

Declaration of performance

№ 223/2023

1. Unique identification code of the product-type:

Model number and Description:

Natron WSS - Wireless addressable fire alarm sounder and strobe Type A

Approved Accessories:

n/a

Harmonized Product Type(s):

Sounders

Visual alarm devices

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, 1220 Sofia, Bulgaria

4. Authorized representative:

Teletek Electronics JSC

2 Iliyansko shose Str, 1220 Sofia, Bulgaria

5. System(s) of AVCP

System 1

6. Harmonized Standard(s)

EN 54- 3: 2001/ A1:2002 + EN 54-3: 2001/ A2: 2006

EN 54- 23: 2010

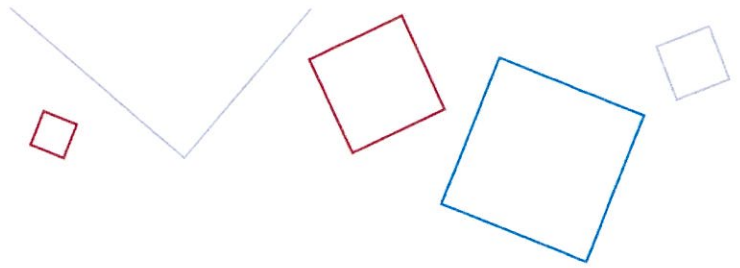
EN 54-25:2008,

EN 54-25:2008/AC:2010,

EN 54-25:2008/AC:2012

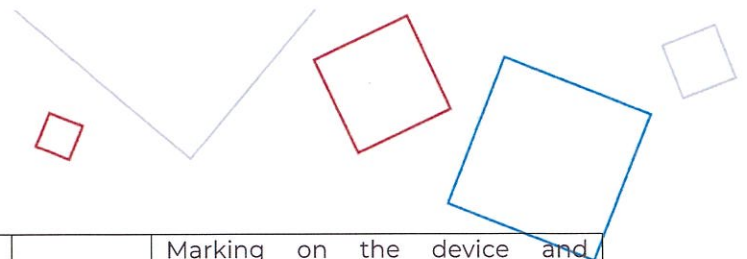
Notified body/ies:

Fire Certification and Inspection Ltd. (Notified Body 2918)

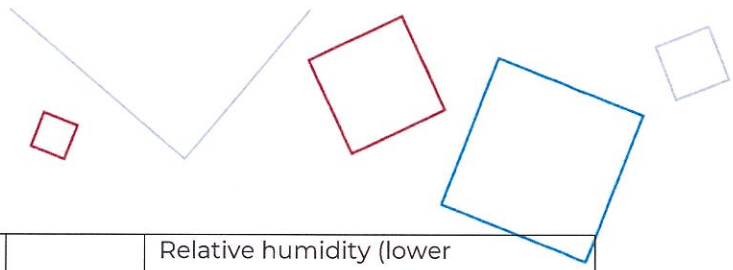


7. Declared performance

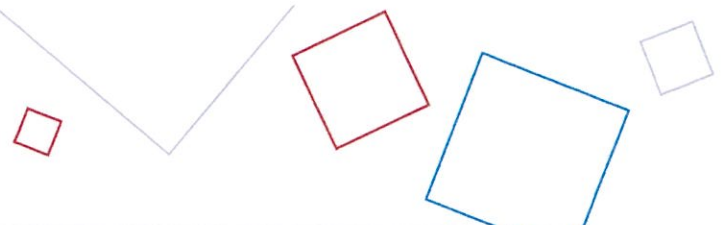
Essential characteristics	Clause in EN 54- 3: 2001/ A1:2002 + EN 54-3: 2001/ A2: 2006	Registers	Performance
Features of operation in the "Fire Alarm" operating mode:			
Sound level	4.2		During the tests the alarm sounder produced A-weighted sound levels of at least 65 dE3 in one direction and not exceeding 120 dB in any direction.
Frequency and sound pattern	4.3		Reference was made using the local regulations.
Reproducibility	5.2		The audible alarm device was deemed to comply with the requirements of this subclause if the difference between L_m , and L_{min} is less than 6 dB
Operational performance	5.3		The sound level of the specimen was measured in free field conditions using the test method described in annex A (page 22 in the Standard) with the supply parameters at the maximum and minimum of the specified range.
Attention drawing signal and message broadcast sequences	C.3.1		N/A
Synchronization (option with requirements)	C.3.2		N/A
Broadcast message performance	C.5.1		N/A
Attention drawing signal/silence/message sequence timing	C.5.2		N/A
Message synchronization testing (option with requirements)	C.5.3		N/A
Operational reliability:			
Durability	4.4		The sounder was rated for 100 hours operation.
Construction	4.5		Provided were means to limit the for removal of parts or the whole device and to make adjustment to the mode of operation, e.g., special tool, codes, hidden screws, seals, etc.



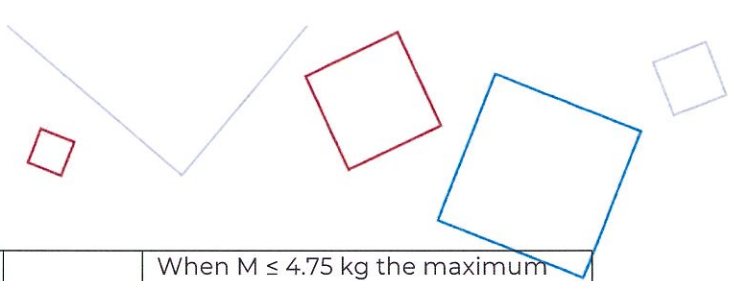
Marking and data	4.6		Marking on the device and abbreviations that are not in common use were explained in the data supplied of the device. Markings of the device were installed on a visible place.
Durability	5.4		The sounder was deemed to comply with the requirements of this subclause if the A-weighted sound level measured after 100 durability cycles does not decrease by more than 6 dB from that measured, for the same specimen, under the same operating condition, in the reproducibility test
General testing	C.4		N/A
Durability of operational reliability: temperature resistance:			
Dry heat (operational)	5.5		Sounder complied the requirements of this subclause if the mean A-weighted sound level measured after the recovery period did not decrease by more than 6 dB from that measured for the same specimen in the reproducibility test.
Cold (operational)	5.7		Temperature, °C Type A: -10 ± 3 Type B: -10 ± 3 Duration: 16 h Sounder which requires power during the quiescent state were monitored for false operation and fault signals during the conditioning period. Sound level was measured as described in Annex B (page 25 in Standard) during the final 15 mins of the conditioning.
Damp heat, cyclic (operational)	5.8		Type A Lower temperature, °C: 25 ± 3 Relative humidity (lower temperature), %: > 95 Upper temperature, °C: 40 ± 2 Relative humidity (upper temperature), %: 93 ± 3 Number of cycles: 2 Type B Lower temperature, °C: 25 ± 3



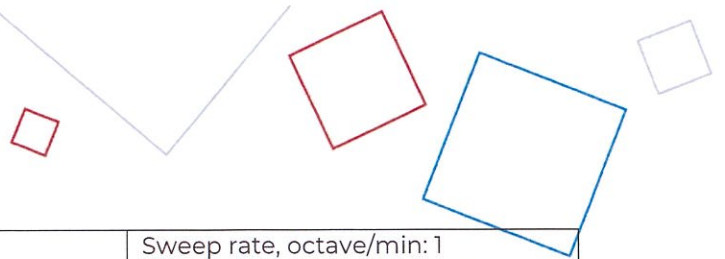
			<p>Relative humidity (lower temperature), %: > 95 Upper temperature, °C: 55 ± 2 Relative humidity (upper temperature), %: 93 ± 3 Number of cycles: 2</p> <p>Sound level of the specimen was measured as described in Annex B (page 25 of the Standard) after the recovery period is specified in IEC 60068-2-30:1980.</p>
Damp heat, steady state (endurance)	5.9		<p>Type A Temperature, °C: 40 ± 2 Relative humidity, %: 93 ± 3 Duration days: 21</p> <p>Type B Temperature, °C: 40 ± 2 Relative humidity, %: 93 ± 3 Duration days: 21</p> <p>Sound level of the specimen was measured as described in Annex B (page 25 of the Standard) after the recovery period is specified in HD 323.2.56 S1:1990 or HD 323.2.3 S2: 1987</p>
Dry heat (endurance)	5.6		N/A
Durability of operational reliability; damp resistance:			
Damp heat, cyclic (operational)	5.8		<p>Type A Lower temperature, °C: 25 ± 3 Relative humidity (lower temperature), %: > 95 Upper temperature, °C: 40 ± 2 Relative humidity (upper temperature), %: 93 ± 3 Number of cycles: 2</p> <p>Type B Lower temperature, °C: 25 ± 3 Relative humidity (lower temperature), %: > 95 Upper temperature, °C: 55 ± 2 Relative humidity (upper temperature), %: 93 ± 3 Number of cycles: 2</p> <p>Sound level of the specimen was measured as described in Annex B (page 25 of the Standard) after the</p>



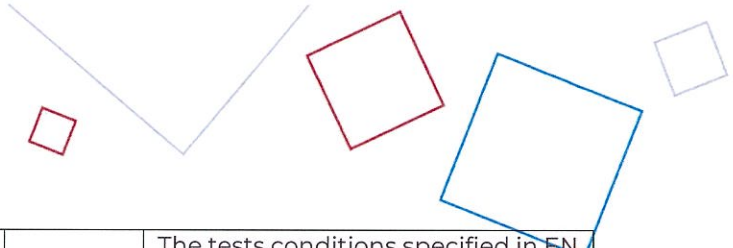
			recovery period is specified in IEC 60068-2-30:1980.
Damp heat, steady state (endurance)	5.9		<p>Type A Temperature, °C: 40 ± 2 Relative humidity, %: 93 ± 3 Duration days: 21</p> <p>Type B Temperature, °C: 40 ± 2 Relative humidity, %: 93 ± 3 Duration days: 21</p> <p>Sound level of the specimen was measured as described in Annex B (page 25 of the Standard) after the recovery period is specified in HD 323.2.56 S1:1990 or HD 323.2.3 S2: 1987</p>
Damp heat, cycle (endurance)	5.10		N/A
Durability of operational reliability; corrosion resistance: -Sulphur dioxide (SO ₂), corrosion (endurance)	5.11		<p>Type A Sulfur dioxide content, ppm: 25 ± 5 Temperature, °C: 25 ± 2 Relative humidity, %: 93 ± 3 Duration days: 21</p> <p>Type B Sulfur dioxide content, ppm: $25 \cdot 5$ Temperature, °C: 25 ± 2 Relative humidity, %: 93 ± 3 Duration days: 21</p> <p>Note: ppm – parts per million by volume</p> <p>Immediately after the conditioning the specimen were subjected to a drying period of 16 hours at (40 f 2) °C, and relative humidity 50 %, followed by a recovery period of 1 to 2 hours at the standard laboratory conditions.</p> <p>Sound level of the specimen was measured as described in Annex B (page 25 of the Standard) after the specified recovery period.</p>
Durability of operational reliability; shock and vibration resistance:			
Shock (operational)	5.12		<p>Type A Pulse time: Half sine Pulse duration (ms): 6</p>



		<p>When $M \leq 4.75$ kg the maximum acceleration related to specimen mass M in kg m s^{-2} is $10 \times (100-20M)$ When $M > 4.75$ kg no test was performed Number of shock directions: 6 Number of pulses per direction: 3</p> <p>Type B Pulse time: Half sine Pulse duration (ms): 6 When $M \leq 4.75$ kg the maximum acceleration related to specimen mass M in kg m s^{-2} is $10 \times (100-20M)$ When $M > 4.75$ kg no test was performed Number of shock directions: 6 Number of pulses per direction: 3</p> <p>No false operation or fault signals were detected during the conditioning period. A-weighted sound level measured after the conditioning period (see 5.12.2.5, page 16 in the Standard) did not decrease by more than 6 dB from that measured for the same specimen in the reproducibility test</p>
Impact (operational)	5.13	<p>Type A Impact energy, J: 0.5 ± 0.04 Number of impacts per accessible point: 3</p> <p>Type B Impact energy, J: 0.5 ± 0.04 Number of impacts per accessible point: 3</p> <p>No false operation or fault signals were detected during the conditioning period. A-weighted sound level measured after the conditioning period (see 5.13.2.5, page 17 in Standard) did not decrease by more than 6 dB from that measured for the same specimen in the reproducibility test.</p>
Vibration, sinusoidal (operational)	5.14	<p>Type A Frequency range, Hz: 10 to 150 Acceleration amplitude, $\text{m s}^{-2} \{g_n\}$: 5 {0.5} Number of axes: 3</p>



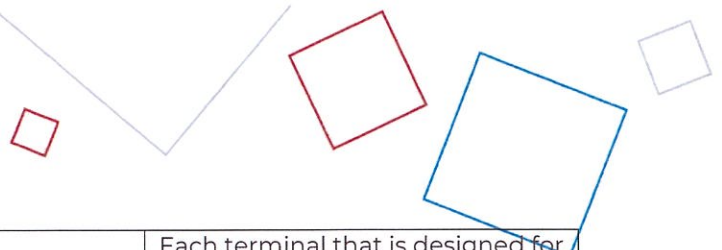
		<p>Sweep rate, octave/min: 1 Number of sweep cycles per axis per functional conditions: 2</p> <p>Type B Frequency range, Hz: 10 to 150 Acceleration amplitude, $m s^2 \{g_n\}$: 5 {0.5} Number of axes: 3 Sweep rate, octave/min: 1 Number of sweep cycles per axis per functional conditions: 2</p> <p>Sound level of the specimen was measured as described in Annex B (page 25 of the Standard) after the conditioning. A-weighted sound level measured after the conditioning period (see 5.14.2.5, page 18 in Standard) did not decrease by more than 6 dB from that measured for the same specimen in the reproducibility test.</p>
<p>Vibration, sinusoidal (endurance)</p>	<p>5.15</p>	<p>Type A Frequency range, Hz: 10 to 150 Acceleration amplitude, $m s^2 \{g_n\}$: 10 {1} Number of axes: 3 Sweep rate, octave/min: 1 Number of sweep cycles per axis per functional conditions: 20</p> <p>Type B Frequency range, Hz: 10 to 150 Acceleration amplitude, $m s^2 \{g_n\}$: 10 {1} Number of axes: 3 Sweep rate, octave/min: 1 Number of sweep cycles per axis per functional conditions: 20</p> <p>Sound level of the specimen was measured as described in Annex B (page 25 of the Standard) after the conditioning. A-weighted sound level measured after the conditioning period (see 5.15.2.5, page 19 in Standard) did not decrease by more than 6 dB from that measured for the same specimen in the reproducibility test.</p>



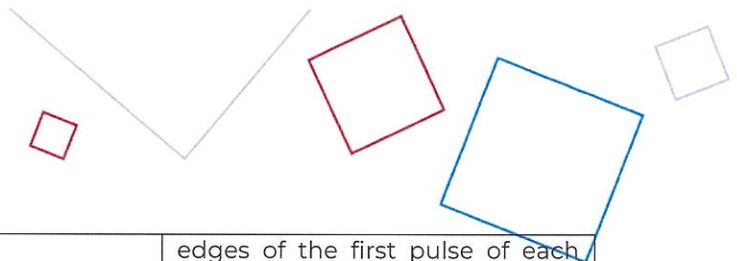
Electromagnetic compatibility (EMC), immunity tests (operational)	5.16		<p>The tests conditions specified in EN 50130-4:1995 for the tests listed in 5.16.2.1 were applied.</p> <p>No false operation or fault signals were detected when sounding.</p> <p>No interruption of the sound output was detected during the conditioning period.</p> <p>A-weighted sound level measured after the conditioning period (see 5.16.2.5, page 20 in Standard) did not decrease by more than 6 dB from that measured for the same specimen in the reproducibility test.</p>
Enclosure protection	5.17		<p>Type A, indoor use: IP21C Type B, outdoor use: IP33C</p> <p>The were tested and complied the acceptance conditions for the test for protection against solid foreign objects of EN 60529:1991, subclause 13.3.</p> <p>The were tested and complied the acceptance conditions for the test against protection against access to hazardous parts EN 60529:1991, subclause 15.3.</p> <p>After the conditioning period the specimens were tested for protection against water. No water has penetrated the enclosure. The device provides adequate provision for drainage.</p> <p>A-weighted sound level measured after the conditioning period did not decrease by more than 6 dB from that measured for the same specimen in the reproducibility test.</p>

*NA – not applicable

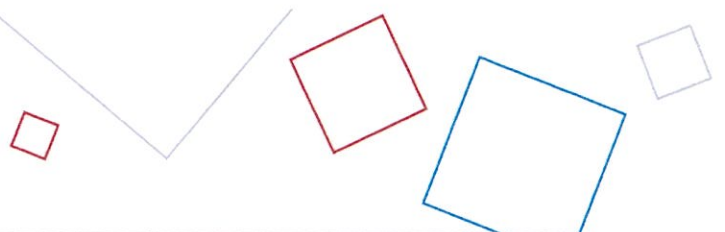
Essential characteristics	Clause in EN 54- 23: 2010	Registers	Performance
Operational reliability:			
Duration of operation	4.2.1		The VAD was rated for at least 100 h of operation.



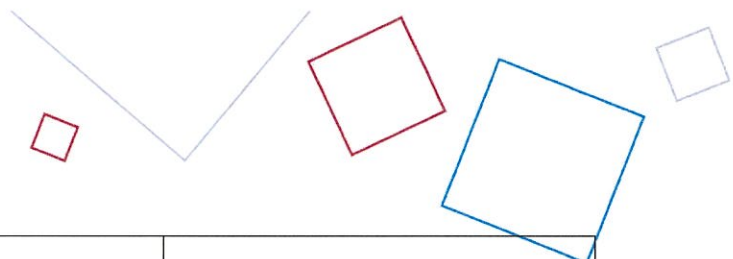
Provision for external conductors	4.2.2		Each terminal that is designed for connecting external conductors or cables was capable of allowing the connection of any conductor having a cross sectional area between 0.28mm ² and 1.5 mm ² inclusive.
Flammability of materials	4.2.3		The VAD is constructed of materials capable of withstanding the tests.
Enclosure protection	4.2.4		Type A VAD: Code IP21C of EN 60529:1991 Type B VAD: Code IP33C of EN 60259:1991
Access	4.2.5		The VAD has complied with the requirements of the standard.
Manufacturer's adjustments	4.2.6		The manufacturers settings cannot be changes except by special means or by breaking or removing the seal.
On site adjustments of behavior	4.2.7		Access to the adjustment was only possible by the use of a code or special tool or by removing the VAD from the base on mounting.
Requirements for the software-controlled devices	4.2.8		Submitted is a documentation that gives an overview of the software design.
Performance parameters under fire conditions:			
Coverage volume	4.3.1		The VAD was meeting the coverage volume of the one of the following categories: "C": ceiling mounted devices "W": wall mounted devices "O": open class devices
Variation light output	4.3.2		Variation in effective Luminous intensity of the VAD, over 30min was less than 25%.
Minimum and maximum effective luminous intensity	4.3.3		VAD has produced an effective luminous Intensity of at least 1 cd for 70% of all measurement points and has not exceed 500 cd for any measurement points.
Light color	4.3.4		The VAD emitted a white or red flashing light.
Light temporal pattern and frequency of flashing	4.3.5		Flash rate of the VAD was between 0.5 Hz and 2 Hz measured at 10% of the peak values of consecutive leading



			edges of the first pulse of each flash. Any set of multiple pulses was not he exceed 0.2s between the P _{10L} for the first peak to the P _{10T} of the last peak. A set of pulses
Marking and data	4.3.6		Markings were not placed on screws or another easily removable parts of the device.
Synchronization (option with requirements)	4.3.7		N/A
Durability of operational reliability; temperature resistance:			
Dry heat (operational)	4.4.1.1		Type A and Type B were functioning correctly at these specified high ambient temperatures in 5.4.1.1 (page 26 in the standard)
Dry heat (endurance)	4.4.1.2		N/A
Cold (operational)	4.4.1.3		Type A and Type B were functioning correctly at these specified low ambient temperatures in 5.4.1.3 (page 28 in the standard)
Durability of operational reliability; damp resistance:			
Damp heat, cyclic (operational)	4.4.2.1		Type A Lower temperature, °C: 25±3 Relative humidity: (lower temperature), % RH: > 95 Upper temperature, °C: 40 ± 2 Relative humidity: (upper temperature), % RH: > 95 Number of cycles: 2 Type B Lower temperature, °C: 25±3 Relative humidity: (lower temperature), % RH: > 95 Upper temperature, °C: 55 ± 2 Relative humidity: (upper temperature), % RH: > 95 Number of cycles: 2 No false operation or fault signals were detected during the measurement. All light sources were functioning.



			The ratio of the light output levels Q_{max} , Q_{min} does not exceed 1.5.
Damp heat, steady state (endurance)	4.4.2.2		Type A & B Temperature, °C: 40 ± 2 Relative humidity: (lower temperature), % RH: 93 ± 3 Duration: 21 days No false operation or fault signals were detected during the measurement. All light sources were functioning. The ratio of the light output levels Q_{max} , Q_{min} does not exceed 1.5.
Damp heat, cycling (endurance)	4.4.2.3		N/A
Durability of operational reliability; corrosion resistance: -Sulphur dioxide (SO ₂), corrosion (endurance)	4.4.4		Type A and Type B VADs were capable of withstanding exposure to an SO ₂ , corrosive atmosphere as specified in 5.4.4. (Page 37 in the Standard)
Durability of operational reliability; shock and vibration resistance:			
Shock (operational)	4.4.3.1		Type A and Type B VADs were capable of withstanding exposure to an SO ₂ , corrosive atmosphere as specified in 5.4.3.1. (Page 33 in the Standard)
Impact (operational)	4.4.3.2		Type A and Type B VADs were capable of withstanding exposure to an SO ₂ , corrosive atmosphere as specified in 5.4.3.2. (Page 36 in the Standard)
Vibration, sinusoidal (operational)	4.4.3.3		Type A and Type B VADs were capable of withstanding exposure to an SO ₂ , corrosive atmosphere as specified in 5.4.3.3. (Page 36 in the Standard)
Vibration, sinusoidal (endurance)	4.4.3.4		Type A and Type B VADs were capable of withstanding exposure to an SO ₂ , corrosive atmosphere as specified in 5.4.3.4. (Page 36 in the Standard)
Durability of operational reliability; electrical stability:	4.4.5		Type A and Type B VADs can operate correctly when submitted to electromagnetic interference as specified in 5.4.5. (Page 38 in the Standard)



- Electromagnetic compatibility (EMC), immunity tests (operational)			
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Essential characteristics	Harmonized technical specification EN 54-25:2008, EN 54-25:2008/AC:2010, 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

*NA – not applicable

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:

1220 Sofia,
2, Iliyansko shose str.
26.06.2023

Yuliy Iliev
Quality Manager