

### COMPATIBILITY

This acoustic device is only compatible with conventional control panels and systems, unless an approved optional module is fitted. For more specific information regarding compatibility refer to your fire security system supplier and the technical documentation concerning the control panel in use.

### INSTALLATION - IMPORTANT NOTES

Refer to national and international standards in use for spacing and positioning of the fire security's system devices; refer also to specific standards and your supplier if the system is going to be installed in particular environments or environments where specific risks exist.

This device is to be used only with conventional control panels and systems (check the COMPATIBILITY paragraph).

This device must be wired according to the connection details described in this manual.

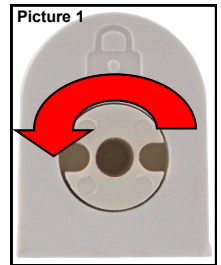
Disconnect the sounder line from the control panel before installing this device.

Test the device after installation.

### SOUNDER OPENING PROCEDURE

In order to detach the upper sounder body from the base:

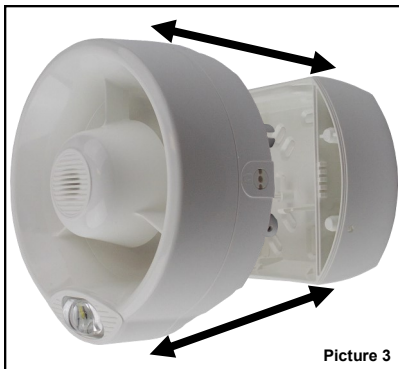
- 1) Insert the pins of the compatible key into the holes of one of the two side locking mechanisms.
- 2) Turn the key 90° to the left whilst applying light pressure.
- 3) Repeat this step for the second side locking mechanism; the locking mechanism appears as in picture 1 when in the open position (flush).
- 4) Detach the sounder body from the base by pulling gently to separate (picture 3).



### SOUNDER CLOSING PROCEDURE

In order to assemble the sounder body to the base:

- 1) Assemble the sounder body to the base using gentle pressure (picture 3).
- 2) Insert the pins of the compatible key into the holes of one of the two side locking mechanisms.
- 3) Turn the key 90° to the right.
- 4) Repeat this step for the second side locking mechanism, starting from point 2; the locking mechanism appears as in picture 2 once closed (recessed).
- 5) To secure use the retaining screws, using the location holes on both sides of the base (picture 4).



Picture 3



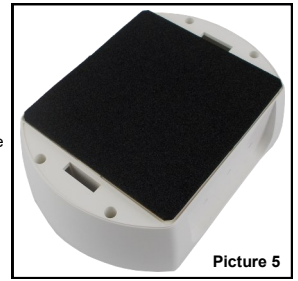
Picture 4



EN 54-3 Type B - approved for outdoor use.

### OUTDOORS AND DAMP ENVIRONMENTS INSTALLATION

When installing the sounder outdoors or in a damp environment, carefully apply the self-adhesive sealing pad to the back of the sounder base (picture 5).



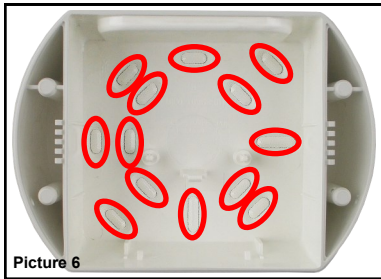
Picture 5

### WALL INSTALLATION

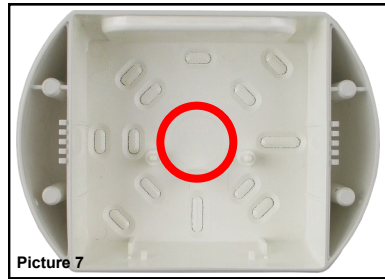
- 1) Choose the installation location for the sounder based upon system design regulations.
- 2) Fix the sounder base to the wall; the prepared location options for the fixing screws are highlighted in picture 6.

### CABLE ENTRIES

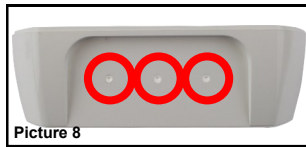
The sounder base is provided with a knockout entry for the system cables, located in the centre of the base (picture 7). The side wall of the base has prepared drilling points to allow for installation of cable glands; a row of three drilling points are provided to allow for single or twin cable connection (picture 8).



Picture 6



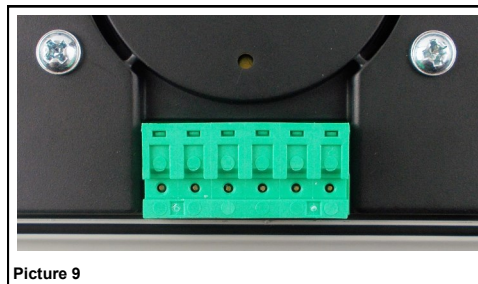
Picture 7



Picture 8

### TERMINAL BLOCKS INSTALLATION

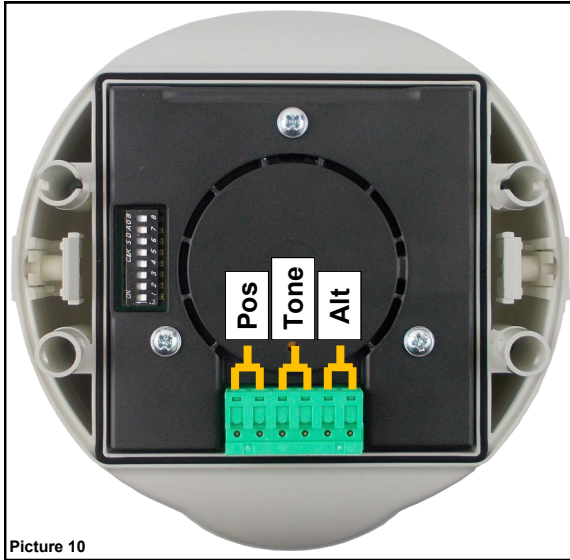
The terminal block on the back of the sounder body is installed as illustrated in picture 9.



Picture 9

**WIRING**

Connect the sounder to the sounder circuit from the control panel; wiring terminal connections are as illustrated in picture 10 and described in table 1; an example of a typical circuit wiring arrangement is shown in picture 11.

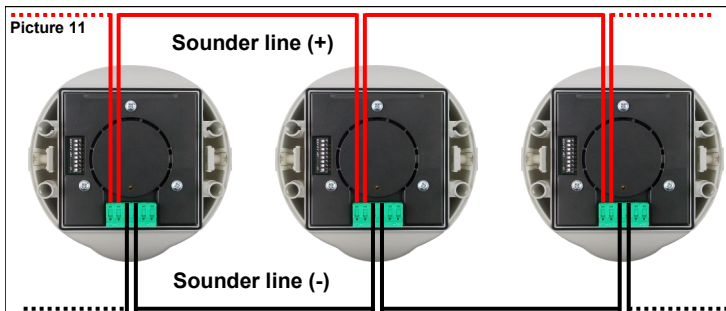


Picture 10

| Terminal block number | Terminal block designation | Notes   | Usage   |
|-----------------------|----------------------------|---|---|
| 1                     | <b>Pos</b>                 | Terminal blocks for the line's positive terminals (+). These block are shorted: either one can be used. | Connect to the positive terminals of the control panel's sounder circuit.   |
| 2                     |                            |   |   |
| 3                     | <b>Tone</b>                | Terminal blocks for the line's negative terminals (-). These block are shorted: either one can be used. | Connect to the negative terminals of the control panel's sounder circuit. Wiring to these terminal blocks activates the main tone set.      |
| 4                     |                            |   |   |
| 5                     | <b>Alt</b>                 | Terminal blocks for the line's negative terminals (-). These block are shorted: either one can be used. | Connect to the negative terminals of the control panel's sounder circuit. Wiring to these terminal blocks activates the alternate tone set. |
| 6                     |                            |   |   |

Table 1

**!** Use of the Tone or Alt terminals enable, respectively, the main tone set or the alternate one; refer to the MAIN TONE SET and the ALTERNATE TONE SET paragraphs.

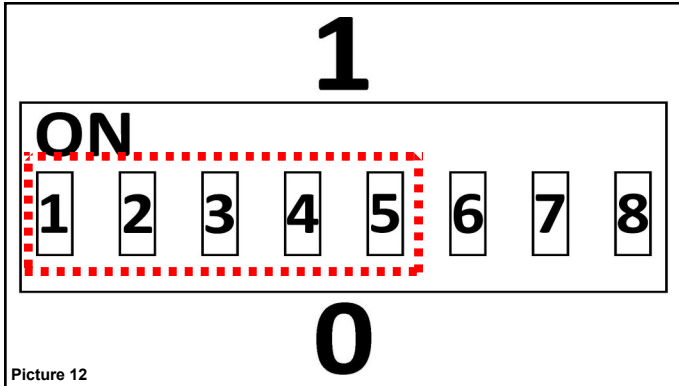


**!** The sounder line must be capable of providing a surge/power-up current of at least 2 times the sum of the indicated current of all the AV devices on the line itself.

The sounder line must be capable of providing a steady state current of at least 1.5 times the sum of the alarm currents of all the AV devices on the line itself.

### OUTPUT TONE SETTING

Use the DIP switch on the back of the sounder body to select the tone required; for this function the first five switches are used, highlighted in picture 12.



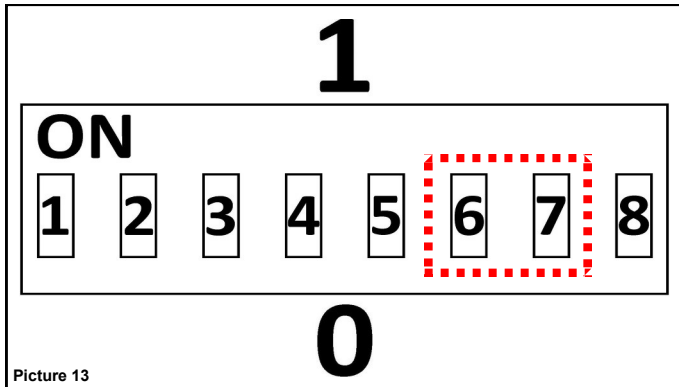
Picture 12

The switches positioned upwards acquire value "1"; on the other hand, if positioned downwards acquire value "0".

- 1) From the MAIN TONE SET table or the ALTERNATE TONE SET table (the choice of the table depends on how the sounder's wiring has been carried out) select the output alarm tone triggered when the sounder is activated.
- 2) Refer to the corresponding line of the "DIP configuration" column to select the five switch selection settings.

### OUTPUT VOLUME SETTING

Use the DIP switch at the back of the sounder body to select the output volume; in particular, switches 6 and 7, highlighted in picture 13, are used.



Picture 13

The switches positioned upwards acquire value "1"; on the other hand, if positioned downwards acquire value "0".

- 1) Select the alarm volume required when the sounder is activated (table 2).
- 2) Refer to the corresponding line of the "DIP configuration" column to set the two volume selection switches.

| Tone volume | DIP configuration - switch 6 and 7 | dB(A) evaluation | Notes     |
|-------------|------------------------------------|------------------|-----------|
| HIGH        | 11                                 | 100 dB(A) +/- 3  | All tones |
| MEDIUM HIGH | 01                                 |                  |           |
| MEDIUM LOW  | 10                                 |                  |           |
| LOW         | 00                                 |                  |           |

Table 2

**MAIN TONE SET**

| <b>Tone number</b> | <b>Tone designation</b>              | <b>Tone description</b>                               | <b>DIP switch configuration:<br/>1,2,3,4 e 5</b> |
|--------------------|--------------------------------------|---|--|
| 1 *                | <b>Warble Tone</b>                   | <b>800Hz for 500ms, then 1000Hz for 500ms</b>         | <b>11101</b>                                     |
| 2 *                | <b>Continuous tone</b>               | <b>970Hz continuous tone</b>                          | <b>01011</b>                                     |
| 3 *                | <b>Slow Whoop (Dutch)</b>            | <b>500-1200Hz for 3500ms, then off for 500ms</b>      | <b>10101</b>                                     |
| 4 *                | <b>German DIN tone</b>               | <b>1200-500Hz swept every 1000ms (1Hz)</b>            | <b>00111</b>                                     |
| 5                  | Alternate HF slow sweep              | 2350-2900Hz swept every 333ms (3Hz)                   | 10010  |
| 6                  | Alternative warble                   | 800Hz for 250ms, then 960Hz for 250ms                 | 11110  |
| 7                  | Alternative warble                   | 500Hz for 250ms, then 600Hz for 250ms                 | 11100  |
| 8                  | Analogue sweep tone                  | 500-600Hz swept every 500ms (2Hz)                     | 10100  |
| 9                  | Australian Alert (intermittent tone) | 970Hz for 625ms, then OFF for 625ms                   | 10001  |
| 10                 | Australian Evac (slow whoop)         | 500-1200Hz sweep for 3750ms, then OFF for 250ms       | 10110  |
| 11                 | Alternative warble                   | 990Hz for 250ms, then 665Hz for 250ms                 | 00001  |
| 12                 | French tone AFNOR                    | 554Hz for 100ms, then 440Hz for 400ms                 | 00101  |
| 13                 | HF Back up interrupted tone          | 2800Hz for 1s, then OFF for 1s                        | 11011  |
| 14                 | HF Back up interrupted tone – fast   | 2800Hz for 150ms, then OFF for 150ms                  | 11001  |
| 15                 | HF Continuous                        | 2800Hz continuous                                     | 01001  |
| 16                 | Interrupted tone                     | 800Hz for 500ms, then OFF for 500ms                   | 01111  |
| 17                 | Interrupted tone medium              | 1000Hz for 250ms, then OFF for 250ms                  | 01101  |
| 18                 | ISO 8201 LF BS5839 Pt 1 1988         | 970Hz for 500ms, then OFF for 500ms                   | 01110  |
| 19                 | ISO 8201 HF                          | 2850Hz for 500ms, then OFF for 500ms                  | 01100  |
| 20                 | LF Back up Alarm                     | 800Hz for 150ms, then OFF for 150ms                   | 11010  |
| 21                 | LF Buzz                              | 800-950Hz swept every 9ms                             | 01010  |
| 22                 | LF Continuous tone BS5839            | 800Hz continuous                                      | 11000  |
| 23                 | Silent                               | No sound  | 11111  |
| 24                 | Siren 2 way ramp (long)              | 500-1200Hz rising for 3000ms, then falling for 3000ms | 00000  |
| 25                 | Siren 2 way ramp (short)             | 500-1200Hz rising for 250ms, then falling for 250ms   | 00010  |
| 26                 | Swedish all clear signal             | 660Hz continuous                                      | 00100  |
| 27                 | Swedish Fire signal                  | 660Hz for 150ms, then OFF for 150ms                   | 00110  |
| 28                 | Sweep tone (1 Hz)                    | 800-900Hz swept every 1000ms                          | 10111  |
| 29                 | Sweep tone (3 Hz)                    | 800-970Hz swept every 333ms (3Hz)                     | 10011  |
| 30                 | Sweep tone (9 Hz)                    | 800-970Hz swept every 111ms (9Hz)                     | 01000  |
| 31                 | US Temporal Pattern HF               | (2900Hz for 500ms ON, 500ms OFF) x3, then 1500ms OFF  | 00011  |
| 32                 | LF Sweep (Cranford tone)             | 800-1000Hz swept every 500ms (2Hz)                    | 10000  |

\* EN 54-3 certified tones

Table 3

**ALTERNATIVE TONE SET**

| <b>Tone number</b> | <b>Tone description</b>                         | <b>DIP switch configuration:<br/>1,2,3,4 e 5</b> |
|--------------------|---|--|
| 1                  | 800Hz continuous                                | 11101  |
| 2                  | 1000Hz continuous tone                          | 01011  |
| 3                  | 500-1200Hz for 3500ms, then off for 500ms       | 10101  |
| 4                  | 800Hz continuous                                | 00111  |
| 5                  | 2400Hz continuous                               | 10010  |
| 6                  | 800Hz continuous                                | 11110  |
| 7                  | 500Hz continuous                                | 11100  |
| 8                  | 500Hz continuous                                | 10100  |
| 9                  | 2400Hz continuous                               | 10001  |
| 10                 | 500-1200Hz sweep for 3750ms, then OFF for 250ms | 10110  |
| 11                 | 990Hz continuous                                | 00001  |
| 12                 | 800Hz continuous                                | 00101  |
| 13                 | 2800Hz continuous                               | 11011  |
| 14                 | 800Hz continuous                                | 11001  |
| 15                 | 2800Hz continuous                               | 01001  |
| 16                 | 800Hz continuous                                | 01111  |
| 17                 | 800Hz continuous                                | 01101  |
| 18                 | 970Hz for 500ms, then OFF for 500ms             | 01110  |
| 19                 | 2850Hz for 500ms, then OFF for 500ms            | 01100  |
| 20                 | 800Hz continuous                                | 11010  |
| 21                 | 800Hz continuous                                | 01010  |
| 22                 | 800Hz continuous                                | 11000  |
| 23                 | 970Hz continuous                                | 11111  |
| 24                 | 800Hz continuous                                | 00000  |
| 25                 | 800Hz continuous                                | 00010  |
| 26                 | 660Hz continuous                                | 00100  |
| 27                 | 660Hz for 150ms, then OFF for 150ms             | 00110  |
| 28                 | 800Hz continuous                                | 10111  |
| 29                 | 800Hz continuous                                | 10011  |
| 30                 | 800Hz continuous                                | 01000  |
| 31                 | 2900Hz continuous                               | 00011  |
| 32                 | 800Hz continuous                                | 10000  |

**Table 4**

## TESTING

- 1) Activate an alarm or evacuate condition at the control panel.
- 2) Check both the audible and visual activation of the sounder/VAD.
- 3) Press the SILENCE SOUNDERS button (or equivalent) and ensure all Sounder type devices have silenced before continuing.
- 4) Reset the system from the control panel.

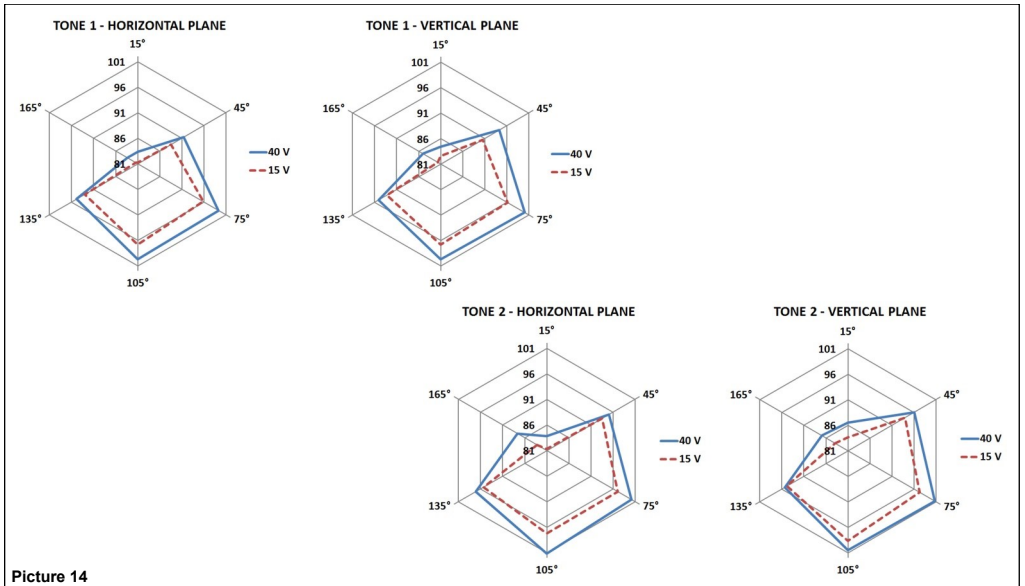
**All devices must be tested after installation and thereafter on a periodic basis as required by local codes.**

| TECHNICAL SPECIFICATIONS *   |                                     |
|--|-------------------------------------|
| Power supply voltage range   | 15 - 40 Vdc (24 Vdc standard value) |
| Activated current load range, volume set to HIGH.<br>Valid for all tones | 11 - 25 mA at 24 Vdc                |
| Acoustic emission frequency range.<br>Valid for all tones                | 440 - 2900 Hz                       |
| Maximum acoustic intensity, volume set to HIGH.<br>Valid for all tones   | 100 dB(A) $\pm$ 3                   |
| Visual Alarm Device (VAD) frequency                                      | 0.5 Hz                              |
| VAD flash coverage   | W - 2.5 - 7 (122.5 m <sup>3</sup> ) |
| Tolerated temperature range  | -25 °C / +70 °C                     |
| Maximum tolerated humidity   | 95% RH (without condensation)       |
| Height (base included)   | 192 mm                              |
| Diameter   | 130 mm                              |
| Weight (base included)   | 290 g                               |
| IP rating (EN 54-3 certified)  | 33                                  |
| IP rating (not certified) **   | 65                                  |

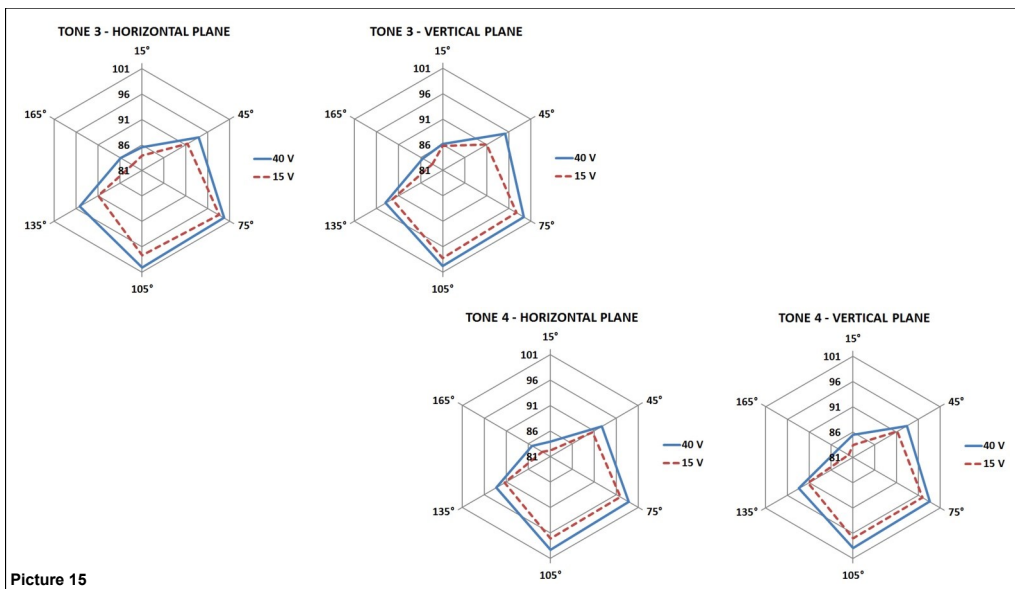
\* Consult the latest version of the TDS-CWSXX document for further information, obtainable from your supplier.

\*\* Independently assessed and certified to IPX5 (not part of the current EN54-3 certification).

## ACOUSTIC OPERATIONAL PERFORMANCE



Picture 14



Picture 15

**WARNINGS AND LIMITATIONS**

Our devices use high quality electronic components and plastic materials that are highly resistant to environmental deterioration. However, after 10 years of continuous operation, it is advisable to replace the devices in order to minimize the risk of reduced performance caused by external factors. Ensure that this device is only used with compatible control panels. Detection systems must be checked, serviced and maintained on a regular basis to confirm correct operation. Smoke detectors may respond differently to various kinds of smoke particles, thus application advice should be sought for special risks. Detectors cannot respond correctly if barriers exist between them and the fire location and may be affected by special environmental conditions. Refer to and follow national codes of practice and other internationally recognized fire engineering standards. Appropriate risk assessment should be carried out initially to determine correct design criteria and updated periodically.

**WARRANTY**

All devices are supplied with the benefit of a limited 3 years warranty relating to faulty materials or manufacturing defects, effective from the production date indicated on each product. This warranty is invalidated by mechanical or electrical damage caused in the field by incorrect handling or usage. Product must be returned via your authorized supplier for repair or replacement together with full information on any problem identified. Full details on our warranty and product's returns policy can be obtained upon request.



2831

21

HF-20-010CPR

Hyfire Wireless Fire Solutions Limited - Unit B12a, Holly Farm  
Business Park, Honiley,  
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EN 54-3:2001+A1:2002+A2:2006 Type B

EN 54-23:2010

HFCS-SBW-23-03

For use in compatible fire detection and alarm system.

Category rating: W - 2.5 - 7

- Duration of operation: Pass
- Provision for external conductors: Pass
- Flammability of materials: Pass
- Enclosure protection: Pass
- Access: Pass
- Manufacturer's adjustments: Pass
- On-site adjustment of behaviour: Pass
- Requirements for software controlled devices: Pass
- Coverage volume: Pass
- Variation of light output: Pass
- Minimum and maximum light intensity: Pass
- Light colour: White
- Light temporal pattern / frequency of flashing: N/A / 0.5 Hz
- Marking and data: Pass
- Synchronization: Pass
- Durability: Pass
- Temperature resistance: Pass
- Humidity resistance: Pass
- Shock and vibration resistance: Pass
- Corrosion resistance: Pass
- Electrical stability: Pass