SIEMENS

UK CA

FDOOTC241

Declaration of performance No UKP210359 ..... English – EN 2

Zug, 2022-03-07
Siemens Schweiz AG

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Head of Fire Safety

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Declaration of performance No UKP210359

This declaration of performance has been issued on the basis of the Construction Products Regulations 2013 and has no significance beyond this context. In particular, without limitation, this declaration does not contain any legal relevant declarations, such as in respect to quality, durability, usability, or warranty and liability commitments of any kind. These aspects are subject to agreement on a case-by-case basis at the time when the contract is concluded. The safety information in the applicable product documentation must be observed. You can obtain the latest version of the product documentation, as well as the declarations of performance and declarations of conformity, by contacting the Customer Support Center on +49 89 9221-8000 or by visiting https://siemens.com/bt/download.

Product type:

FDOOTC241

Product description:

Smoke/heat detector incl. short-circuit isolator

Product variants:

FDOOTC241

Components:

FDB221 FDB222

Intended use/es:

Fire safety, point detectors for the use of fire detection and fire alarm installations installed in and around buildings. Fire detection and fire alarm installations installed in and around buildings.

Manufacturer:

Siemens Schweiz AG, Theilerstrasse 1a, CH-6300 Zug

System/s of AVCP:

System 1

Harmonised standard:

EN 54-5:2017 + A1:2018 | EN 54-7:2018 | EN 54-17:2005 + AC:2007

Notified body/ies:

0832, BRE Global Limited

Declared performance/s:

EN 54-5:2017 + A1:2018		
Essential characteristics	**Section**	**Performance**
Operational reliability		
Position of heat sensitive elements	4.2.1	≥15 mm
Individual alarm indication	4.2.2	Provided
Connection of ancillary devices	4.2.3	Provided
Monitoring of detachable detectors	4.2.4	Provided
Manufacturer’s adjustments	4.2.5	Provided

EN 54-5:2017 + A1:2018		
Essential characteristics	**Section**	**Performance**
On-site adjustment of response behaviour	4.2.6	Provided
Software controlled detector (when provided)	4.2.7	Provided
Nominal activation conditions/sensitivity		
Directional dependence	4.3.1	Classes A1: 1 min 0 s ≤ RT ≤ 4 min 20 s Classes B: 2 min 0 s ≤ RT ≤ 5 min 30 s
Static response temperature	4.3.2	Classes A1: 54 °C ≤ T ≤ 65 °C Classes B: 69 °C ≤ T ≤ 85 °C
Response time from typical application temperature	4.3.3	Classes A1: 1 K min^{-1}: 29 min 0 s ≤ RT ≤ 40 min 20 s 3 K min^{-1}: 7 min 13 s ≤ RT ≤ 13 min 40 s 5 K min^{-1}: 4 min 9 s ≤ RT ≤ 8 min 20 s 10 K min^{-1}: 1 min 0 s ≤ RT ≤ 4 min 20 s 20 K min^{-1}: 0 min 30 s ≤ RT ≤ 2 min 20 s 30 K min^{-1}: 0 min 20 s ≤ RT ≤ 1 min 40 s Classes B: 1 K min^{-1}: 29 min 0 s ≤ RT ≤ 46 min 0 s 3 K min^{-1}: 7 min 13 s ≤ RT ≤ 16 min 0 s 5 K min^{-1}: 4 min 9 s ≤ RT ≤ 10 min 0 s 10 K min^{-1}: 2 min 0 s ≤ RT ≤ 5 min 30 s 20 K min^{-1}: 1 min 0 s ≤ RT ≤ 3 min 13 s 30 K min^{-1}: 0 min 40 s ≤ RT ≤ 2 min 25 s
Response time from 25 °C	4.3.4	3 K min^{-1}: 7 min 13 s ≤ RT 20 K min^{-1}: 1 min 0 s ≤ RT
Response time from high ambient temperature	4.3.5	Classes A1: 3 K min^{-1}: 1 min 20 s ≤ RT ≤ 13 min 40 s 20 K min^{-1}: 0 min 12 s ≤ RT ≤ 2 min 20 s Classes B: 3 K min^{-1}: 1 min 20 s ≤ RT ≤ 16 min 0 s 20 K min^{-1}: 0 min 12 s ≤ RT ≤ 3 min 13 s
Reproducibility	4.3.6	Classes A1: 3 K min^{-1}: 7 min 13 s ≤ RT ≤ 13 min 40 s 20 K min^{-1}: 0 min 30 s ≤ RT ≤ 2 min 20 s Classes B: 3 K min^{-1}: 7 min 13 s ≤ RT ≤ 16 min 0 s 20 K min^{-1}: 1 min 0 s ≤ RT ≤ 3 min 13 s
Response delay (response time)		
Response delay (response time)	4.4.1	Classes xS: 3 K min^{-1}: 9 min 40 s ≤ RT 5 K min^{-1}: 5 min 48 s ≤ RT 10 K min^{-1}: 2 min 54 s ≤ RT 20 K min^{-1}: 1 min 27 s ≤ RT 30 K min^{-1}: 0 min 58 s ≤ RT
Additional tests for suffix R detectors	4.4.2	Classes A1R: 10 K min^{-1}: 1 min 0 s ≤ RT ≤ 4 min 20 s 20 K min^{-1}: 0 min 30 s ≤ RT ≤ 2 min 20 s 30 K min^{-1}: 0 min 20 s ≤ RT ≤ 1 min 40 s Classes BR: 10 K min^{-1}: 2 min 0 s ≤ RT ≤ 5 min 30 s 20 K min^{-1}: 1 min 0 s ≤ RT ≤ 3 min 13 s 30 K min^{-1}: 0 min 40 s ≤ RT ≤ 2 min 25 s
Tolerance to supply voltage – Variation in supply parameters	4.5.1	Classes A1: 3 K min^{-1}: 7 min 13 s ≤ RT ≤ 13 min 40 s 20 K min^{-1}: 0 min 30 s ≤ RT ≤ 2 min 20 s

EN 54-5:2017 + A1:2018		
Essential characteristics	**Section**	**Performance**
		Classes B: 3 K min^{-1}: 7 min 13 s ≤ RT ≤ 16 min 0 s 20 K min^{-1}: 1 min 0 s ≤ RT ≤ 3 min 13 s
Durability of Nominal activation conditions/sensitivity		
Cold (operational)	4.6.1.1	Classes A1: 3 K min^{-1}: 7 min 13 s ≤ RT 20 K min^{-1}: 0 min 30 s ≤ RT Classes B: 3 K min^{-1}: 7 min 13 s ≤ RT 20 K min^{-1}: 1 min 0 s ≤ RT
Dry heat (endurance)	4.6.1.2	NPD
Humidity resistance		
Damp heat, cyclic (operational)	4.6.2.1	Classes A1: 3 K min^{-1}: 7 min 13 s ≤ RT 20 K min^{-1}: 0 min 30 s ≤ RT Classes B: 3 K min^{-1}: 7 min 13 s ≤ RT 20 K min-$^{-1}$: 1 min 0 s ≤ RT
Damp heat, steady-state (endurance)	4.6.2.2	Classes A1: 3 K min^{-1}: 7 min 13 s ≤ RT 20 K min^{-1}: 0 min 30 s ≤ RT Classes B: 3 K min^{-1}: 7 min 13 s ≤ RT 20 K min^{-1}: 1 min 0 s ≤ RT
Corrosion resistance: Sulphur dioxide (SO_2) corrosion (endurance)	4.6.3	Classes A1: 3 K min^{-1}: 7 min 13 s ≤ RT 20 K min^{-1}: 0 min 30 s ≤ RT Classes B: 3 K min^{-1}: 7 min 13 s ≤ RT 20 K min^{-1}: 1 min 0 s ≤ RT
Vibration resistance		
Shock (operational)	4.6.4.1	Classes A1: 3 K min^{-1}: 7 min 13 s ≤ RT 20 K min^{-1}: 0 min 30 s ≤ RT Classes B: 3 K min^{-1}: 7 min 13 s ≤ RT 20 K min^{-1}: 1 min 0 s ≤ RT
Impact (operational)	4.6.4.2	Classes A1: 3 K min^{-1}: 7 min 13 s ≤ RT 20 K min^{-1}: 0 min 30 s ≤ RT Classes B: 3 K min^{-1}: 7 min 13 s ≤ RT 20 K min^{-1}: 1 min 0 s ≤ RT
Vibration, sinusoidal (operational)	4.6.4.3	Classes A1: 3 K min^{-1}: 7 min 13 s ≤ RT 20 K min^{-1}: 0 min 30 s ≤ RT Classes B: 3 K min^{-1}: 7 min 13 s ≤ RT 20 K min^{-1}: 1 min 0 s ≤ RT
Vibration, sinusoidal (endurance)	4.6.4.4	Classes A1: 3 K min^{-1}: 7 min 13 s ≤ RT 20 K min^{-1}: 0 min 30 s ≤ RT Classes B:

EN 54-5:2017 + A1:2018		
Essential characteristics	**Section**	**Performance**
		3 K min^{-1}: 7 min 13 s ≤ RT 20 K min^{-1}: 1 min 0 s ≤ RT
Electrical stability: Electromagnetic Compatibility (EMC), Immunity tests (operational)	4.6.5	Classes A1: 3 K min^{-1}: 7 min 13 s ≤ RT 20 K min^{-1}: 0 min 30 s ≤ RT Classes B: 3 K min^{-1}: 7 min 13 s ≤ RT 20 K min^{-1}: 1 min 0 s ≤ RT

EN 54-7:2018		
Essential characteristics	**Section**	**Performance**
Operational reliability		
Individual alarm indication	4.2.1	Provided
Connection of ancillary device	4.2.2	Provided
Monitoring of detachable detectors	4.2.3	Provided
Manufacturer's adjustments	4.2.4	Provided
On-site adjustment of response behaviour	4.2.5	Provided
Protection against the ingress of foreign bodies	4.2.6	Provided
Response to slowly developing fires	4.2.7	Provided
Software controlled detector (when provided)	4.2.8	Provided
Nominal activation conditions/sensitivity		
Repeatability	4.3.1	$m_{max} / m_{min} \leq 1,6$ $m_{min} \geq 0,05$ dB m^{-1}
Directional Dependence	4.3.2	$m_{max} / m_{min} \leq 1,6$ $m_{min} \geq 0,05$ dB m^{-1}
Reproducibility	4.3.3	$m_{max} / m_{mean} \leq 1,33$ $m_{mean} / m_{min} \leq 1,5$ $m_{min} \geq 0,05$ dB m^{-1}
Response delay (response time)		
Air movement	4.4.1	$(m_{(0,2)max} + m_{(0,2)min}) / (m_{(1,0)max} + m_{(1,0)min}) \geq 0,625$ $(m_{(0,2)max} + m_{(0,2)min}) / (m_{(1,0)max} + m_{(1,0)min}) \leq 1,6$
Dazzling	4.4.2	$m_{max} / m_{min} \leq 1,6$
Tolerance to supply voltage - Variation in supply parameters	4.5	$m_{max} / m_{min} \leq 1,6$ $m_{min} \geq 0,05$ dB m^{-1}
Performance parameters under fire conditions - Fire sensitivity	4.6	TF2: m ≤ 2 dB m^{-1}; RT ≤ 840 s TF3: m ≤ 2 dB m^{-1}; RT ≤ 750 s TF4: m ≤ 1,73 dB m^{-1}; RT ≤ 180 s TF5: m ≤ 1,24 dB m^{-1}; RT ≤ 240 s
Durability of Nominal activation conditions/sensitivity		
Cold (operational)	4.7.1.1	$m_{max} / m_{min} \leq 1,6$
Dry heat (operational)	4.7.1.2	$m_{max} / m_{min} \leq 1,6$
Humidity resistance		
Damp heat, steady-state (operational)	4.7.2.1	$m_{max} / m_{min} \leq 1,6$
Damp heat, steady-state (endurance)	4.7.2.2	$m_{max} / m_{min} \leq 1,6$
Corresion resistance - Sulfur dioxide (SO_2) corresion (endurance)	4.7.3	$m_{max} / m_{min} \leq 1,6$
Vibration resistance		
Shock (operational)	4.7.4.1	$m_{max} / m_{min} \leq 1,6$
Impact (operational)	4.7.4.2	$m_{max} / m_{min} \leq 1,6$
Vibration, sinusoidal (operational)	4.7.4.3	$m_{max} / m_{min} \leq 1,6$
Vibration, sinusoidal (endurance)	4.7.4.4	$m_{max} / m_{min} \leq 1,6$
Electrical stability - Electromagnetic Compability (EMC), Immunity test (operational)	4.7.5	$m_{max} / m_{min} \leq 1,6$

EN 54-17:2005 + AC:2007		
Essential characteristics	**Section**	**Performance**
Performance in the event of fire		
Manufacturing tolerance	5.2	Passed
Operational reliability		
Requirements	4	Passed
Stability of operational reliability, temperature resistance		
Dry heat (during operation)	5.4	Passed
Cold (during operation)	5.5	Passed
Stability of operational reliability, vibration resistance		
Impact (during operation)	5.9	Passed
Blow (during operation)	5.10	Passed
Oscillation, sinusoidal (during operation)	5.11	Passed
Oscillation, sinusoidal (endurance test)	5.12	Passed
Stability of operational reliability, air humidity resistance		
Humid heat, cyclical (during operation)	5.6	Passed
Humid heat, constant (endurance test)	5.7	Passed
Stability of operational reliability, corrosion resistance		
Sulphur dioxide (SO_2) corrosion (endurance test)	5.8	Passed
Stability of operational reliability, electrical stability		
Fluctuations in supply voltage	5.3	Passed
Electromagnetic compatibility (EMC), interference immunity tests (during operation)	5.13	Passed

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 the Construction Products Regulations 2013, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Zug, 2022-03-07
Siemens Schweiz AG

Dr. Peter Nebiker
Head of Fire Safety

Irina Penzo Feliu de Cabrera
Quality Manager Fire Safety

For signatures, see front page