



ACS-Report-NOTE ®

The INEO-SENSE product line includes Lithium Thionyl Chloride batteries (non-rechargeable) which provide long life over a wide temperature range, with low self-discharge rate and high security designs.

1. Battery replacement : PILE LITHIUM TAILLE A

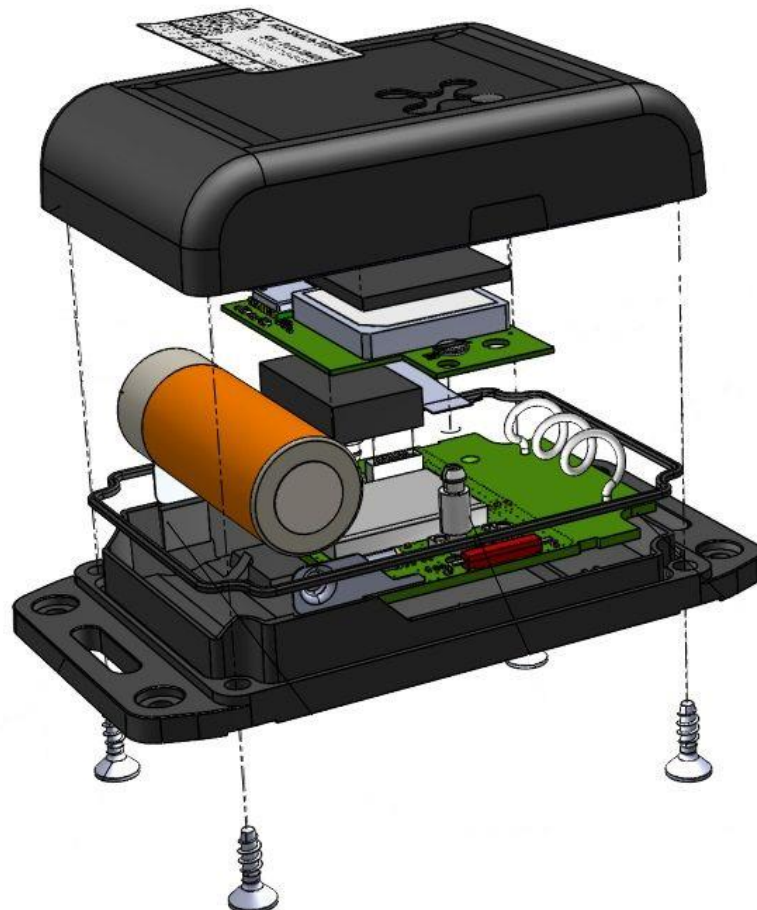
Safe disassembly

Battery replacement of the ACS-Report- NOTE is done in 4 steps :

1. Unscrew the four T15 Torx screws from the bottom hood
2. Remove the upper hood
3. Replace the battery according to polarity

 **Otherwise, components may be at risks**

4. Close and screw tight



2. Battery initialization

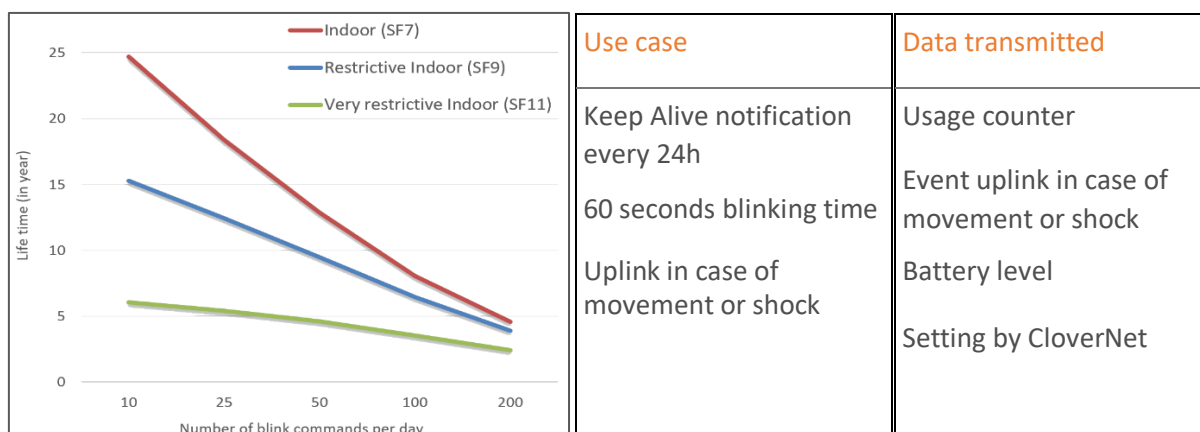
 LoRaWAN downlinks commands on port #1

Battery level initialization is done through a LoRaWAN downlink after replacing the battery.

Request 1501110400000000
LoRaWAN answer uplink 94011100

Initialization can also be done in the INS-Player mobile application through the button *set battery initialization* or the button *initialization after battery change*.

3. Battery lifespan



Though Lithium Thionyl Chloride batteries are versatile and durable, several factors can affect their longevity, including environmental conditions or types of use case.

Their lifespan is an estimate based on the activity of each functional block of the device (sensor, data processing, transmission, ...). Our sensor will not actually measure the battery level status. It will compute the activity of each functional block, which will infer the battery power status, based on the maximum capacity advised by the batteries manufacturer. This will give a good hint as to the battery lifespan by +/- 10%.

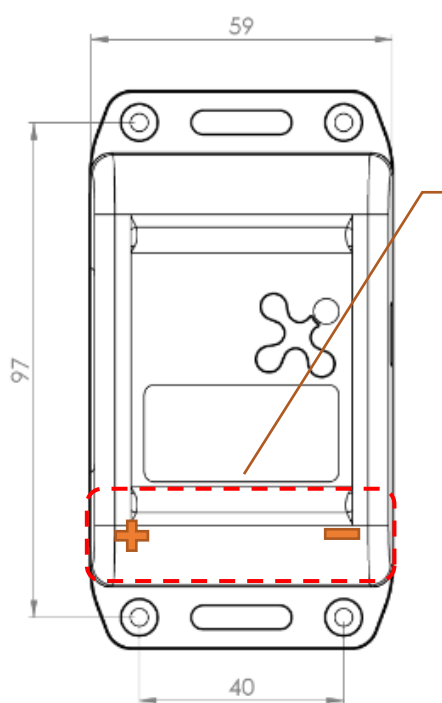
4. Safety measures

Mounting direction

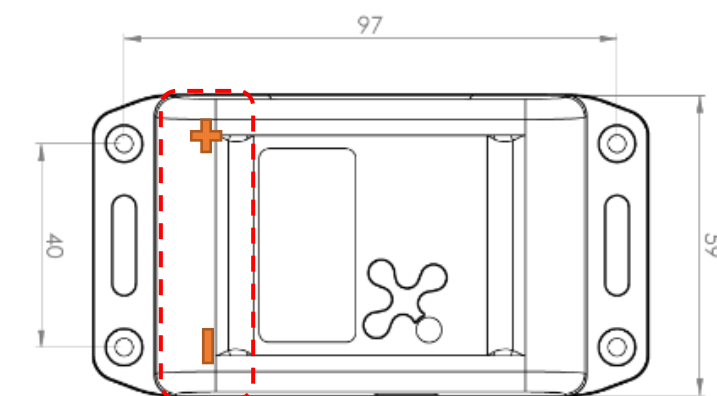
The lithium battery performances are diminished if the positive terminal is placed downwards. It is thus necessary to mount the battery according to the **TOP visual cues** drawn on the back of the device) :

IMPORTANT

- Do not puncture or grind
- Do not subject to excessive mechanical stress
- Do not heat directly, solder or expose to fire
- Do not short-circuit the (+) and (-) terminals
- Do not reverse the polarity
- Do not expose the battery to water or condensation
- Do not throw away without taking the applicable recycling measures



Vertical mounting



Horizontal mounting

Characteristics

- Storage temperature : $-55^{\circ}\text{C} > +85^{\circ}\text{C}$
- Operating temperature : $-20^{\circ}\text{C} > +70^{\circ}\text{C}$
- Voltage : 3.6V
- Weight : 30g
- Capacity : 3500mAh
- Maximum constant current : 500Ma

5. Firefighting measures



- In a fire with lithium batteries, copious amounts of cold water or water-based foam can be used to cool the batteries; these methods are effective in preventing the spread of fire until the fire has progressed to the point that the metallic lithium they contain is exposed to the air (characterized by the appearance of intense red flames). Do not use lukewarm or hot water.
- Lith-X extinguishers (class D) are effective only when a small number of lithium batteries are involved in the fire.
- Do not use CO2 or halon extinguishers.
- Do not dump sand, dry powder or sodium carbonate, graphite powder, or apply a fire blanket.

6. Waste disposal management

Waste disposal according to the local regulations : in most countries, dumping of battery waste in the wild is banned. Users must possibly reach out to governmental agencies or professional organizations.

When used or properly disposed of, Lithium Thionyl Chloride batteries pose no risks to the environment. Please send them to authorized recycling agencies, ideally by carriers obeying the existing environmental legislation.