



The Long Life Tracker  
www.nabitrack.com

## Device Datasheet

Document nr.: NABIDSV1  
Date: 2020.05.18

### Key Features

- 3-5 years battery life
- Waterproof enclosure
- Several mounting options

### Applications

- Factory level logistics
- Palette tracking
- Security

### NaBi Solo



## Overview

NaBi is a GPS and NBLoT network based low energy tracking device. NaBi can periodically record location, temperature and motion information and this data is transferred to the General Track servers through NBLoT network. The device configuration regarding sensor recording and data synchronisation intervals, and sensor based alarms can be configured and batch deployed to multiple devices in the General Track online system. The recorded data is available in the online system, mobile application or through REST API ([https://www.nabitrack.com/documentation.html#gt\\_api](https://www.nabitrack.com/documentation.html#gt_api)).

## Features and functions

### Flexible configuration options for different applications

#### Battery life prediction

#### Motion sensor:

- Selectable sensitivity
- Configurable event on motion
- Configurable event on standstill
- Configurable event on orientation changing

#### Location:

- Regular geolocation logs
- Geolocation logs on motion sensor event
- Location measurement falls back to NBLoT cell based location measurement in case of GPS unavailability (when the device is inside a building)

#### Temperature:

- Regular temperature logs
- Overtemperature or undertemperature alerts

#### Scheduled data communication and active periods:

- Configurable calendar for scheduled data communication
- Configurable calendar for active time periods

## Sensor characteristics

#### Accelerometer:

- |                              |   |
|------------------------------|---|
| Static orientation detection | Adjustable event trigger: 10°..170°, resolution: 1° |
| Motion detection threshold   | Adjustable: 0.063..5 G, resolution: 0.063 G         |
| Maximum logged acceleration  | ±12.7 m/s <sup>2</sup>                              |
| Resolution                   | 0.1 m/s <sup>2</sup>                                |

#### Temperature sensor:

- |                   |             |
|-------------------|-------------|
| Resolution        | 1 °C        |
| Accuracy          | ±0.5 °C     |
| Temperature range | -55..128 °C |

General Track

## Pushbutton functions

Short press: Out of schedule instant data synchronization with the server  
Long press (>10s): Debug mode (3 min): The LED is on when motion is detected\*

\*Works only when motion detection is configured with given thresholds.

## LED functions

Normal operation: Blinks once in every minutes  
After battery replacement: Blinks in every second until first server communication is finished  
After pushbutton press: Blinks in every second until first server communication is finished

## Battery life prediction

Power consumption depends on the device settings and usage. Most power is used by localization and NBloT communication. Battery lifetime estimation examples can be seen on Table 1.

Table 1. Estimated battery lifetime in the function of data synchronisation and location rates

GPS sampling period	Data synchronisation		
	Every hour	Every 12 hours	Daily once
30 minutes	0.24 year	1.09 year	1.32 year
2 hours	0.26 year	1.98 year	2.9 year
12 hours	0.27 year	2.57 year	4.37 year
24 hours	0.27 year	2.65 year	4.6 year

Estimate the battery life of a configuration that suits your application at <https://www.nabitrack.com/configuration.html>

## Radio characteristics

### GPS characteristics:

AGPS yes  
GPS sensitivity -165 dBm

### NB-IoT Radio characteristics:

Output power 22.5 dBm  
Narrow-Band IoT freq. bands B5 / B8 / B20

## Environmental characteristics

Maximum vibration  $\pm 5$  G  
Operating ambient temperature -40..+85 °C  
Storage temperature -40..+85 °C

## Replaceable battery (included)

Battery type IEC FR20, Spiral Type Thionyl Chloride Lithium Battery Only  
Battery voltage 3.6 V  
Nominal capacity 14 Ah

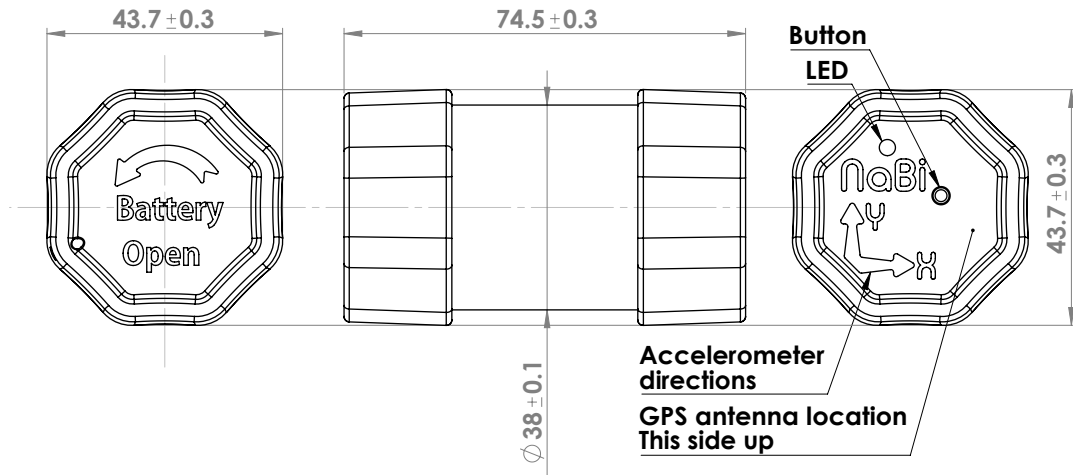
## Approvals

CE in progress  
RoHS, PbFree



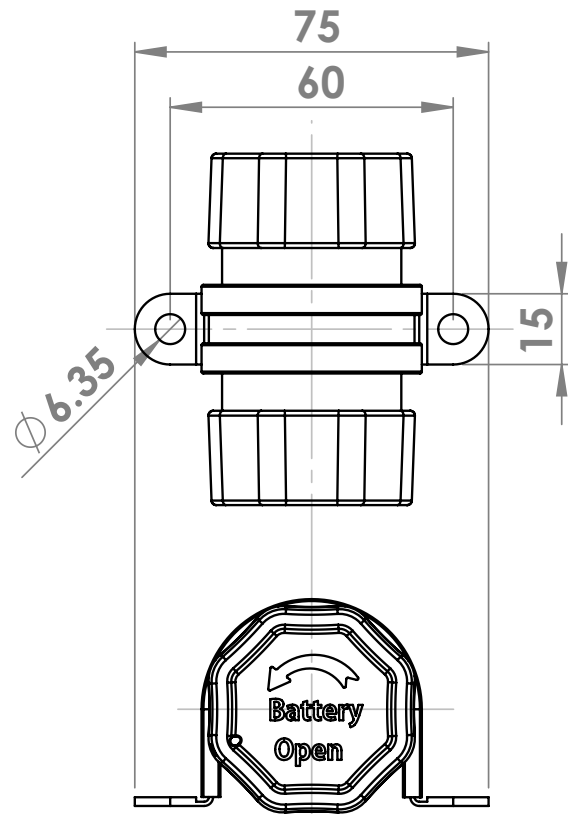
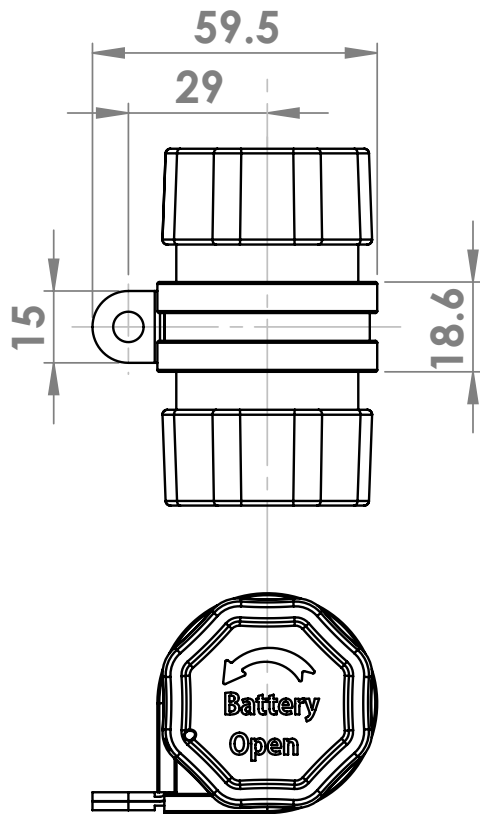
# Mechanical dimensions

Size (L x W x H) 75 x 44 x 44 mm  
 Weight, incl. battery 170 g



Mounting option "A"

Mounting option "B"



# Disclaimer

© Copyright, General Mechatronics Ltd., Budapest, Hungary. All rights reserved. The text and pictures, in this paper are all subject to copyright and other intellectual property protection. The document may also contain trademarks to which copyright is attributable to third parties. Reproduction or transmission, in whole or in part, of any material contained within this paper is prohibited, except if the source of the material is clearly stated.

The authors make no representations or warranties with respect to the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice.

For more information contact: [info@nabitrack.com](mailto:info@nabitrack.com)