

TWIG Beacon Ex

Quick Guide

Manufacturer:
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Due to differences in use, installation and hardware, all settings and functions may not be applicable to each device version.

RADIO FREQUENCY (RF) ENERGY

Transmission frequencies and power for TST90EUEX device types in EU are listed in the table below.

Transmitter	TX frequency bands / MHz	Max power / dBm
SRD	869.675	5

For any further questions please contact TWIG Support at support@twigcom.com or +358 40 510 5058.

1. Installation of beacons

TWIG Beacon Ex has integrated lithium primary battery giving typical 3-4 year operating time. The operating time can vary according to use and environment.

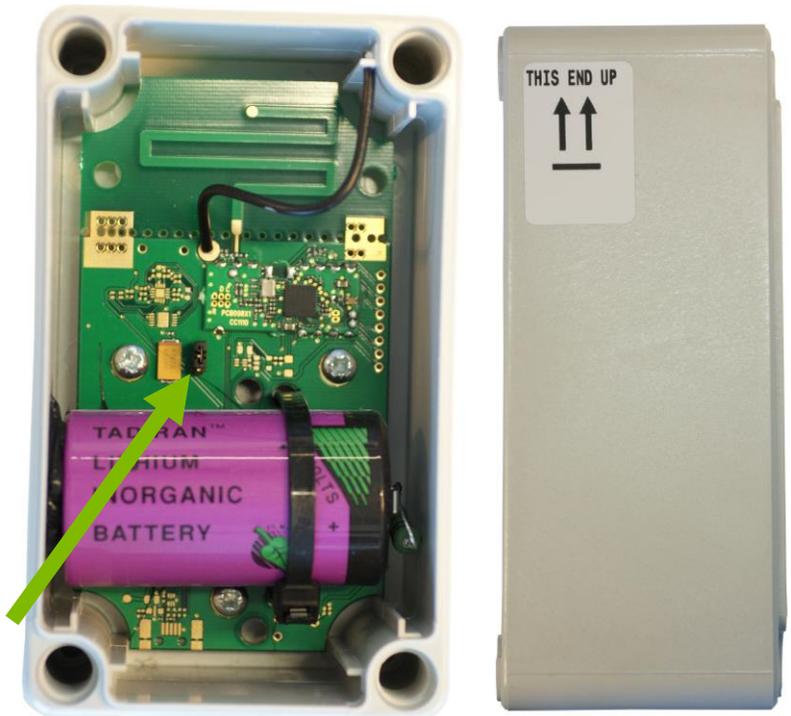
Mount the beacon to a suitable place based on desired radius for operation. There's a separate instruction leaflet for antenna pattern and directional antenna adjusting. Mounting of the beacon should not be done against metal wall or behind other metal materials as they are damping the signal and can even totally block them in certain directions.

If the beacon must be installed to metal wall, there should be used 25 mm thick non-metal spacer between beacon and wall or install the beacon sideways. If the beacon has antenna 90-degrees tilted or has separate wire antenna it can be mounted directly to metal. However metal will damp signal towards back direction.

Device must be installed vertically like in the picture. Note! The battery direction should not be positive pole downwards in any installation because it will damage the battery.

Do not install the Ex beacon to place where static electricity can be created e.g. with blowing dust.

Once the beacon is mounted to a desired position it can be turned on by inserting the jumper. Once the jumper is connected, the beacon is operational. The LED will blink on transmission interval. If the beacon is in configuration mode it will blink in 2 seconds interval with two colours.



2. Installing software and drivers

Connect TWIG Beacon Ex wireless configuration adapter to your computer's USB port. Allow Windows to install drivers automatically. Once drivers are loaded, run the program Beacon Configurator. Program will show each TWIG Beacon Ex it can currently hear. Note that the location of the Beacon configuration box containing similar transceiver as Beacon Ex has significant effect. Do not place it on metal tables or close to metal shelves.

3. Data field descriptions

The order of the listed beacon devices can be adjusted by clicking the given name in the name field.

No = Position number to indicate how many beacons are "visible" to the configuration program.

Name= ID programmed to the unit. If no name is programmed the field will be empty. Maximal length is 8 characters.

Serial number is factory programmed non erasable ID.

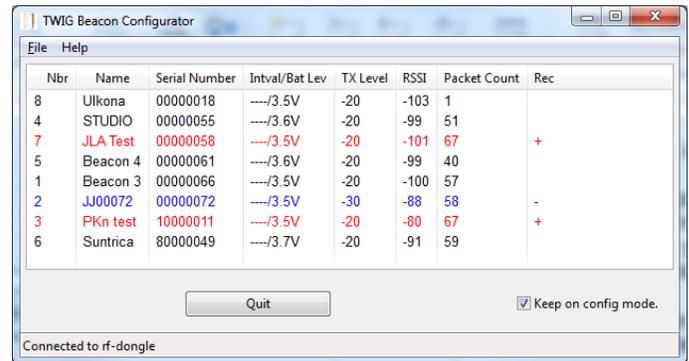
Interval is the programmed transmitting interval. Default value is 4 seconds. The interval is only shown in programming mode. Changing interval longer preserves battery but may result in loss of signal noticed by Protector in some cases.

Tx Level = The level of transmission programmed to the Beacon. Default value is -20dBm

Rssi = The level of transmission the Configuration unit and also Protector can hear the Beacon.

Packet Count = Number of received data packages

Rec = Data reception is displayed with plus (+) sign. (The minus (-) sign can be ignored).

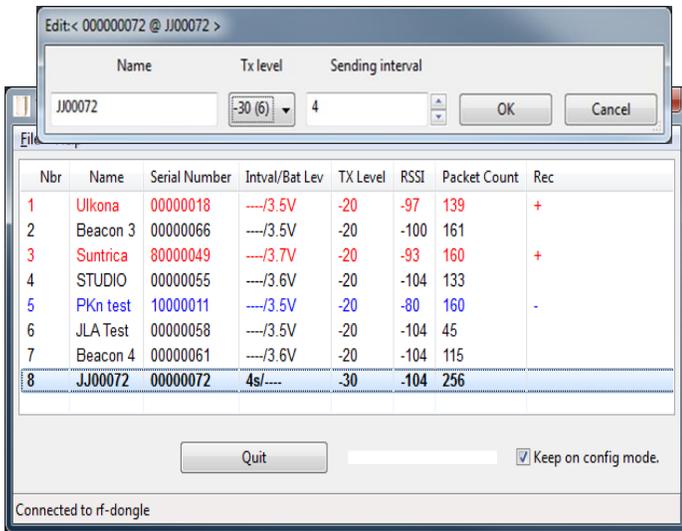


When the beacon is in the configuration mode, the editor (see the picture on the left) pops up by clicking the beacon on the list.

When the "Keep on config mode" box is ticked, all beacons in configuration mode (marked in bold on the list) remain in the configuration mode 10 minutes also when outside the configurator coverage area.

When "Keep on config mode" box is not ticked, all beacons in configuration mode (marked in bold on the list) will remain in configuration mode for 10 minutes from start or last configuration.

If the device is not configured during the given time, the beacon must be restarted with the jumper in the main PCB.



4. Protocols & messaging

TWIG Beacon transfers its data via ISM band. The relevant data is being transferred to system backend via MPTP messaging. Please refer to TWIG MPTP v3.24 or later for details.

5. Safety & recycling

Usage: -20°C to +40°C

Storage: -30°C to +70°C

Do not open the device or battery by yourself or pierce holes in it. Rough handling may break the circuitry inside the device. Do not drop, knock, twist or shake the device or its battery. Keep the device dry, liquids contain minerals which could corrode electronic circuits. If the device gets wet, turn it off and dry the device and the battery immediately. Put the device into an upright position and let it dry. It is recommended that a dealer or service personnel check that the device functions properly. Even though the device is waterproof, do not wet the device unnecessarily or immerse it in water. Protect the device from heat. High temperatures may shorten the life of the electronic devices, melt or warp plastics and damage batteries. Do not warm up the device or battery or use it near fire. Do not short-circuit the battery or battery contacts. Exposing the metal strips of the battery to a close contact with a metallic object, such as a coin, a clip or a set of keys can cause accidental short-circuiting and damage the battery. Use the battery only for the purpose it is intended. Clean the device with a soft cloth, dampened slightly with mild soapy water. Do not clean the device with harsh chemicals, solvents or other corrosive substances. Only allow service personnel authorised by the dealer to service the device.

CARE AND MAINTENANCE

NOTE: The instructions below apply to the device, its accessories and integrated batteries.

- Dust and dirt may create static electricity to cover. Do not use or keep the device in dusty or dirty surroundings.
- Rough handling may break the circuitry inside the device. Do not drop, knock, twist or shake the device.
- Keep the device dry. Liquids contain minerals which could corrode electronic circuits. If the device gets wet, turn it off and dry the device.
- Even though the device is waterproof, do not wet the device unnecessarily or immerse it in water.
- Protect the device from heat. High temperatures may shorten the life of the electronic devices, melt or warp plastics and damage batteries. Do not warm up the device or battery or use it near fire.
- Do not short-circuit the charging contacts with a metallic object, such as a coin, a clip or a set of keys. This can cause accidental short-circuiting and damage the device.

- Charge and recharge the battery only with the charger specified in the Operating instructions/Quick Guide.
- Clean the device with a soft cloth, dampened slightly with mild soapy water. Do not clean the device with harsh chemicals, solvents or other corrosive substances.
- Only manufacturer is allowed to service the device.

SAFETY AND PRECAUTIONS

The user and person mounting the device is fully responsible for ensuring that the TWIG Beacon Ex is used in explosive atmospheres in accordance with the applicable regulations. The category of TWIG Beacon Ex is II 2 G Ex ib IIC T4 Gb. TWIG Beacon Ex is an intrinsically safe, waterproof, dust- and impact-resistant radio transceiver safety device phone for industrial application in areas with an increased risk of explosion in accordance with directive 1999/92/EC (ATEX 137). Only use approved accessories.

SAFETY INSTRUCTIONS

These safety instructions contain information and safety regulations which are to be observed without fail for safe operation in the described conditions. Nonobservance of this information and these instructions can have serious consequences or it may violate regulations. Please read these safety instructions carefully before starting to use the unit. In case of any doubt (in the form of translation or printing errors) the English language operating instructions shall apply.

FAULTS AND DAMAGES

If there is any reason to suspect that the safety of the unit has been impaired, it must be withdrawn from use and removed immediately from the Ex-area. Measures must be taken to prevent it from being restarted accidentally. The safety of the device may be compromised, if, for example:

- there is visible damage to the housing.
- the unit has been subjected to excessive loads.
- the unit has been improperly stored.
- the unit has been damaged in transit.
- unit markings or inscriptions are illegible.
- malfunctions occur.
- permitted limit values have been exceeded.

SAFETY REGULATIONS

Use of the device TWIG Beacon Ex assumes that the operator complies with conventional safety regulations and has read the certificate in order to eliminate faulty operation of the unit. The following points are to be observed:

- The battery of the device may not be changed inside the Ex-area.
- Only approved TWIG Beacon Ex accessories may be used.
- Connecting USB cable or any other connector is not allowed in Ex-area.
- Configuring the TWIG Beacon Ex is only allowed so that configuration adapter is outside Ex-area.
- Opening and repair of the device is only permitted in the factory service
- User takes full responsibility on making sure that device may only be used in areas which are in accordance to the Ex approval of the unit printed in the type label of the unit.
- Scrubbing is prohibited while cleaning the device.
- The plastic enclosure shall be cleaned with damp or wet cloth only.

Recycle the batteries according to the country-specific regulations.