TELETEK

Declaration of performance

№ 214/2023

1. ***Unique identification code of the product-type:***
   Model number and Description:
   Natron MD - Wireless addressable fire alarm combined (heat and optical smoke) detector

   Approved Accessories:
   n/a

   Harmonized Product Type(s):
   Heat Detectors
   Smoke Detectors
   Components using radio links

2. ***Intended use/es:***

   Fire detection and fire alarm systems installed in and around buildings

3. ***Manufacturer***
   Teletek Electronics JSC
   2 Iliyansko shose Str, NPZ Voenna Rampa, 1220 Sofia, Bulgaria

4. ***Authorized representative:***
   Teletek Electronics JSC
   2 Iliyansko shose Str, NPZ Voenna Rampa, 1220 Sofia, Bulgaria

5. ***System(s) of AVCP***

   System 1

6. ***Harmonized Standard(s)***
   EN 54-5: 2017 + A1: 2018
   EN 54-7: 2018,
   EN 54-25:2008
   EN 54-25:2008/AC:2012

   Notified body/ies:

   EVPÚ a.s. (Notified Body 1293)

TELETEK

7. *Declared performance*

Essential characteristics	Clauses in EN 54-5: 2017/ A1:2018	Regulatory classes	Performance
Operational reliability:		A1R	
Position of heat sensitive element	4.2.1		The heat sensitive element(s) or at least part of it, except elements with auxiliary functions (e.g., Characteristics correctors), are a distance ≥15mm from the mounting surface of the point heat detector.
Individual alarm indication	4.2.2		Category A1R The heat detector is provided with an integral red visual indicator and can remain identified until the alarm is reset. The visual indicator is visible from a distance of 6 m directly below the point heat detector, in an ambient light intensity up to 500 lx.
Connection of ancillary devices	4.2.3		Open or short circuit failures of connection to ancillary device do not prevent the correct operation of the detector.
Monitoring of detachable point heat detectors	4.2.4		A fault condition is signaled when the detector is removed from the mounting base.
Manufacturer's adjustments	4.2.5		It is not possible to change the manufacturer's settings except by special means (e.g., a special code or tool, or by breaking or remove a seal).
Onsite adjustments of response behavior	4.2.6		N/A
Software controlled detectors (When provided)	4.2.7		The software documentation and the software design comply supplied by the manufacturer with the requirements of this standard.
Nominal activation conditions/ Sensitivity:			
Directional dependence	4.3.1		The response time of the point detector do not unduly depend on the direction of airflow around the point heat detector.
Static response temperature	4.3.2		The response temperatures of the point heat detectors lie between the minimum and maximum static response temperatures, according to the category of the point heat detector in Table 1 (p.9 in Standard).
Response times from typical application temperature	4.3.3		The response times of the point heat detector lie between the lower and upper response time limits for the appropriate point heat detector category in Table 2 (p.17 in Standard).
Response times from 25 °C	4.3.4		The response time at 3 K/min exceeds 7 min 13 s and the response time at 20 K/min exceeds 1 min 0 s.
Response times from high ambient temperature	4.3.5		No alarm or fault signal was given at high ambient temperatures appropriate to the anticipated service temperatures. A1R 3 K/min, Lower limit, 1 min 20 s and upper limit 13m 40s. 20 K/min, Lower limit, 12 s and upper limit 2 m 20 s.
Reproducibility	4.3.6		The response times of the point heat detectors lie between the lower and upper response time limits specified in Table 2 (p.17 in Standard).
Response delay (response time):			
Additional test for suffix S point heat detectors	4.4.1		N/A

Additional test for suffix R point heat detectors	4.4.2		Suffix R, the point heat detector maintains the response requirements of its category, in table 2 above, for high rates of rise of temperature from an initial temperature below the typical application temperature applicable to the category marked on it. Point heat detector category = A1R Point heat detector category Initial conditioning temperature = 5°C ±2°C
Tolerance to supply voltage:			
Variation in supply parameters	4.5		The point heat detector does not unduly depend on variation in the supply parameters and lie between the lower and upper response time limits specified in Table 2 (p.17 in Standard).
Durability of nominal activation conditions/Sensitivity:			
Temperature resistance			
Cold (operational)	4.6.1.1		No alarm or fault signal was given during the transition to the conditioning temperature or during the period at the condition temperature A1R: 20 K/min was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6
Dry heat (endurance)	4.6.1.2		No fault signal was given on reconnection attributable to the endurance conditioning A1R: 20 K/min was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6
Humidity resistance			
Damp heat, cyclic (operational)	4.6.2.1		No alarm or fault signal was given during the conditioning. Lower temperature: (25±3) °C Upper temperature: (40±2) °C Relative humidity: At lower temperature: ≥ 95 % At upper temperature: (93 ±3) %. A1R: 20 K/min was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6
Damp heat, steady-state (endurance)	4.6.2.2		No fault signal was given on reconnection attributable to the endurance conditioning. Conditioning Temperature: 40 ±2 °C Relative Humidity: 93 ±3 % Duration: 21 days A1: 20 K/min was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6
Corrosion resistance			
Sulphur dioxide (SO_2) corrosion (endurance)	4.6.3		No fault signal was given on reconnection attributable to the endurance conditioning. Conditioning: Temperature: 25 ±2 °C Relative Humidity: 93 ±3 % SO2 concentration: 25 ±5 ppm (by volume) Duration: 21 days

			A1R: 20 K/min was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6
Vibration resistance			
Shock (operational)	4.6.4.1		No alarm or fault signal was given during the conditioning period or an additional 2 min. For specimen with a mass ≤ 4,75 kg: Shock pulse type: Half sine Pulse duration: 6 ms Peak acceleration: 10X (100-20M) ms-2 (M is specimen mass in Kg) Number of directions: 6 Pulses per direction: 3 A1R: 20 K/min was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6
Impact (operational)	4.6.4.2		No alarm or fault signal was given during the conditioning period or an additional 2 min. Conditioning: Impact energy: 1,9 ±0,1 J Hammer velocity: 1,5 ±0,13 ms -1 Number of impacts: 1 A1R: 20 K/min was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6
Vibration, sinusoidal (operational)	4.6.4.3		No fault signal was given during the conditioning Conditioning: Frequency range: 10 to 150 Hz Acceleration amplitude: 5 ms -2 (≈0,5 g n) Number of axes: 3 Sweep rate: 1 octave min -1 Number of sweep cycles: 1 per axis A1R: 20 K/min was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6
Vibration, sinusoidal (endurance)	4.6.4.4		No fault signal was given on reconnection attributable to the endurance conditioning. Conditioning: Frequency range: 10 to 150 Hz Acceleration amplitude: 10 ms -2 (≈1,0 g n) Number of axes: 3 Sweep rate: 1 octave min -1 Number of sweep cycles: 20 per axis A1R: 20 K/min was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6
Electrical stability			
EMC immunity (operational)	4.6.5		Compliance in EN 50130-4:2011 and No fault signal was given during the conditioning. A1R: 20 K/min was not less than 30 s and did not exceed 30 s compared with the time obtained in 4.3.6

TELETEK

Essential characteristics	Clauses in EN 54-7: 2018	Regulatory classes	Performance
Operational reliability:	**None**		
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		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.
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:	Threshold		
Repeatability	4.3.1		Ratio of response values $m_{max} : m_{min} < 1.6$ Lower response value, $m_{min} > 0.05$ dB m -1
Directional dependence	4.3.2		Ratio of response values $m_{max} : m_{min} < 1.6$ Lower response value, $m_{min} > 0.05$ dB/m
Reproducibility	4.3.3		Ratio of response values $m_{max} : m_{avg} < 1.33$ Ratio of the response values $m_{avg} : m_{min} < 1.5$ Lower response value, $m_{min} > 0.05$ dB/m
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		The specimen did not emit neither an alarm nor a fault signal and Ratio of response thresholds $m_{max} : m_{min} < 1.6$
Tolerance to supply voltage:			
Variation in supply parameters	4.5		Ratio of response values $m_{max} : m_{min} < 1.6$ Lower response value, $m_{min} > 0.05$ dB/
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 $m_{max} : m_{min} < 1.6$
Dry heat (operational)	4.7.1.2		The specimen did not emit neither an alarm nor a fault signal and Ratio of response values $m_{max} : m_{min} < 1.6$
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 $m_{max} : m_{min} < 1.6$

Essential characteristics	**Harmonized technical specification EN 54-25:2008, EN 54-25:2008/AC:2012**	**Performance**
Performance parameters under fire conditions:	4.1, 4.2.2, 5.2, 8.3.7	PASS
Response delay (reaction time to fire):	8.2.3, 8.2.6	PASS
Operational reliability:	4.2.1, 4.2.3 to 4.2.7, 5.3, 5.4	PASS
Documentation and marking	6, 7	PASS

System tests	8.2.2, 8.2.4, 8.2.5, 8.2.7, 8.2.8, 8.2.9, 8.3.1, 8.3.3, 8.3.4, 8.3.5, 8.3.6	PASS
Durability of operational reliability, Temperature resistance:	8.3.9 to 8.3.11	PASS
Durability of operational reliability, Vibration resistance:	8.3.16 to 8.3.19	PASS
Durability of operational reliability, Humidity resistance:	8.3.12 to 8.3.14	PASS
Durability of operational reliability, Corrosion resistance:	8.3.15	PASS
Durability of operational reliability, Electrical stability:	8.3.20	PASS

8. *Online Display Location*

This document can be viewed online at https://teletek-electronics.com/

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 Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

2, Iliyansko shose str.
NPZ Voenna Rampa
1220 Sofia, Bulgaria
26.09.2023

Yuliy Iliev
Quality Manager