# BT-3HT UHF

The BT-3HT Boltable RFID Tag provides identification and tracking capabilities in rugged or hazardous use-areas. This tag can either be fixed with pressure-sensitive adhesive or be bolted to objects, on both metal and non metal surface. This rugged tag can withstand high temperatures.


## Key features

- Resistance to high temperature and chemicals
- Multiples fixing methods : welding or bolting
- Metal compatible

## Applications

- Metal pipes
- Metal returnable containers
- Metal canisters
- Metal pallets
- High value metal items
- Military applications

## Functional specifications

| | |
|---|---|
| Type | UHF |
| Frequency | 865-869 MHz (EU)<br>902-928 MHz (US) |
| Air interface protocol | EPC Global Class1Gen2; ISO 18000-6C |
| IC Type | Standard: Alien Higgs 3<br>Optional: EM4325 |
| Memory | EPC memory: 128 bits (Alien), 352 bits (EM4325)<br>User memory : 512 bits (Alien), 3072 bits (EM4325)<br>TID: Factory-programmed, non-changeable, unique 64-bit ID (Alien)<br>Factory-programmed, non-changeable, unique 48-bit ID (EM4325) |
| Read range | Real-world: 1 – 2 meters, depending on attachment<br>Lab environment: 7 meters |

## Physical specifications

| | |
|---|---|
| Dimensions / Weight | Length: 76 mm / Width: 28 mm / Height: 19 mm/ Weight: 43g |
| Tag Material | Tag Body: Proprietary high temperature nylon |
| Mounting Method | Welding or bolting |
| Applicable surface | Any material.<br>Metal surfaces; ferrous and non-ferrous. |

*V4.0*
*Non-contractual datasheet*

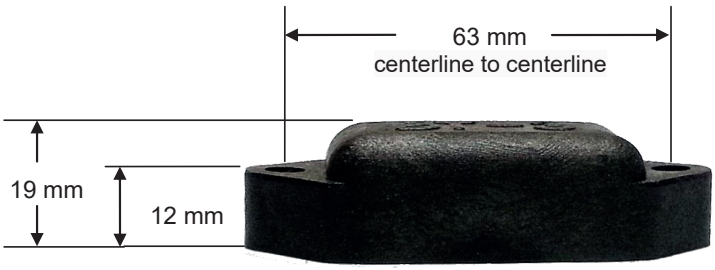
## Environmental and industry compliance

| | |
|---|---|
| Certificates | RoHS compliant<br>ATEX-compliant<br>ISO 17665 - Sterilization of Health Care Products - Moist Steam<br>ISO 11135 - Sterilization of Health Care Products - Ethylene Oxide |
| IP classification | IP68: complete protection against dust / protection against continuous immersion in water (tested for 5hours in 1m [3.3 ft] depth, immersion in water to be qualified in any industrial application) |
| Storage Temperature | -50°C to +300°C* |
| Operating Temperature | -50°C to +85°C* |
| Peak temperature | +300ºC for 1 hour* |
| Weather ability | Excellent, including UV-resistance and sea water immersion* |
| Chemical resistance | No physical or performance changes in:<br>- Salt water*<br>- NaOH (depending on concentration)*<br>- Sulfuric acid (depending on concentration)*<br>- Motor oil (tested in 168 hour exposure)*<br>Generally good against:<br>- Most solvents*<br>- Most acids and bases* |

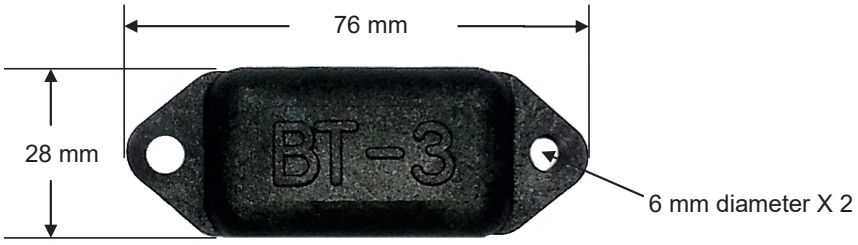
**According to tests performed under optimal conditions, environmental resistance to be qualified in any industrial application*

**Note:** The RFID tag will not be functional if the BT-3HT Boltable RFID Tag is left at the maximum indicated temperatures such that the internal soak temperature exceeds +80 deg C (+176 deg F). The RFID tag itself will function between -50 deg C and +80 deg C.

## Plan view




## Profil view




*V4.0*
*Non-contractual datasheet*

## Read range

| | UHF Max read range on metal with 4W EIRP |
|---|---|
| **BT-3HT Boltable RFID Tag** (915 MHz) | 3 - 4 meters (10 – 13 feet) |

The read range listed above was obtained from a lab test environment. Actual test results may be different. Testing in actual use environments is strongly recommended.

## Installation instructions

**Tag placement**

The BT-3HT Boltable RFID Tag must be mounted to the metal surface with the "cup" pointed up and with no metal covering the tag.

When selecting the mounting location, ensure the following:

- Select an even metal surface so that the entire base of the BT-3HT Boltable RFID Tag is in contact with the mounting surface.
- Place the tag in the middle of the largest metal mounting surface available.
- It is recommended that the tag be taped to the metal surface before bolting the tag, to check orientation and performance.

The BT-3HT Boltable RFID Tag's performance depends on the shape of the metal object and the tags placement on that surface. The above recommendations are valid for flat surfaces. Testing is

**Tag attaching methods**

The tag can be adhered using pressure-sensitive adhesive or bolted.

**1. Pressure-sensitive adhesive**

This is the quickest method of attachment; peel the liner from the adhesive and press to the cleaned mounting surface.

**2. Bolting the tag to the metal surface**

Bolting achieves effective mounting and retention in various use conditions.

The BT-3HT Boltable RFID Tag can be mechanically attached using;

- Screws (size M6)
- Pop rivets (size 6 mm)



AXEM Technology
11, rue Auguste Perret - ZAC Europarc - 94042 Créteil Cedex France
Tél. : +33 (0)1 41 94 11 85 - Fax. : +33 (0)1 49 56 91 52 - info@axemtec.com - www.axemtec.com