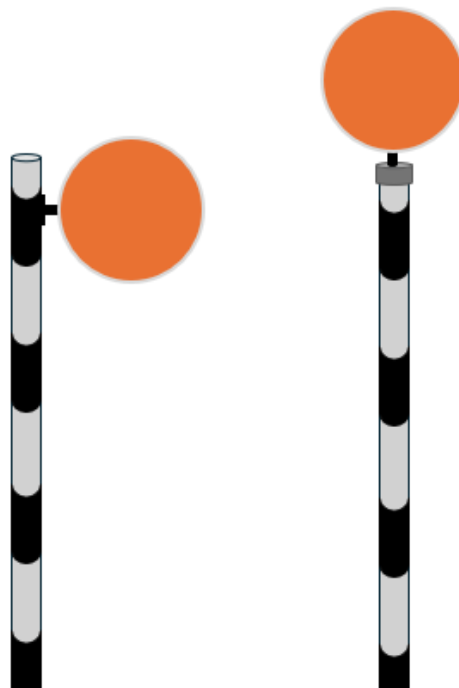




# HTL LED PEDESTRIAN CROSSING BELISHA

Model: TL BELISHA

## Operation & Maintenance Manual



Version 1.0

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| Release / Change | Version | Release Date |
|------------------|---------|--------------|
| Initial Release  | 1.0     | October 2024 |
|                  |         |              |
|                  |         |              |
|                  |         |              |
|                  |         |              |

## Safety Instructions



**WARNING:** Ensure all safety instructions have been followed prior to servicing.



**WARNING:** Ensure that no items fall onto the lanes below at any time.



**CAUTION:** When the door/cover of the equipment is opened, please ensure it is fixed before performing next procedure. After finishing maintenance, ensure the door/cover is locked.



**CAUTION:** The LEDs on LED Module of the equipment are ESD (Electro-Static Discharge) sensitive. Take necessary precautions to prevent damage to the LED.

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## 1. Health and Safety

All personnel involved in carrying out the work must be aware of any site working regulations and required certification.

Before taking any installation or maintenance action, service personal must follow the above safe working practices:

- Only allow sufficiently experienced personnel to do maintenance.
- Provide sufficient illumination for the job, especially during non-daylight hours.
- Wear personal protective gear when working near or with energized parts.
- Use insulated tools and equipment when working near or with energized parts.
- Take measures to avoid inadvertent contact of conductive materials or equipment with energized parts of BELISHA

### **WARNING**

**The BELISHA is a 12 VDC device. Harding Traffic cannot guarantee that mains power may not have been introduced as part of the installation e.g. 230VAC: 12VDC Power Supply.**

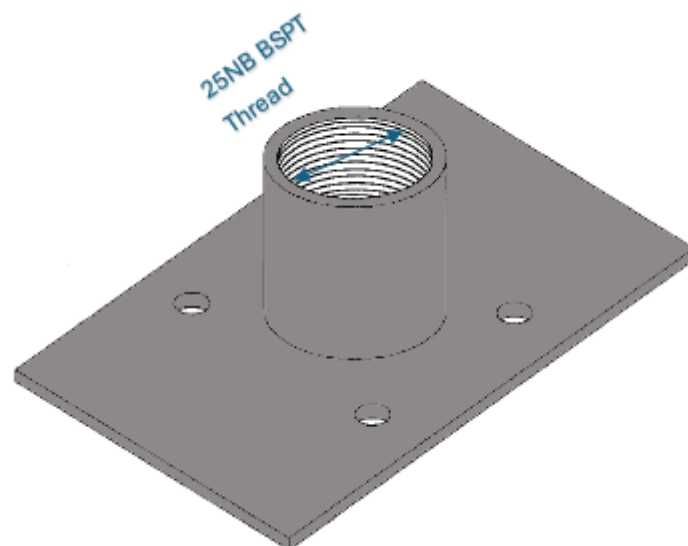
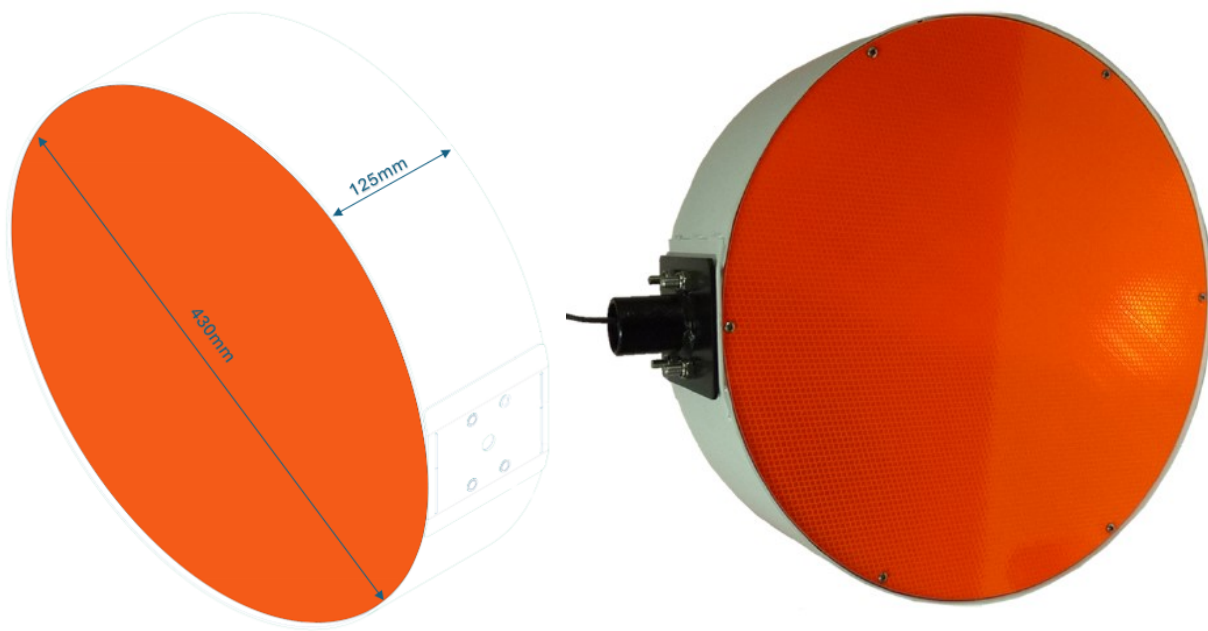
**Service Personal must ensure that the system is suitably isolated before working on the BELISHA.**

## 2. General Overview

### 2.1. Sign Specifications

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|                          |   |
|--------------------------|---|
| <b>Outside Diameter:</b> | 438mm                                     |
| <b>Disc Diameter:</b>    | 430mm                                     |
| <b>Width:</b>            | 125mm                                     |
| <b>Mounting Bracket:</b> | <b>Female</b> – Fits any 25NB BSPT Thread |
| <b>Housing Material:</b> | 2mm Aluminium (Powder Coated Artic White) |



## 2.2. Single Power Supply / Flasher Specifications

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|                                |                         |
|--------------------------------|-------------------------|
| <b>Rated Current:</b>          | 5 Ampere                |
| <b>Output Voltage:</b>         | 12 Volt                 |
| <b>Input Voltage:</b>          | 90V~264V                |
| <b>Working temperature:</b>    | -30~+70°C               |
| <b>Power Supply Dimension:</b> | 162.5mm x 42.5mm x 32mm |
| <b>Flasher Dimension:</b>      | 64 mm x 58 mm x 35mm    |
| <b>Flasher Enclosure:</b>      | Diecast Aluminium       |

## 2.3. Dual Power Supply / Flasher Specifications

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|                                |                      |
|--------------------------------|----------------------|
| <b>Rated Current:</b>          | 8.5 Ampere           |
| <b>Output Voltage:</b>         | 12 Volt              |
| <b>Input Voltage:</b>          | 90V~264V             |
| <b>Working temperature:</b>    | -30~+70°C            |
| <b>Power Supply Dimension:</b> | 190mm x 52mm x 37mm  |
| <b>Flasher Dimension:</b>      | 64 mm x 58 mm x 35mm |
| <b>Flasher Enclosure:</b>      | Diecast Aluminium    |

## 2.4. Triple Power Supply / Flasher Specifications

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|                                |                       |
|--------------------------------|-----------------------|
| <b>Rated Current:</b>          | 12.5 Ampere           |
| <b>Output Voltage:</b>         | 12 Volt               |
| <b>Input Voltage:</b>          | 100V~305V             |
| <b>Working temperature:</b>    | -40°C~90°C            |
| <b>Power Supply Dimension:</b> | 180mm x 63mm x 35.5mm |
| <b>Flasher Dimension:</b>      | 64 mm x 58 mm x 35mm  |
| <b>Flasher Enclosure:</b>      | Diecast Aluminium     |

# 3. Maintenance Guide

## 3.1. Preventative Maintenance

To ensure the continued optimal performance and longevity of your BELSIHA in challenging environments, regular preventive maintenance is recommended. By following these guidelines, you can mitigate potential issues and extend the lifespan of your product:

**Cleaning Schedule:** Establish a routine cleaning schedule based on the local conditions and usage. While the standard recommendation is maintenance every six months, consider more frequent cleaning if the environment is particularly harsh.

**Record Keeping:** Maintain a record of maintenance activities, including dates, procedures performed, and observations made. This documentation can help track the product's health and guide future maintenance decisions.

**Professional Inspection:** Periodically, consider engaging professional technicians to conduct a thorough inspection of the BELISHA. Their expertise can identify potential issues that might not be apparent during routine maintenance.

| Faults                                      | Action  |
|---|---|
| Check for marks, scratches, dirt, or cracks | Use an appropriate cleaning solution to remove any visible marks or dirt. |

### 3.3. Sign Maintenance

Because of its ability to withstand extremely harsh environments, the BELISHA requires minimal maintenance. However, regular maintenance can help prolong the product's lifespan and ensure optimal display performance.

The suggested maintenance interval is every six months, although this duration can be adapted based on the local conditions.

Maintenance tool:

- Gentle non-woven fabric or a soft brush
  - Neutral cleaning solution (non-abrasive)
- Basic maintenance equipment

Recommended Maintenance Procedure

- 1) Moisten a cloth with the cleaning solution, then use it to gently wipe away dust from the surface. Rinse the surface with water afterwards.

## 4. Troubleshooting

| Item                | Description             | Solution   |
|---------------------|-------------------------|--|
| Signs not operating | Sign is not powering on | <ul style="list-style-type: none"> <li>• Verify the integrity of all wiring and connectors.</li> </ul> |

In all other cases, please contact Harding Traffic on 0800 427 346 or at [service@hardingtraffic.co.nz](mailto:service@hardingtraffic.co.nz)