

TSD2 USER INSTRUCTIONS

1. INTENDED USE OF TSD2

TSD2 is used for distance measurements and resulting data is sent wirelessly to a Wirepas protocol mesh network. The device has also an accelerometer. Typically TSD2 is used together with MTXH Thingsee Gateway in use cases where distance measurements are performed in several locations and this data is wirelessly collected and sent via 2G cellular connection to a data server / cloud.

2. GENERAL

Place two AAA batteries (recommended model Varta Industrial) inside the device, the correct direction is shown on the PWB. Plus sign indicates the positive node of the battery.



Snap the B cover in place (please note that the B cover can be placed only in one direction). The device starts making distance measurements about any objects on the top side of the device. Measurements are made once a minute (default, can be changed by configuration).

The device starts seeking any other nearby devices having the same pre-programmed Wirepas network ID as the device itself. If it finds any, it connects to this Wirepas network and starts sending measurement results from both sensors to the network once a minute (default, can be changed by configuration).

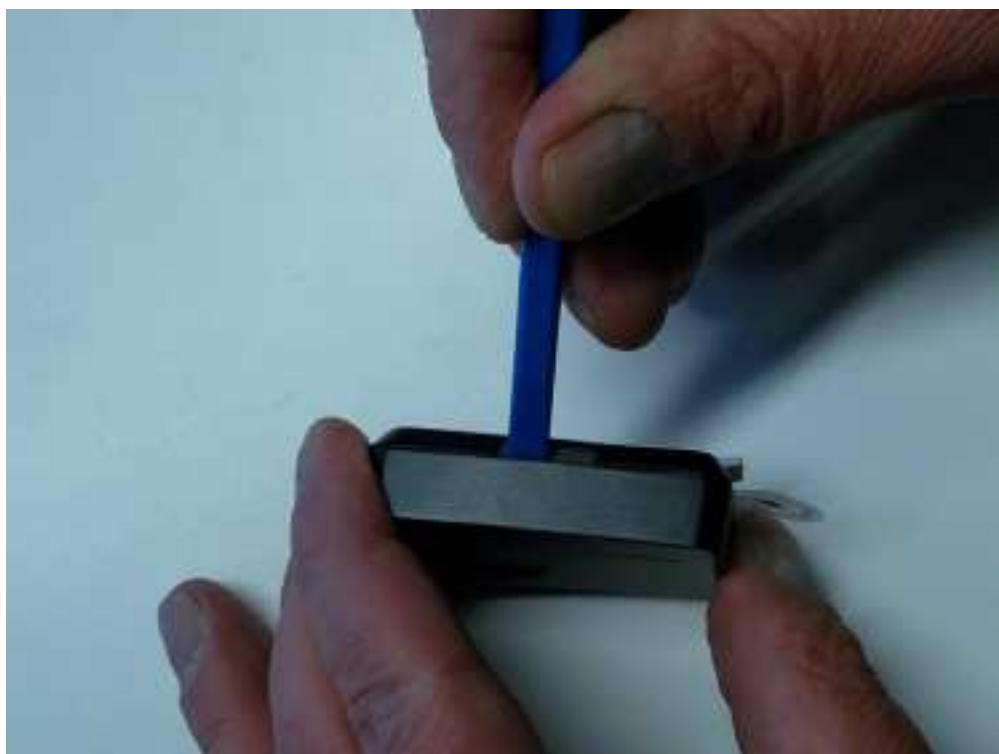
3. INSTALLATION GUIDELINES

The device B cover has a double-sided tape which can be used for attachment; remove the cover tape and attach the device to the desired position for distance measurement. The surface for attachment needs to be flat and clean. Press the device from both sides for 5 seconds to make sure that the tape is correctly attached into the surface.



Remove the cover
tape from here

The device operates with fresh Varta Industrial batteries typically for more than 2 years (this time depends heavily on the configuration used for measurement and reporting intervals). If there is a need to change the batteries, spread the side of the A cover gently as shown in the picture below. Be careful while opening the cover that locking snaps don't break. Remove the B cover, remove the batteries and place new batteries as described earlier.



If the device is already attached to some surface, opening needs to be performed with a special tool:



The tool can be ordered from Haltian Products Oy.

The device can also be ordered with batteries pre-installed. In this case just pull out the tape disconnecting batteries in order to power on the device.



4. PRECAUTIONS

- TSD2 is intended for indoor use only and shall not be exposed to rain. The operating temperature range for the device is -20...+50 °C.
- Remove the batteries from the TSD2 device if you are taking it inside an aeroplane (unless you have the pre-installed pull-out tape still in place). The device has a Bluetooth LE receiver/transmitter which must not be operational during a flight.
- Please take care that the used batteries are recycled by taking them to appropriate collection point.
- When changing batteries, replace both of them at the same time using identical brand and type.
- Do not swallow batteries.
- Do not throw batteries into water or fire.

- Do not short-circuit batteries.
- Do not try to charge primary batteries.
- Do not open or disassemble batteries.
- Batteries should be stored in a dry place and at room temperature. Avoid large temperature changes and direct sunlight. At higher temperature the electrical performance of the batteries may be reduced.
- Keep batteries away from children.

5. LEGAL NOTICES

Hereby, Haltian Products Oy declares that the radio equipment type TSD2 is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: <https://thingsee.com>

Haltian Products Oy vakuuttaa, että radiolaitetyyppi TSD2 on direktiivin 2014/53/EU mukainen.

EU-vaatimustenmukaisuusvakuutuksen täysimittainen teksti on saatavilla seuraavassa internetosoitteessa: <https://thingsee.com>

TSD2 operates at Bluetooth® 2.4 GHz frequency band. Maximum radio-frequency power transmitted is +4.0 dBm.

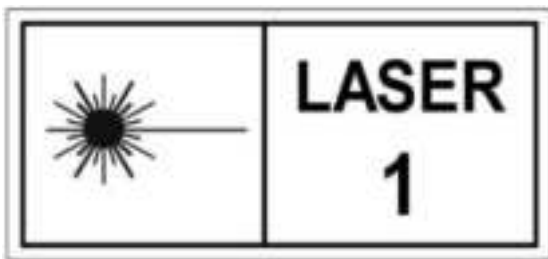
Manufacturer name and address:

Haltian Products Oy

Yrttipellontie 1 D

90230 Oulu

Finland



FCC REQUIREMENTS FOR OPERATION IN THE UNITED STATES

FCC Information for the User

This product does not contain any user serviceable components and is to be used with approved, internal antennas only. Any product changes or modifications will invalidate all applicable regulatory certifications and approvals.

FCC Guidelines for human Exposure

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 5 mm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Federal Communications Commission Statement

This device complies with Part 15 Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

FCC Radio Frequency Interference Warnings & Instructions

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following methods:

- Increase the separation between the equipment and the receiver.
- Connect the equipment into an electrical outlet on a circuit different from that which the radio receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference, and
- 2) this device must accept any interference received, including interference that may cause undesired operation.

Industry Canada:

This device complies with RSS-247 of the Industry Canada Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Ce dispositif est conforme à la norme RSS-247 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable

Radiation Exposure Statement :

This device complies with ISED radiation exposure limits set forth for an uncontrolled environment.

NOTE IMPORTANTE: Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec une distance minimale de 10 mm entre le radiateur et votre corps.

FCC ID: 2AEU3TSBEAM

IC ID: 20236-TSBEAM