



NB-CPR 305/2011 EU

Nr. 1415

Product certification body accredited by NAH  
under No NAH-6-0057/2015/K.

ÉMI NON-PROFIT LIMITED LIABILITY COMPANY FOR QUALITY  
CONTROL AND INNOVATION IN BUILDING  
TECHNICAL DIRECTORATE  
CONFORMITY ASSESSMENT CENTER  
CERTIFICATION OFFICE

H-2000 Szentendre, Dózsa György út 26. Postal address: H-2001.Szentendre, Pf : 180.  
Phone: +36 (26) 502 300 E-mail: tanusitas@emi.hu WEB: http://www.emi.hu

## EC-CERTIFICATE OF CONSTANCY OF PERFORMANCE

1415–CPR–36-(C-70/2015)

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

### TFO-480, TFO-480A, TPH-482, TPH-482A, TFH-280F, TFH-280A detectors and TFB-180 detector base

with performance shown in the annex as page 2/5 – 5/5 of this certificate  
for **Fire safety** intended use and

produced by

**Telefire Fire & Gas Detectors Ltd.**  
43 Hasivim St., Petach-Tikva, Israel

and produced in the manufacturing plant

**Telefire Fire & Gas Detectors Ltd.**  
43 Hasivim St., Petach-Tikva, Israel

This certificate attests that all provisions concerning the assessment and verification of constancy of performance and the performances described in Annex ZA of the standard **EN 54-5:2017+A1:2018** and **EN 54-7:2018** under system (1) are applied and that

***the product fulfils all the prescribed requirements set out above.***

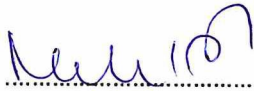
This certificate was first issued on 04.01.2016. and will remain valid as long as the test methods and/or factory production control requirements included in the harmonized standard, used to assess the performance of the declared characteristics, do not change, and the product, and the manufacturing conditions in the plant are not modified significantly.

***This certificate consists of 5 pages!***

Issue: 4

Dated at Szentendre, 08<sup>th</sup> December 2022



  
Ágnes Molnár  
Head of Certification Office



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ANNEX

	TFO-480	TFO-480A
Operating voltage:	12 ...28 VDC	21V modulated
Maximum current:	quiescence mode: 120 $\mu$ A alarm mode (3 Indicators): 35 mA maximum current to indicators: 50 mA	
Operating temperature range:	-10... +60°C (14°F – 140°F)	
Relative humidity range:	10... 93 rH% non-condensing	
Sensitivity range default: (no jumper)	0,26 $\pm$ 0,07 dB/m	Level 2: 0,11 dB/m; Level 5: 0,20 dB/m; Level 10: 0,35 dB/m; (in 9 step)
high sensitivity (with jumper)	0,17 $\pm$ 0,07 dB/m	
Diameter / weight:	$\varnothing$ 101x48 mm (including TFB-180 detector base) / 98 g	

	TPH-482	TPH-482A
Operating voltage:	12 ...28 VDC	21V modulated
Maximum current:	quiescence mode: 120 $\mu$ A alarm mode (3 Indicators): 35 mA maximum current to indicators: 50 mA	
Operating temperature range:	-10... +60°C (14°F – 140°F)	
Relative humidity range:	10... 93 rH% non-condensing	
Sensitivity range default: (no jumper)	0,26 $\pm$ 0,07 dB/m	Level 2: 0,11 dB/m; 62°C; 8°C/min Level 5: 0,20 dB/m; 68°C; 9,5°C/min Level 10: 0,35 dB/m; 76°C; 12°C/min (in 9 step)
high sensitivity (with jumper)	0,17 $\pm$ 0,07 dB/m	
Diameter / weight:	$\varnothing$ 101x52 mm (including TFB-180 detector base) / 106 gr.	

	TFH-280F	TFH-280A
Operating voltage:	12 ...28 VDC	21V modulated
Maximum current:	quiescence mode: 120 $\mu$ A alarm mode (3 Indicators): 35 mA maximum current to indicators: 50 mA	
Temperature range:	-10... +60°C	
Relative humidity range:	10... 93 rH% non-condensing	
Sensitivity range set:	fixed temperature 65°C	rate of rise 7...13°C / min. or 60°C fix: 50... 90°C in 1°C increments
Diameter / weight:	$\varnothing$ 101x52 mm (including TFB-180 detector base) / 106 g	

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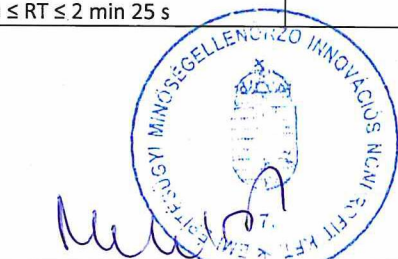
ANNEX

Product essential characteristics	Performance	EN 54-5:2017 +A1:2018 clause
<b>Operational reliability</b>		
Position of heat sensitive element	Distance $\geq 15$ mm	4.2.1
Individual alarm indication	red LED	4.2.2
Connection of ancillary devices	Correct operation	4.2.3
Monitoring of detachable point heat detectors	Correct operation, giving a fault signal on detaching	4.2.4
Manufacturing adjustments	Special means required	4.2.5
On-site adjustment of response behaviour	Special means required	4.2.6
Software controlled detector (when provided)	Software documentation, design and storage is appropriate	4.2.7
<b>Nominal activation conditions / Sensitivity</b>		
Directional dependence	A2 category, 2 min 0 s $\leq$ RT $\leq$ 5 min 30 s	4.3.1
Static response temperature	A2 category, 54°C $\leq$ T $\leq$ 70°C	4.3.2
Response times from typical application temperature	A2 category 1 K/min: 29 min 0 s $\leq$ RT $\leq$ 46 min 0 s 3 K/min: 7 min 13 s $\leq$ RT $\leq$ 16 min 0 s 5 K/min: 4 min 9 s $\leq$ RT $\leq$ 10 min 0 s 10 K/min: 2 min 0 s $\leq$ RT $\leq$ 5 min 30 s 20 K/min: 1 min 0 s $\leq$ RT $\leq$ 3 min 13 s 30 K/min: 0 min 40 s $\leq$ RT $\leq$ 2 min 25 s	4.3.3
Response time from 25 °C	see 4.3.3	4.3.4
Response times from high ambient temperature	A2 category, No alarm or fault indication in connection with conditioning, 3 K/min: 1 min 20 s $\leq$ RT $\leq$ 16 min 0 s 20 K/min: 0 min 12 s $\leq$ RT $\leq$ 3 min 13 s	4.3.5
Reproducibility	A2 category 3 K/min: 7 min 13 s $\leq$ RT $\leq$ 13 min 40 s and 20 K/min: 0 min 30 s $\leq$ RT $\leq$ 2 min 20 s	4.3.6
<b>Response delay (response time)</b>		
Additional test for suffix S point heat detectors	A2S category: No alarm or fault indication in connection with conditioning 3 K/min: 9 min 40 s $\leq$ RT 5 K/min: 5 min 48 s $\leq$ RT 10 K/min: 2 min 54 s $\leq$ RT 20 K/min: 1 min 27 s $\leq$ RT 30 K/min: 0 min 58 s $\leq$ RT	4.4.1
Additional test for suffix R point heat detectors	A2R category 10 K/min: 2 min 0 s $\leq$ RT $\leq$ 5 min 30 s 20 K/min: 1 min 0 s $\leq$ RT $\leq$ 3 min 13 s 30 K/min: 0 min 40 s $\leq$ RT $\leq$ 2 min 25 s	4.4.2

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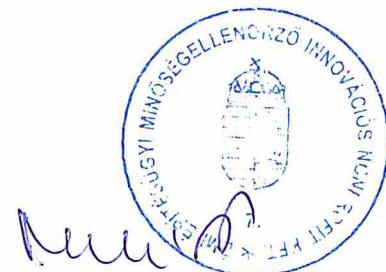
### ANNEX

Product essential characteristics	Performance	EN 54-5:2017 +A1:2018 clause
<b>Tolerance to supply voltage</b>		
Variation in supply parameters	A2 category 3 K/min: 7 min 13 s ≤ RT ≤ 16 min 0 s 20 K/min: 1 min 0 s ≤ RT ≤ 3 min 13 s	4.5.1
<b>Durability of Nominal activation conditions/Sensitivity</b>		
<b>Temperature resistance:</b> Cold (operational)	A2 category: No alarm or fault indication in connection with conditioning A2 category: 3 K/min: 7 min 13 s ≤ RT, ΔRT ≤ 2 min 40 s 20 K/min: 1 min 0 s ≤ RT, ΔRT ≤ 30 s	4.6.1.1
Dry heat (endurance)	Not applicable	4.6.1.2
<b>Humidity resistance:</b> Damp heat, cyclic (operational) Damp heat, steady state (endurance)	A2 category: No alarm or fault indication in connection with conditioning, A2 category: 3 K/min: 7 min 13 s ≤ RT, ΔRT ≤ 2 min 40 s 20 K/min: 1 min 0 s ≤ RT, ΔRT ≤ 30 s	4.6.2.1 4.6.2.2
<b>Corrosion resistance:</b> Sulphur dioxide (SO <sub>2</sub> ) corrosion (endurance)	A2 category: No alarm or fault indication in connection with conditioning, A2 category: 3 K/min: 7 min 13 s ≤ RT, ΔRT ≤ 2 min 40 s 20 K/min: 1 min 0 s ≤ RT, ΔRT ≤ 30 s	4.6.3
<b>Vibration resistance:</b> Shock (operational) Impact (operational) Vibration, sinusoidal (operational) Vibration, sinusoidal (endurance)	A2 category: No alarm or fault indication in connection with conditioning, A2 category: 3 K/min: 7 min 13 s ≤ RT, ΔRT ≤ 2 min 40 s 20 K/min: 1 min 0 s ≤ RT, ΔRT ≤ 30 s	4.6.4.1 4.6.4.2 4.6.4.3 4.6.4.4
<b>Electrical stability:</b> EMC, immunity (operational)	A2 category: No alarm or fault indication in connection with conditioning 3 K/min: 7 min 13 s ≤ RT, ΔRT ≤ 2 min 40 s 20 K/min: 1 min 0 s ≤ RT, ΔRT ≤ 30 s	4.6.5

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**ANNEX**

Product essential characteristics	Performance	EN 54-7:2018 clause
<b>Operational reliability</b>		
Individual alarm indication	Red LED	4.2.1
Connection of ancillary devices	Correct operation	4.2.2
Monitoring of detachable point detectors	Correct operation, giving a fault signal on detaching	4.2.3
Manufacturing adjustments	Special means required	4.2.4
On-site adjustment of response behaviour	Special means required	4.2.5
Protection against the ingress of foreign bodies	Protected against spheres $\geq 1.3$ mm in diameter	4.2.6
Response to slowly developing fires	Correct operation	4.2.7
Software controlled detector (when provided)	Software documentation, design and storage is appropriate	4.2.8
<b>Nominal activation conditions / Sensitivity</b>		
Repeatability	$m_{max} / m_{min} \leq 1,6$ , $m_{min} \geq 0,05$ dB/m	4.3.1
Directional dependence	$m_{max} / m_{min} \leq 1,6$ , $m_{min} \geq 0,05$ dB/m	4.3.2
Reproducibility	$m_{max} / m_{mean} \leq 1,33$ , $m_{mean} / m_{min} \leq 1,5$ ; $m_{min} \geq 0,05$ dB/m	4.3.3
<b>Response delay (response time)</b>		
Air movement	No alarm or fault indication in connection with conditioning $1,6 \geq (m_{(0,2)max} + m_{(0,2)min}) / (m_{(1,0)max} + m_{(1,0)min}) \geq 0,625$	4.4.1
Dazzling	No alarm or fault indication in connection with conditioning, $m_{max} / m_{min} \leq 1,6$	4.4.2
<b>Tolerance to supply voltage</b>		
Variation in supply parameters	$m_{max} / m_{min} \leq 1,6$ , $m_{min} \geq 0,05$ dB/m	4.5
<b>Performance parameters under fire conditions</b>		
Fire sensitivity	TF2: $m \leq 2$ dB/m, RT $\leq 840$ s, TF3: $m \leq 2$ dB/m, RT $\leq 750$ s, TF4: $m \leq 1,73$ dB/m, RT $\leq 180$ s TF5: $m \leq 1,24$ dB/m, RT $\leq 240$ s	4.6
<b>Durability of Nominal activation conditions/Sensitivity</b>		
<b>Temperature resistance:</b>		
Cold (operational)	No alarm or fault indication in connection with conditioning	4.7.1.1
Dry heat (operational)	$m_{max} / m_{min} \leq 1,6$	4.7.1.2
<b>Humidity resistance:</b>		
Damp heat, steady-state (operational)	No alarm or fault indication in connection with conditioning	4.7.2.1
Damp heat, steady-state (endurance)	$m_{max} / m_{min} \leq 1,6$	4.7.2.2
<b>Corrosion resistance:</b>		
Sulphur dioxide (SO <sub>2</sub> ) corrosion (endurance)	No alarm or fault indication in connection with conditioning, $m_{max} / m_{min} \leq 1,6$	4.7.3
<b>Vibration resistance:</b>		
Shock (operational)	No alarm or fault indication in connection with conditioning	4.7.4.1
Impact (operational)	No alarm or fault indication in connection with conditioning	4.7.4.2
Vibration, sinusoidal (operational)	$m_{max} / m_{min} \leq 1,6$	4.7.4.3
Vibration, sinusoidal (endurance)	$m_{max} / m_{min} \leq 1,6$	4.7.4.4
<b>Electrical stability: EMC, immunity (operational)</b>		
	No alarm or fault indication in connection with conditioning, $m_{max} / m_{min} \leq 1,6$	4.7.5

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