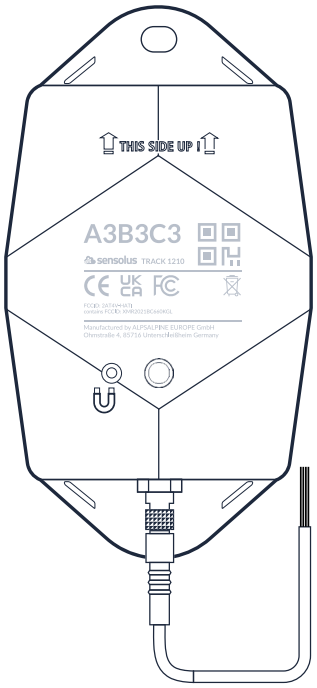
The rugged low-power tracker can be wired to an external power source. It has NB-IoT connectivity and guaranteed data recovery. The tracker provides general localization, zone and high precision. The tracker comes with an on-board temperature sensor and shock detection. Compatible with multiple external 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
- IK07
- 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

Mounting

- 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
IK07

Drop shock and vibration
EN 60068

Operating temperature
-20°C to 60°C (-4°F to 140°F) *

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
Declaration ID in progress

Electrical safety
EN-60905-1

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

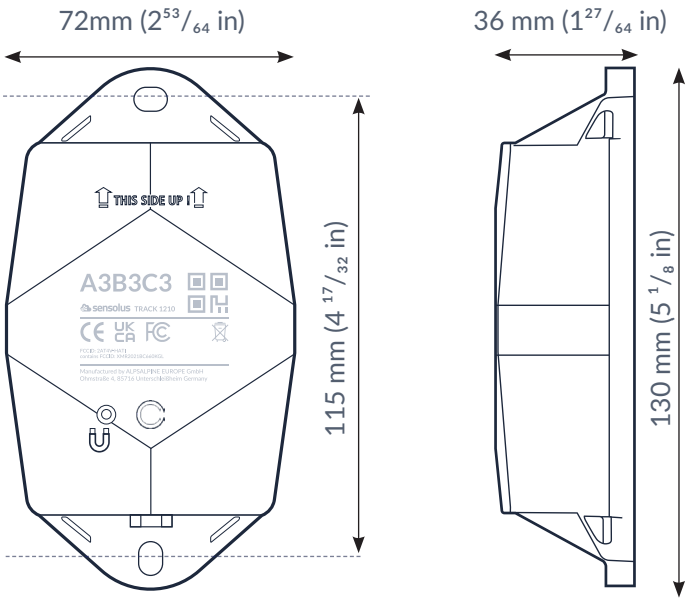
Environmental sensing
- Polling and aggregation strategy
- Alerts
- Edge processing parameters

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