



# **CONTAINER LOCK®**

# PRODUCT DESCRIPTION JANUARY 2020



#### 1. Product Overview

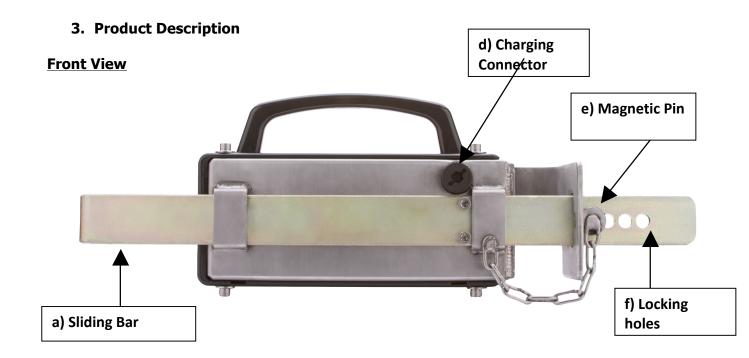
The LOCK V4.0 High Security Electronic Container Lock works together with a GSM/GPRS/GPS CelloTrack unit and it's based on a rugged, massive, harsh weather resistant container lock that secures the CelloTrack unit from harsh blows and enables it to be quickly and easily installed on the container doors so as to track and monitor through strategically located sensors, any tampering or unauthorized door opening attempts.

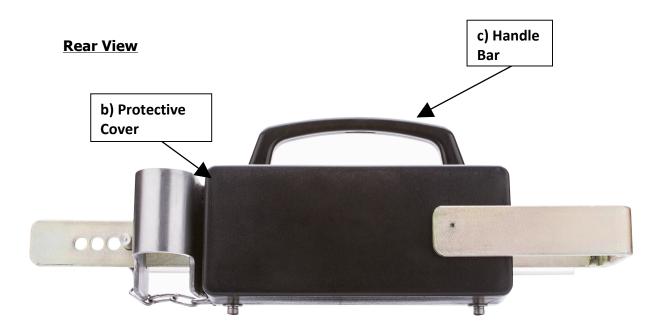
LOCK's main purpose is to monitor and control cargo containers throughout the whole supply chain without interfering with logistics operations such as authority's inspections, transport, loading and unloading, etc; since anyone can easily install or uninstall the Lock in less than 10 seconds, without having to open the container for that purpose.

This new product enables cargo security services companies to offer a whole new set of innovative services since, it allows the customer (Cargo Owner) to control and monitor in real time it's own cargo independently from the vehicle that transports it (Ship, truck, train, etc), leaving trace and evidence throughout the whole supply chain (Warehouses, routes, ports, parking lots, etc), helping identify bottlenecks and cost saving opportunities as well as securing in an effective way their cargo from burglary and drug contamination.

#### 2. Highlights

- Supports all rich functionality of the CelloTrack Power such as movement detection, controlling transmission rate, 3 years battery life, IP67 and more.
- Massive and rugged design protecting the CelloTrack from harsh blows.
- Stainless Steel structure to ensure harsh weather and deterioration resistance through time.
- Opening/Closing lock detection.
- Manipulation and Tampering detection sensor.
- Very easy and short (less than 10 seconds) installation process without the need to open the container.
- Battery charging via external connector.





a) **Sliding Bar:** It slides to lock / unlock the Lock on the container doors. When the bar slides to the "closed" position, the sensors trigger to indicate the CelloTrack that the Lock has been locked. When the bar slides to its "open" position, the sensors trigger to indicate that the Lock has been unlocked.

- b) **Protective Cover:** Its highly resistant design and material protects the CelloTrack from harsh blows.
- c) **Handle Bar:** Helps to easily carry and manipulate the Lock.
- d) **Charging Connector:** It enables the Cellotrack battery charging without the need to open the Lock.
- e) **Magnetic Pin:** When introduced into the locking holes, it secures the sliding bar on its "closed" position.
- f) **Locking holes:** There are three different locking holes used to place the magnetic pin and tightly secure the sliding bar on its locked position.

#### 4. Specifications

#### 4.1 Lock Hardware:

- a) Highly resistant and reliable reed switch sensor strategically placed to detect the Lock's opening, tampering and manipulation.
- b) Sliding and locking bar with reinforcements to prevent it from bending and being manipulated.
- c) Materials:
  - I. Main Structure: Stainless Steel.
  - II. Sliding Bar: Reinforced HR Steel, dimensions 1 1/2" x 1/4"
- III. Protective cover: High Impact Thermoplastic.
- d) Weight (Including CelloTrack Unit): 3.5Kg
- e) Lock is designed to support dry van types of ISO6346 containers. For other type of containers the lock may not be optimal or possibly not even functional.

#### 4.2 CelloTrack GPS/GSM Tracking Unit:

#### a) 3D Accelerometer to sense movement for two purposes:

- Detect movement in unauthorized times according to cargo's security protocol.
- Change the transmitting rate when cargo is in still/movement mode to save battery life. When the container is in still mode transmission is performed twice a day only, unless there are any special events such as tampering or opening of doors.
- b) 13,600mAh capacity Lithium Ion rechargeable Battery, assures up to 3 years without recharging.
- c) Input voltage: 12 Volt / 1 Ampere (external charge)

#### d) Communications:

- GSM Modes Quadband GSM/GPRS class 10, TCP / UDP-IP, PDU SMS
- Antenna Internal, quad band GSM antenna

#### e) GPS:

- Technology Internal module, SiRFIII GSC3F/LP single chipset
- Sensitivity (tracking): -159dBm
- Acquisition (normal): Cold <42Sec, Warm<35Sec, Hot<1Sec</li>

#### f) Certifications:

- IP67 Compliance
- Vibration, Impact, Humidity: ISO 16750
- FCC: Part 15 Subpart B, PArt 22/24 compliant
- CE:
  - a. CE EMC & R & TTE according to
  - b. 89/336/EEC or 1999/5/EC
  - c. CE Safety EN60950-1:2001+A11:2004
- PTCRB: TRP, TIS, Spurious & harmonics emission



### 5. Lock installation process in a container.

a. Posible installation places.



b. Remove the magnetic Pin and move the sliding bar to its "open position".





c. Install the Lock in the right hand side central container bar as shown in the picture, and then move it forward in between both container bars.





d. Move the sliding bar to its closed "position". Then place the magnetic pin in the locking hole that leaves the sliding bar with the least movement possibility.





e. As an additional security measure, it's possible to install a bottle seal as shown in the following pictures.





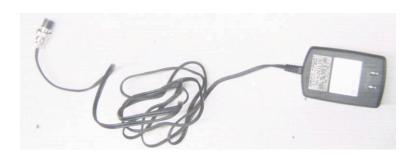
#### f. CelloTrack battery charging

To recharge the CelloTrack batteries, simply remove the rubber cap to access the three pin charging connector and plug the wall charger supplied. As an alternative, an "off the shelf" wall charger can be used with the specifications stated in the "Lock – Cellotrack

connection diagram" document.

Input voltage: 12 Volt / 1 Ampere

To guarantee a full charge, leave the charger connected for at least 24 hours.





#### **6. Intellectual Property**

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