

## Declaration of Performance

According to Construction Products Regulation 305/2011/EU

1. Unique identification code of the product-type:  
**Optical beam smoke detector: Firebeam Xtra**
2. Type, batch or serial number or any other element allowing identification of the construction product as required under article 11(4):  
**Optical beam smoke detector: Firebeam Xtra**
3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:  
**Smoke detectors – Line detectors using an optical beam intended for use in fire detection and fire alarm systems installed in buildings**
4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required under article 11(5):  
**The Firebeam Company Limited  
Unit 8 Thames Industrial Estate  
High Street South, Dunstable  
Bedfordshire, LU6 3HL**
5. Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in article 12(2):  
**Not applicable, see item 4**
6. System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR Annex V:  
**System 1**
7. In case of the declaration of performance concerning a construction product covered by the harmonised standard:  
**Product certification body No: 0786 VdS Schadenverhütung GmbH performed type testing and the initial inspection of the manufacturing plant and of the factory production control with continuous surveillance assessment and approval of the factory production control under system 1 and issued the Certificate of constancy of performance 0786-CPR-20241**
8. In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued:  
**Not applicable, see item 7**

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9. Declared performance:

Harmonised technical specification		EN 54-12:2015
Essential Characteristics	Performance	Clause
Operational reliability		
- Individual alarm indication	Red LED	4.2.1
- Connection of ancillary devices	Correct operation	4.2.2
- Manufacturer's adjustments	Special means required	4.2.3
- On-site adjustment of response value	Special means required	4.2.4
- Protection against ingress of foreign bodies	Protected (> 1.3mm)	4.2.5
- Monitoring of detachable detectors and connections	Fault signal released	4.2.6
- Requirements for software-controlled detectors	Documentation, design and storage correct	4.2.7
Nominal activation conditions / sensitivity		
- Reproducibility	$C_{min} \geq 0.4\text{dB}$ $C_{max}/C_{rep} \leq 1.33$ ; $C_{rep}/C_{min} \leq 1.5$	4.3.1
- Repeatability	Correct operation $C_{min} \geq 0.4\text{dB}$ ; $C_{max}/C_{min} \leq 1.6$	4.3.2
- Tolerance to beam misalignment	Correct operation Maximum angle $> 0.4^\circ$	4.3.3
- Rapid changes in attenuation	Correct operation	4.3.4
- Response to slowly developing fires	Correct operation	4.3.5
- Optical path length dependence	$C_{min} \geq 0.4\text{dB}$ ; $C_{max}/C_{min} \leq 1.6$	4.3.6
- Stray light	Correct operation $C_{min} \geq 0.4\text{dB}$ ; $C_{max}/C_{min} \leq 1.6$	4.3.7
Tolerance to supply voltage		
- Variation in supply parameters	$C_{min} \geq 0.4\text{dB}$ ; $C_{max}/C_{min} \leq 1.6$	4.4
Performance under fire conditions		
- Fire sensitivity	$m_a < 0.7 \text{ dB m}^{-1}$	4.5
Durability of nominal activation conditions / sensitivity, temperature resistance		
- Dry heat (operational)	Correct operation $C_{min} \geq 0.4\text{dB}$ ; $C_{max}/C_{min} \leq 1.6$	4.6.1.1
- Cold (operational)	Correct operation $C_{min} \geq 0.4\text{dB}$ ; $C_{max}/C_{min} \leq 1.6$	4.6.1.2
Durability of nominal activation conditions / sensitivity, humidity resistance		
- Damp heat, steady state (operational)	Correct operation $C_{min} \geq 0.4\text{dB}$ ; $C_{max}/C_{min} \leq 1.6$	4.6.2.1
- Damp heat, steady state (endurance)	$C_{min} \geq 0.4\text{dB}$ ; $C_{max}/C_{min} \leq 1.6$	4.6.2.2
Durability of nominal activation conditions / sensitivity, vibration resistance		
- Vibration, (endurance)	$C_{min} \geq 0.4\text{dB}$ ; $C_{max}/C_{min} \leq 1.6$	4.6.3.1
- Impact (operational)	Correct operation $C_{min} \geq 0.4\text{dB}$ ; $C_{max}/C_{min} \leq 1.6$	4.6.3.2
Durability of nominal activation conditions / sensitivity, electrical stability		
- Electromagnetic compatibility (EMC), Immunity tests (operational)	Correct operation $C_{min} \geq 0.4\text{dB}$ ; $C_{max}/C_{min} \leq 1.6$	4.6.4
Durability of operational reliability, Corrosion resistance		
- Sulphur dioxide (SO <sub>2</sub> ) corrosion (endurance)	$C_{min} \geq 0.4\text{dB}$ ; $C_{max}/C_{min} \leq 1.6$	4.6.5

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Registered in England No. 04663703  
VAT Registration No. 838662294

10. The performance of the product identified in items 1 and 2 is in conformity with the declared performance in 9. This declaration of performance is issued under the sole responsibility of the manufacturer identified in 4.

Signed for and on behalf of the manufacturer by:



Cliff Key  
Managing Director  
Dunstable UK – 8<sup>th</sup> April 2019

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