

SMADÉ

Hot Location Tracker (LC03)

Instructions for use



IFU-LC03-01-REV08

Instruction Before Usage

To ensure optimal connectivity, trackers must be unpacked 24 hours before installation in a location with network coverage.

Avoid stacking multiple trackers together for the best results.

SMADE supplies stainless steel rivets, passivated for optimal performance and durability. If opting for alternatives, ensure they meet the same standards.

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1. Document Overview

This document serves as instructions for use of SMADE Hot Location Tracker (LC03). SMADE Hot Location Tracking Solution combines hardware, software, network and service to keep track of all your sterilizable assets at all times.

2 Device Specifications

2.1. Safety requirement on battery

This appliance contains a lithium battery which is not replaceable.

Warning: Disposing of a lithium battery in a fire, in a hot oven, or any crushing or cutting action can lead to a dangerous explosion, posing a serious risk of fire and injury.

Warning: A lithium battery exposed to extremely low air pressure may cause an explosion or the leakage of flammable liquids or gases, posing a serious risk of fire and explosion.

Warning: Keeping a lithium battery in a very high-temperature environment ($> 140^{\circ}\text{C}$) can lead to an explosion or the leakage of flammable liquids or gases, posing a serious risk of fire and explosion.

2.2 Feature Overview

SMADE Hot Location Tracker (LC03) is configured to collect its position and transmit it a few times a day when it is in 'usage temperature.' It is capable of withstanding High-Temperature cycles and reporting its position after each detected event.

SMADE Hot Location Tracker (LC03) supports a wide array of location tracking methods including:

- Location tracking via Wi-Fi location services
- Location tracking via cellular network services

2.3 Technical data



- Housing material: biocompatible PPSU ([RADEL R-5100 from SOLVAY](#))
- Operating temperature: -20°C to +138°C/ -4°F to +280.4°F.
- Operating pressure range: up to 3.0 bar.
- Internal firmware: updatable over the air, configurable parameters over the air
→ contact our support team at mike@smade.io for a specific configuration.

2.4 Attachment

Attachment of SMADE Hot Location Tracker (LC03) to your assets

SMADE supplies stainless steel rivets, passivated for optimal performance and durability. If opting for alternatives, ensure they meet the same standards.

- 1) Rivet the stainless steel attachment into your asset.
We advise the use of semi-tubular rivets (bored rivets) or blind rivets as well.
- 2) Clip the tracker into the attachment.
- 3) Ensure the tracker is well tightened into the attachment.
If necessary, adjust the brackets distance to reinforce the tightening.

Need more help attaching your trackers? [Use our installation instructions](#) or contact our team at mike@smade.io for assistance.

2.5 Marking Specifications

The serial number of the tracker is marked on its back.



The marking contains a scannable QR code that provides information about the tracker.

Long life battery

SMADE Hot Location Tracker (LC03) has been designed to ensure high performance in the metallic environment of a surgical kit and long-term reliability.

Auto data transfer

SMADE Hot Location Tracker (LC03) eliminates manual data transmission. It seamlessly delivers data via cellular networks, eliminating RFID hassles.

High-temp resistance

SMADE Hot Location Tracker (LC03) is engineered to endure extreme temperature, humidity, and pressure conditions within the autoclave environment.



Do not trash

Please check [“Device Disposal” section \(7\)](#).

2.6 Device Data Storage

SMADE Hot Location Tracker (LC03) contains internal memory for storing collected data in-between cloud connections. This internal memory is used to implement a database for all of the tracker data including, but not limited to: sensor data and location data.

In-between cloud connections, any data that is generated is stored in the database. Should the database reach its maximum capacity of a few weeks, any new data will replace the oldest data entry in the database. When a cellular connection is established, the data is transmitted to the cloud, and the database is emptied.

2.7 Data transmission process

In order to preserve its battery life, SMADE Hot Location Tracker (LC03) will not continuously transmit data. It is set to scan and transmit recorded data either periodically or after having been exposed to high temperature events.

In certain situations, SMADE Hot Location Tracker (LC03) may fail in transmitting data (such as staying in a low network coverage area). In this case, SMADE Hot Location Tracker (LC03) is set to retry transmission later.

If this retried transmission(s) fails as well, then SMADE Hot Location Tracker (LC03) will switch back to its standard operation mode and attempt to transmit after the defined period of time.

No data is lost! If it fails in transmitting, SMADE Hot Location Tracker (LC03) records data in its internal memory to transmit it later.

2.8 S-HUB

S-HUB is our proprietary platform that aggregates all your data. Collected raw data from the hardware are autonomously transferred to S-HUB and processed. On S-HUB, you will find all of your data logs, as well as maps indicating your assets' current location. Additionally, the data is transformed into analytics, allowing you to make data-powered decisions.



3. Battery Considerations

3.1. Introduction

This section serves as an overview for everything related to the battery lifetime of SMADE Hot Location Tracker (LC03).

SMADE Hot Location Tracker (LC03) uses a non-replaceable lithium-metal battery pack.

3.2. Disclaimer

The battery life of the SMADE Hot Location Tracker (LC03) depends on multiple factors, including, but not limited to:

- Battery condition
- Cellular signal strength
- Cellular Reporting rate
- Ambient temperature

This product utilizes a non-replaceable lithium-metal battery pack as the primary energy source. Ensure that all of the safety precautions listed below are followed at all times during device operation and storage:

- Do not expose the device or batteries to excessive heat (over +138 °C/ 280.4 °F) or open flame.
- Do not expose the batteries to water, or any other liquid substance.
- Do not puncture or cut the device or batteries within.
- Do not crush the batteries, or apply excessive force to the enclosure of the device.
- Do not connect the batteries' positive and negative terminals to one another with a metal object, such as a wire.
- Do not attempt to desolder the batteries from the circuit board, and do not solder anything directly onto the battery contacts.
- Do not attempt to make any modifications to the device or batteries.
- Do not attempt to disassemble the device or batteries.

WARNING: Failure to follow any and all of the safety precautions listed above may result in the device and batteries overheating, igniting, or exploding, and may cause serious injury or damage to humans, animals, and property.

4. Export Information

4.1. Harmonized Tariff Schedule Code

Harmonized Tariff Schedule Code: 8517.62.0000

4.2. FCC and IC Compliance

SMADE Hot Location Tracker (LC03) is compliant with USA FCC and Canada ISED:

Orderable Device	FCC ID	IC ID
SMADE Hot Location Tracker (LC03)	2BLRQLC03LC042K24	<i>In Progress</i>

The FCC certificate is available at the following link by searching for the FCC ID listed above:

<https://www.fcc.gov/oet/ea/fccid>

The IC ID certificate is available at the following link by searching for the IC ID listed above:

<https://sms-sgs.ic.gc.ca/equipmentSearch/searchRadioEquipments?execution=e1s1&lang=en>

4.3. FCC Regulatory Notices:

Note : This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures :

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- This equipment complies with FCC's radiation exposure limits set forth for an uncontrolled environment under the following conditions:
 - This equipment should be installed and operated such that a minimum separation distance of 20cm is maintained between the radiator (antenna) and user's/nearby person's body at all times.
 - This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
- 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 undesired operation.

4.4. ISED Regulatory Notices/ Avis réglementaires d'ISDE

CAN ICES-3 (B) / NMB-3(B):

This device complies with Canadian ICES-003 Class B and RSS-210.

Operation is subject to the following two conditions :

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 et RSS-210 du Canada.

Le fonctionnement est soumis aux deux conditions suivantes :

1. Cet appareil ne devra pas causer d'interférences, et
2. Cet appareil doit accepter toutes les interférences, y compris celles pouvant entraîner un dysfonctionnement.

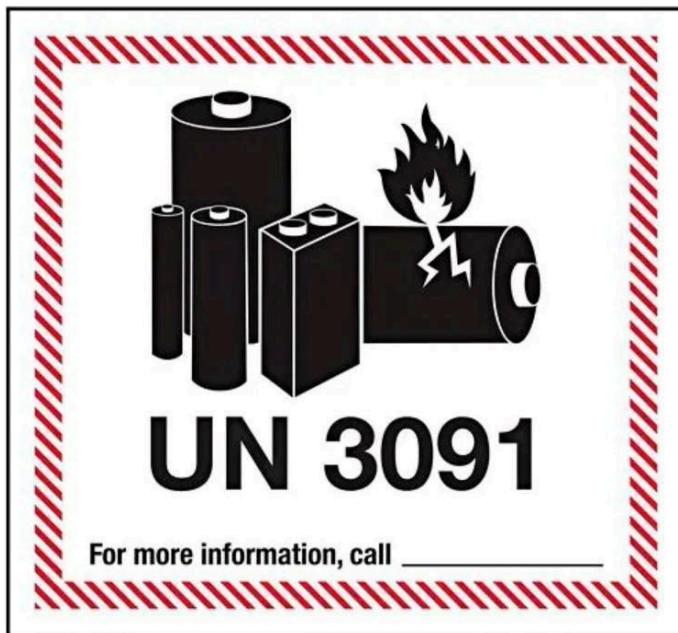
5. Shipping Requirements

Customers shipping SMADE Hot Location Tracker (LC03) domestically or internationally must follow the guidelines for the transportation of lithium batteries contained in equipment.

The regulations that govern the transportation of primary lithium batteries and cells include the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA) and the International Maritime Dangerous Goods Code (IMDG). In addition to international requirements, domestic regulations must be adhered to. The United States Department of Transportation (DOT) regulates the shipment of lithium cells and batteries domestically under part 49 of the Code of Federal Regulations (49 CFR). In the European Union the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) applies.

When shipping LC03 Hot Location Trackers by road, local regulations shall apply. In general, a strong outer packaging shall be used, unless the battery is afforded equivalent protection by the equipment which it is contained in.

The label depicted below must be attached to each box of the shipment in a clearly visible location.



Exceptions:

When shipping no more than two (2) units in the same box and no more than two (2) boxes in the same consignment, no specific regulations apply.

For more information, consult domestic transportation regulations.

When transporting items containing lithium cells and batteries by air, IATA Dangerous Goods Regulations must be adhered to. The provisions of the IATA DGR require cells and batteries to meet the requirements of the UN Manual of

Tests and Criteria, Part III Subsection 38.3. SMADE can provide a Transport Certificate from the manufacturer acknowledging that a specific lithium cell or battery meets the testing requirements.

When shipping SMADE Hot Location trackers (LC03) by air some exemptions to the general requirements on lithium batteries apply :

Packaging Regulations

- The equipment must be packed in strong rigid outer packaging and secured against movement within it.
- Where multiple pieces of equipment are packed in the same outer packaging, each piece of the equipment must be packed and protected against contact with other equipment so as to prevent damage.

Shipment Regulations

- A single package must not have more than 147 devices in total, which is equivalent to 5 kg of lithium batteries.
- The following statement must be added to the waybill of the shipment.

"Lithium-metal Batteries in compliance with Section II of PI 970"

The label depicted below must be attached to each box of the shipment in a clearly visible location.

Please refer to the following document for more information regarding these regulations:

<https://www.iata.org/contentassets/05e6d8742b0047259bf3a700bc9d42b9/lithium-battery-guidance-document.pdf>

6. Device Usage Disclaimer

The use of this device in any manner other than those specified or recommended by SMADE, may impair device operation, or cause permanent damage to person, property, or the product.

SMADE Hot Location Tracker (LC03) operating temperatures range from -20°C to +138°C/ -4°F to +280.4°F

SMADE assumes no responsibility for damage or destruction of the trackers due to improper use or negligence, nor does it assume responsibility for damage or injury caused to person or property caused by improper or negligent use of the tracker.

Please adhere to the following safety guidelines when handling the tracker:

- Handle the tracker with care when attaching it to the tray to avoid injury.
- Use only the designated cleaning products for the tracker, consistent with those used for cleaning the equipment it is installed in.
- Be aware that the tracker will reach high temperatures after autoclaving. Exercise caution to prevent burn hazards.

7. Device Disposal

In any case of disposing of the device, we kindly request that you return the original tracker to SMADE in alignment with our policies. Please ensure that you adhere to all applicable policies and environmental guidelines for electronic device disposal in your geographic area.



This symbol on the product or its packaging indicates that this product is not to be disposed of with household waste, according to the Waste Electrical and Electronic Equipment (WEEE) Directive 2012/19/EU and your national law. This product should be handed over to a designated collection point or to an authorised collection site for recycling Waste Electrical and Electronic Equipment.

8. Contact Information

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hello@smade.com