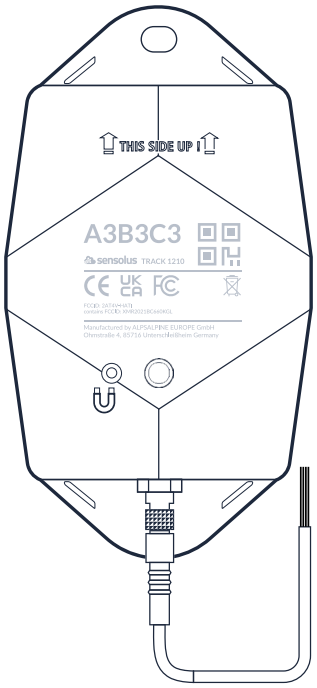
**The rugged low-power tracker can be wired to an external power source. It has NB-IoT connectivity and guaranteed data recovery. The tracker provides general localization, zone and high precision. The tracker comes with an on-board temperature sensor and shock detection. Compatible with multiple external environmental sensors. The tracker firmware can be upgraded over the air.**




- GNSS
- Wi-Fi scanning
- Bluetooth geobeacon for zone precision

- NB-IoT
- Europe and North America
- Data recovery

- Up to 12 years of back up battery
- IP rating in progress
- IK09
- Flame retardant

## Connectivity

### NB-IoT
- Energy efficient transceiver
- Internal omnidirectional antenna
- Bi-directional communication
- NB-IoT bands: Europe and North America
- Data recovery
- OTA firmware upgrade (NB-IoT)

### Bluetooth Low Energy (BLE)
- Bluetooth Low Energy 5.0

## Geolocalization

### GNSS
Multi GNSS constellation chipset (GPS+GALILEO)

### Wi-Fi scanning
- Wi-Fi based geolocalization
- Wi-Fi 2.4 GHz

### BLE
- Sensolus proximity beacon detection
- Detectable by zone and high precision anchors

## Sensing

### Internal

- Activity monitoring
- Orientation monitoring
- Virtual tamper detection
- Temperature monitoring (range: -20°C till 60°C, typical accuracy: +/- 0,25°C, worst case accuracy: +/- 1°C)
- Configurable shock detection

### Connectable environmental BLE sensors

- Temperature, humidity
- Fill level, contact, magnet
- Other BLE sensors can be added

## Activation and mounting

- Activation manual
- Holes 7x9mm ($^{9}/_{32}$ * $^{23}/_{64}$ in) for screws or rivets. 115 mm ($4^{17}/_{32}$ in) distance between the centers of the mounting holes.
- Instructions for mounting the device are available in the Sensolus documentation center.

## Mechanics & design

### Antennas

All antennas are internal

### Size

130x72x36 mm ($5^{1}/_{8}$ x $2^{53}/_{64}$ x $1^{27}/_{64}$ in )(L W H)

### Weight

218,3 gram (7.68 oz) without cable

### Color

White and black

### Casing

- PBT/PC 29 TM-Z2 FR UV LS
- Flame retardant
- UV-stabilized

### Water & dust resistance

IP 67

### Impact resistance

IK09

### Drop shock and vibration

EN 60068

### Operating temperature

-20°C to 60°C (-4°F to 140°F) *

The specifics regarding operational temperature are contingent upon the application, installation circumstances, and environmental factors such as sunlight exposure. For further information, please reach out to Sensolus. Battery life can be affected when devices function for extended periods at the extremes of this range.

## Power supply

### Voltage

Input voltage: 10 - 30 V DC with overvoltage protection

### Typical power consumption

~3mA (idle)

### Max typical power consumption

- 300mA (@10V)
- 70mA (@30V)

### Fuse recommendations

- > 500mA and < 1A fuse
- The TRACK1210 has an internal fuse at the external power input
  - The fuse is rated at 1A (slow blow type)
  - This fuse is NOT resettable
  - Fuse used in the device: Bel fuse 0685T1000

### Cable terminations

Connectors to the power source can be soldered to the cable ends

## Back up battery

### Standard 3 cell
- Battery life depending on operating mode.
- User replaceable battery pack (Li-$SoCl_2$) 12000 mAh
- 2.94 gram (0.1037oz) lithium

## Certifications

### Regulatory
- CE
- FCC
- IC

### Environmental
Drop shock

### Bluetooth 5.0
D068598

### Electrical safety
EN 62368-1

## User interaction

### Device activation
Magnetic activation

### Synchronize remote settings
- Instant: Magnet activation
- Periodic: No user interaction needed

### LED feedback
Green & red LED feedback on the device

## Management services

### Diagnostics
- Back up battery lifetime prediction
- Detailed energy consumption
- Geolocation diagnostics
- Installation
- Communication quality

### Management
- OTA firmware updates over NB-IoT and BLE
- Remote configuration
- Tracker usage profiles
- External environmental sensors

## Application services

- Localization
- Journeys
- Activity
- Utilization
- Connectable with environmental sensors
- Temparture detection
- Tilt detection
- Shock detection

# Firmware configuration

### Communication service
- Data recovery strategy
- Communication conditions

### General configuration
- Rule engine configuration
- Diagnostic levels
- Boot methods
- Accurate time synchronization

### Orientation service
- Orientation detection parameters

### Activity service
- Activity detection parameters

### Shock detection
- Shock algo detection parameters

### Location service
- Motion based,context based, periodic or scheduled
- Configurable update rate and journey detection
- Priority sequence (GNSS, Wi-Fi scanning , Bluetooth geo-beacon)
- GNSS fix parameters
- Indoor detection algo
- Wi-Fi scan strategy
- BLE scan strategy

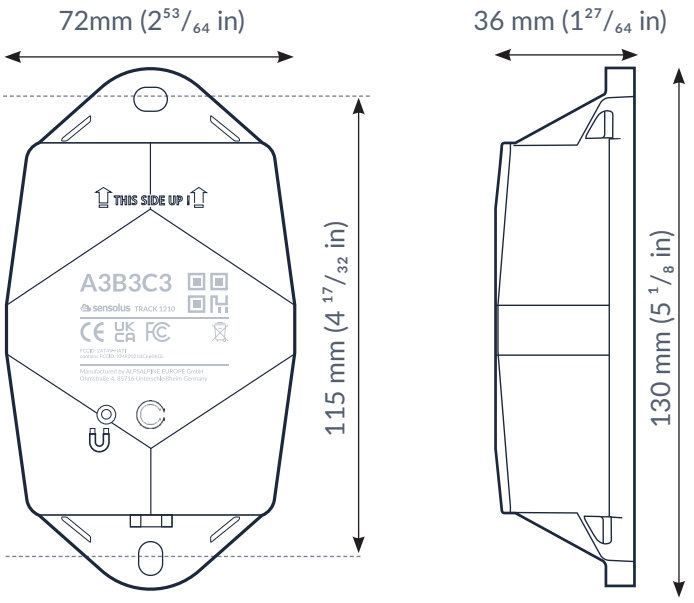
### Environmental sensing
- Polling and aggregation strategy
- Alerts
- Edge processing parameters

### Tamper service
- Virtual tamper algo configuration

# Security

- Device unique encryption keys
- End to end payload encryption Chacha 20
- AES encrypted firmware
- Firmware upgrade allows only signed firmware images

# Tracker measurements




# Accessories

CAB 8600: 6 m power cable for TRACK 1210