leq 1.6$	
Humidity resistance		
Damp heat, steady state (operational)	No fault or alarm signals during conditioning, $C_{min} \geq 0.4dB$, $C_{max} / C_{min} \leq 1.6$	
Damp heat, steady state (endurance)	$C_{min} \geq 0.4dB$, $C_{max} / C_{min} \leq 1.6$	
Vibration resistance		
Vibration (endurance)	$C_{min} \geq 0.4dB$, $C_{max} / C_{min} \leq 1.6$	
Impact (operational)	No fault or alarm signals during conditioning except when the beam is obstructed by the impact apparatus, $C_{min} \geq 0.4dB$, $C_{max} / C_{min} \leq 1.6$	

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Essential Characteristics	Performance	Harmonised Technical Specification
Electrical stability EMC immunity (operational) Sulphur dioxide (SO_2) corrosion (endurance)	 No false operation during conditioning, $C_{min} \geq 0.4dB$, $C_{max} / C_{min} \leq 1.6$ $C_{min} \geq 0.4dB$, $C_{max} / C_{min} \leq 1.6$	

Essential Characteristics	Performance	Harmonised Technical Specification EN 54-17
Performance under fire conditions	Pass	5.2(1)
Operational Reliability	Pass	4
Durability of operational reliability: Temperature resistance	Pass	5.4, 5.5
Durability of operational reliability: Vibration resistance	Pass	5.9 to 5.12
Durability of operational reliability: Humidity resistance	Pass	5.6, 5.7
Durability of operational reliability: Corrosion resistance	Pass	5.8
Durability of operational reliability: Electrical Stability	Pass	5.3, 5.13
(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.		

The performance of the product/s 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 the manufacturer by:

Steve Revill
Technical Director
Hitchin, 21 Aug 2023