

Axible

by Intitex

- USER MANUAL & DATASHEET -

SMART MULTIPURPOSE TRACKER



NON-CONTRACTUAL PICTURES

CHANGELOG

Date	Version	Author	Comment
27/08/2019	1.0	T.L	Creation
23/09/2019	1.1	Y.P	Review
04/10/2019	1.2	T.L	Add Security instructions
14/11/2019	1.3	F.G	Review
15/01/2020	1.4	F.G.	Current and Power

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15/02/2021	1.5	S.Z	remove Confidential, from the footnote / Adding the RF exposure conditions
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FEATURES

- Worldwide geolocation Sigfox* and Wifi
- Light sensor (could be used to detect a container opening)
- Temperature measurement
- Battery level monitoring
- Complex motion pattern detection :
 - Crane up / down movements (validation pending)
 - Take off and landing detection
 - Or any other event that can be characterized

*depending on Sigfox Network coverage

BEHAVIOR

DATA

A frame can be sent :

- When a motion pattern is detected
- When a sensor event is detected (temperature, light, pressure, low battery, ...)
- At regular intervals as a "location" frame. (*configurable via Downlink*)
- When the device moves and then stops (*these settings are configurable via Downlink*)
- etc...

MONARCH

Monarch beacon allows to detect Sigfox zone (RCZ) in the world in order to adapt the radiocommunication means. A scan beacon can be done at regular intervals, after a motion pattern or any event detected by the sensors. The listening period can last up to 5 minutes. If the device does not detect a beacon for many days in a row, it stops transmitting frame as it may be in the wrong RCZ.

WIFI LOCATION

A passive wifi scan is performed to detect MAC addresses in the surrounding area. These addresses are sent via Sigfox frames to Axible backend, which requests a location to specialized APIs (Google, Here...).

INSTRUCTION MANUAL

INSTALLATION

The back of the tracker must be magnetized on a metal surface, at a maximum height of 1.80 meters (no part above 1.80 meters). The orientation of the tracker must always be as shown on the sticker.

BATTERY

If the battery is low, **you must not try to replace the battery by yourself**, you must send the device back to Axible Technologies for battery replacement.

According to the safety instructions do not open the case to try to measure the battery voltage.

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Storage at high temperature must be avoided to preserve the battery life time.

MAINTENANCE

To maintain optimal performance of the tracker, you must ensure that the valve and skylight are clean.

SAFETY INSTRUCTIONS

Only authorized personnel can open the case.



DANGER

Any operation performed in the case, in particular any reprogramming operation, requires disconnecting the battery by removing the protective jumper shown in the picture below.



Handle the Sigfox Multipurpose Tracker with care. The Sigfox Multipurpose Tracker can be damaged if it falls, is burned, pierced, crushed.

DO NOT use a damaged Sigfox Multipurpose Tracker.

DO NOT open the Sigfox Multipurpose Tracker and/or try to repair it.

DO NOT try to replace the battery, you may damage the battery and cause overheating and injury.

DO NOT pinch an object or your fingers between the magnet and a magnetic surface.

KEEP the Sigfox Multipurpose Tracker AWAY from extreme heat.

KEEP the Sigfox Multipurpose Tracker OUT of reach of children

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AVOID letting the Sigfox Multipurpose Tracker in direct sunlight.

BATTERY SPECIFIC SECURITY INSTRUCTIONS

Reminder: **only authorized personnel can open the case and access the battery.**

The battery contains flammable materials such as lithium and organic solvent and performing any of the above actions could cause it to ignite explode or become damaged.

DO NOT recharge, short-circuit, disassemble, deform, heat or place the battery near a direct flame.

Only personnel authorized, to perform a battery voltage measurement use a high impedance (1M or higher) voltmeter.

OTHER INSTRUCTIONS

Dispose of Sigfox Multipurpose Tracker and its battery according to local environmental law.

When throwing the battery away be sure to cover it with tape. If the battery is contacted with other metal objects, it could cause fire or become damaged.

EXTERNAL STICKER SYMBOL DESCRIPTION

The following symbols are used on the sticker:

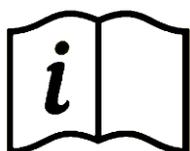
- CE Mark : European certification
- FCC Mark : United state certification
- Sigfox ready mark : Sigfox ready certification
- WEEE : Waste Electronic and Electrical Equipment



INTERNAL STICKER SYMBOL DESCRIPTION



DANGER, WARNING



**YOU MUST READ AND FULLY UNDERSTAND
THE USER MANUAL BEFORE ANY OPERATION**

FCC CERTIFICATION

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS :

- (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND
- (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

NOTE : THE GRANTEE IS NOT RESPONSIBLE FOR ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY

RESPONSIBLE FOR COMPLIANCE. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT

THIS DEVICE CONTAINS LICENCE - EXEMPT TRANSMITTER(S)/RECEIVER(S) THAT COMPLY WITH INNOVATION, SCIENCE AND ECONOMIC DEVELOPMENT CANADA'S LICENCE - EXEMPT RSS(S). OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS :

- (1) THIS DEVICE MAY NOT CAUSE INTERFERENCE.
- (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION OF THE DEVICE.

L'ÉMETTEUR / RÉCEPTEUR EXEMPT DE LICENCE CONTENU DANS LE PRÉSENT APPAREIL EST CONFORME AUX CNR D'INNOVATION, SCIENCES ET DÉVELOPPEMENT ÉCONOMIQUE CANADA APPLICABLES AUX APPAREILS RADIO EXEMPTS DE LICENCE. L'EXPLOITATION EST AUTORISÉE AUX DEUX CONDITIONS SUIVANTES :

- 1) L'APPAREIL NE DOIT PAS PRODUIRE DE BROUILLAGE ;
- 2) L'APPAREIL DOIT ACCEPTER TOUT BROUILLAGE RADIOÉLECTRIQUE SUBI, MÊME SI LE BROUILLAGE EST SUSCEPTIBLE D' EN COMPROMETTRE LE FONCTIONNEMENT.

TECHNICAL SPECIFICATIONS

MECHANICAL	
Product dimensions	150 x 110 x 46 (mm)
Product weight (approx)	350g
Protection	IPX0
EMBEDDED SENSORS	
Accelerometer	Range $\pm 2g$ to $\pm 16g$ / Max sensitivity 1mg/digit
Pressure	Range 300 to 1100hPa / Resolution 0.16Pa / Accuracy ± 1 hPa
Temperature	Range -20°C to 65°C / Resolution 0.01°C / Accuracy $\pm 0.5^{\circ}\text{C}$ at 25°C
POWER SUPPLY	
Number of batteries & type	1 x Non-rechargeable lithium thionyl chloride battery (ER26500M)
Battery capacity	6000 mAh
Battery voltage	3.6V / Discharge cut-off 3.0V
Battery standards compliance and marks of conformity	Compliant with IEC 86-4 safety standard, UL1642, EN60086-4:2015 and UN38.3 standards UL Component Recognition File Number MH46165 
OTHER	
Operating temperature	-20°C to $+60^{\circ}\text{C}$
Storage temperature	-20°C to $+60^{\circ}\text{C}$ (Keep bellow 30°C as far as possible to preserve the battery life time)
Connectivity	Sigfox RC1, RC2, RC3, RC4, RC5 (Monarch)
RF Exposure	This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and any part of your body.
Geolocation	Sigfox Atlas, Wifi passive scan
Fixing system	Magnet

Certifications	CE, FCC, Sigfox
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