CelloTrack Security Seal Product Overview

Cellocator Division
Pointer Telocation Ltd.

Proprietary and Confidential

Version 1.0

Revised and Updated: September 17, 2015

POINTER

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1 Introduction

1.1 About this document

The document describes the CelloTrack Security Seal and is targeted at fleet managers and technical personnel. It includes sections describing the highlights, setting up and installation of the Security Seal.

1.2 Overview

The CelloTrack Security Seal's main purpose is to monitor and control any door intrusion attempts, and acts as a high level security electronic seal. Through the use of an Electronic Wire Rope, the CelloTrack Security Seal quickly installs into any type of truck, trailer, warehouse or critical zone doors, and detects the seal opening, wire rope cutting or tampering to alert of any unauthorized intrusion attempts. It also helps control and manage evidence of door access events as part of a complete management solution.

The CelloTrack Security Seal is based on a CelloTrack Power unit, which is contained in a rugged, massive, harsh weather-resistant lock to protect the unit from harsh blows. It can protect and secure different assets, including assets in transit and stored cargo; critical and high value equipment, vulnerable door access, and so on.

1.3 Highlights

- Supports all the rich functionality of the CelloTrack Power, such as movement detection, controlling transmission rate, a 3 year battery life, IP67, and more.
- Massive and rugged design, incorporates replaceable rubber bumpers into the seal chassis to protect the CelloTrack from harsh blows, making the seal virtually indestructible.
- A combination of high density plastic and a stainless steel structure ensures harsh weather and deterioration resistance over a long period of time.
- Hanging hook for quick and easy installation.
- Electronic Wire Rope tampering and cutting detection.
- Nylon coated, 3/16" stainless steel Electronic Wire Rope, ensures opening/closing lock detection as well as tamper detection.
- CelloTrack battery charged via an external connector, ensuring there is no need to open the seal.
- An operating button and LED window gives access to the CelloTrack LED information and button.

1.4 Abbreviations

Abbreviation	Description

1.5 References

#	Reference	Description
1.	CelloTrack T Installation Guide	
2.	CelloTrack T Family Overview	

1.6 Revision History

Version	Date	Description
1.0	17/9/2015	Preliminary draft

2 Product Description

2.1 Security Seal

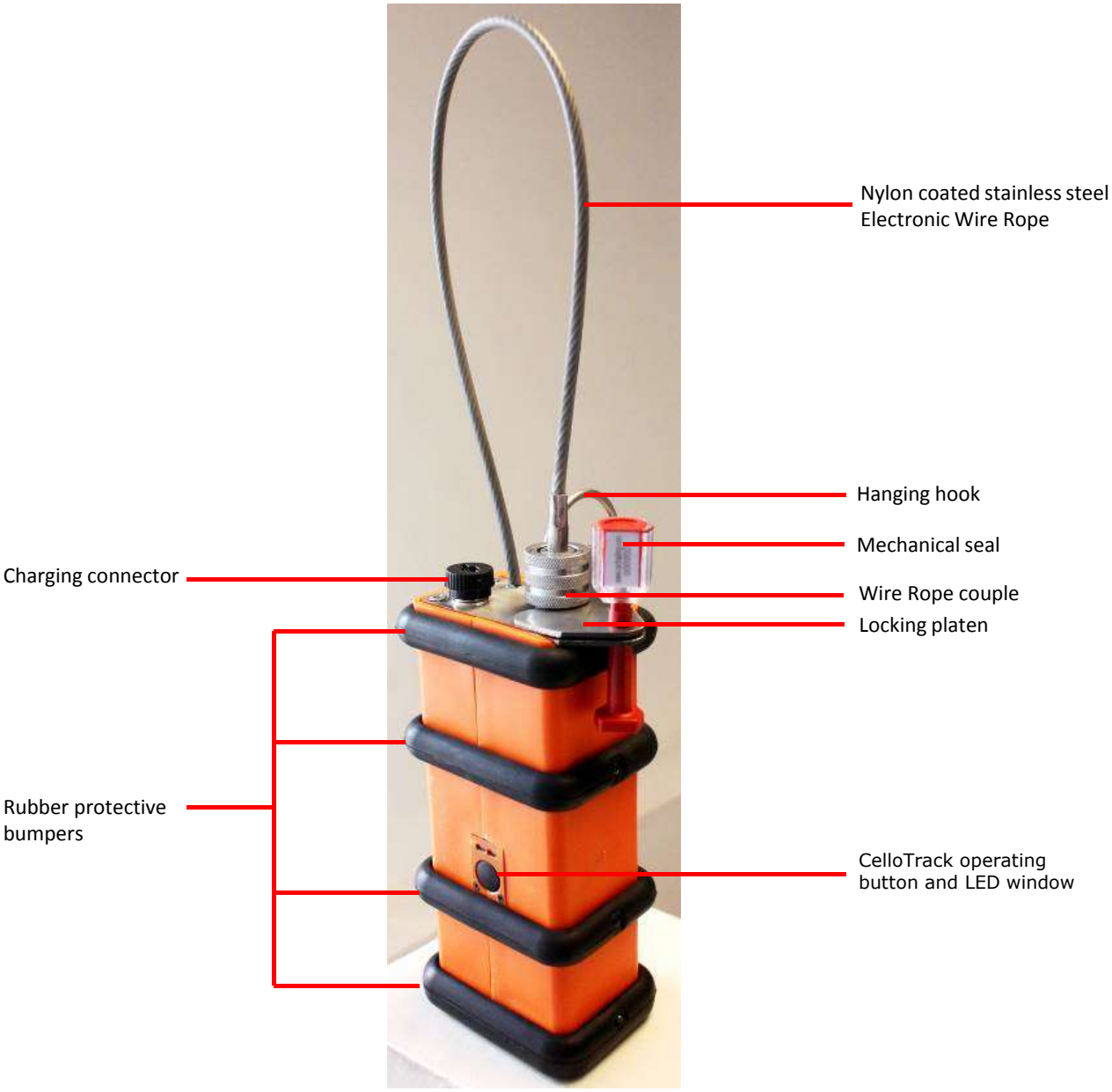

Figure 1: The CelloTrack Security Seal

- **Electronic stainless steel wire rope:** The nylon-coated 3/16” gauge (1/4” including the coating) stainless steel Electronic Wire Rope is the main and most important component since it is the component which will be cut or tampered with. Implementing a unique, technical solution, it is also immune to any attempts to fool the system when trying to cut the rope using a bridging approach.

- **Hanging hook:** The hanging hook is used to hang the seal, especially when intended for installation on any moving vehicle's doors. It helps prevent excessive movement and oscillations.
- **Charging connector:** The connector enables charging of the CelloTrack battery without the need to open the CelloTrack Security Seal.
- **Mechanical seal:** The mechanical seal's purpose is to keep the locking platen in its LOCKED position. A mechanical lock can also be used for this same purpose.
- **Wire rope couple:** The couple is used to couple the wire rope to the seal's main chassis. It has an automatic mechanism which enables easy coupling with one hand.
- **Locking platen:** The platen is used to lock the Wire Rope coupling mechanism and prevent the wire rope from getting detached, therefore keeping the lock from being opened.
- **CelloTrack operating button and LED window:** The operating button and LED window provides access to the CelloTrack LED information and enables the main button to be operated.

2.2 Power Adapter

The power adapter, which can be found inside the Container Lock, is used for charging the CelloTrack battery. It utilizes a connector which fits the Container Lock charging connector; the red wire connects to the charger V+ and the black wire connects to the charger GND.

Figure 2: Power Adapter

2.3 Cable Ties and Screws

Two cable ties and several screws, which are located inside the Security Seal, are needed for the Security Seal set up, as described in the *Setting up the Security Seal* section.

3 Setting up the Security Seal

This section describes the procedure for inserting the SIM into the CelloTrack unit in the Security Seal itself. Note that the Security Seal will come with the CelloTrack already connected to the platen wires and already mounted on the platen; the cable ties and charging adapter are also included as part of the package.

➢ **To set up the Security Seal:**

1. Remove the two screws from the operating button and LED window and remove the window, as shown below.

Figure 3: Removing the Operating Button and LED Window

2. Remove the four screws shown in the image below.

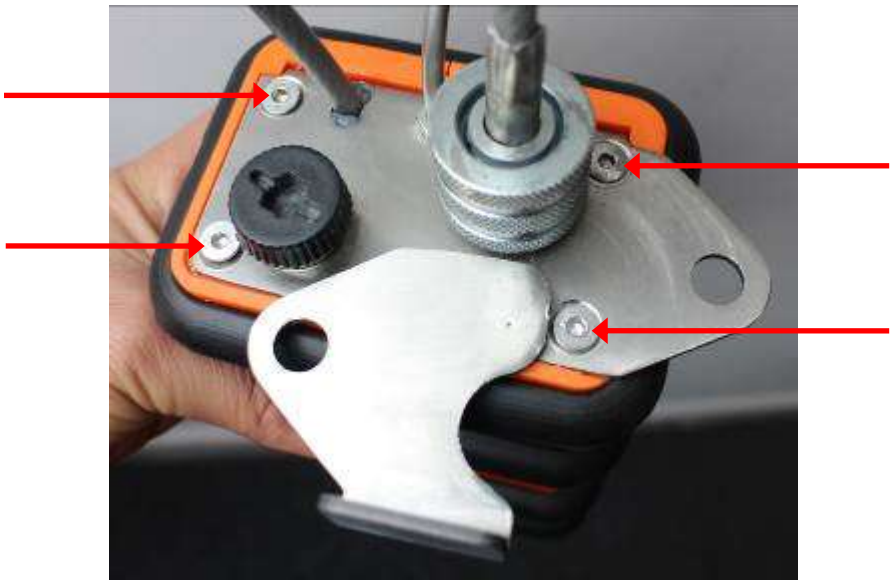

Figure 4: Removing the Security Seal screws

3. Remove the steel platen (with the CelloTrack unit).

Figure 5: Removing the Steel Platen

4. Carefully remove the CelloTrack from its cradle.

Figure 6: Removing the Unit from the Cradle

5. Loosen the CelloTrack unit screws and remove the back cover of the CelloTrack unit.

NOTE: Make sure the SIM card is not PIN protected.

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6. Prepare the SIM card. If the SIM is PIN protected, first insert it into a cellphone and disable the PIN code.
7. Gently insert the SIM card into the SIM holder.
8. Close the unit and make sure not to damage the battery wires while closing it.
9. Insert the eight screws. First, tighten the central screws and then the remaining screws. Tighten screws to a torque of 4 kgf-cm (kilogram force per centimeter) which is approximately 0.4 Nm (Newton per Meter).
10. Replace the CelloTrack device securely back in the cradle, as shown in Figure 6. Make sure that the plastic brackets correctly secure the CelloTrack in its cradle; the unit should "click" into place.
11. Secure the CelloTrack to the cradle using cable ties, avoiding undesired detections due to vibrations or harsh strikes.
12. Insert the steel platen with the CelloTrack installed into the plastic cover and then secure the four screws that were previously removed (in Step 2).

13. Install the operating button and LED window into the plastic cover and then place and secure the screws, as shown below.

Figure 7: Install the Operating Button and LED Window

14. The Security Seal is now ready to be installed and activated.

4 Installation of the Security Seal

This section describes the procedure for installing the CelloTrack Security Seal on a truck's cargo doors.

➤ **To install the Security Seal:**

1. Open the lock by detaching the wire rope from the main chassis, first turning the locking platen clockwise and then pressing down the couple, as shown in the following images.

Figure 8: Detaching the Wire Rope

2. Pass the wire rope through the truck door's handle bar.

Figure 9: Passing the Wire Rope through the Truck Handle Bar

3. Reconnect the wire rope to the couple to close the seal.

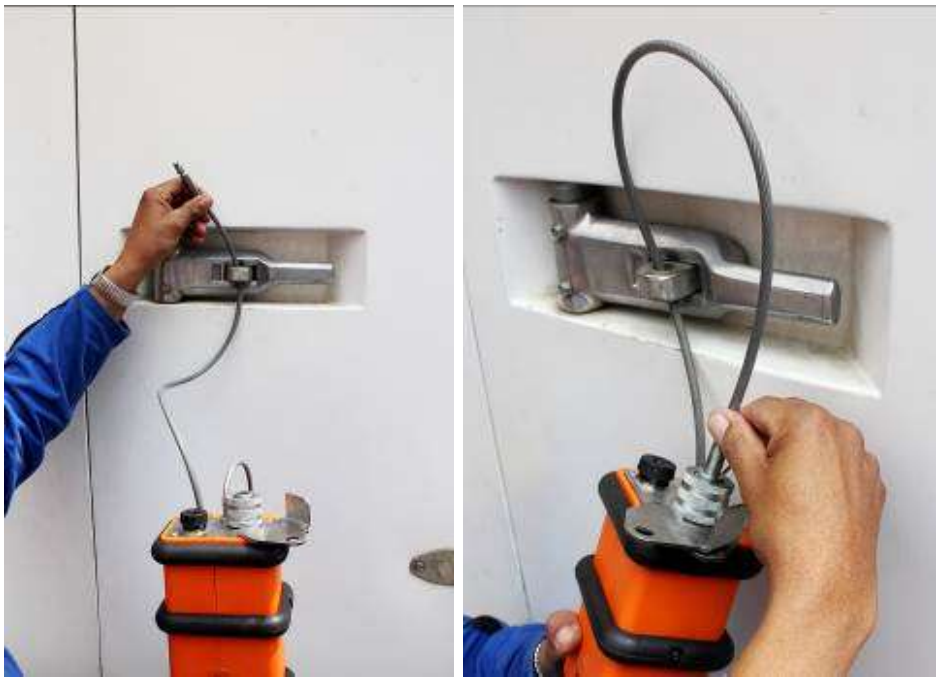

Figure 10: Closing the Security Seal

4. Turn the locking platen counter clockwise until the holes are lined up, and push a mechanical seal (or lock) through the platen to secure it in its closed position. Note that the seal or lock should be provided by the installer.

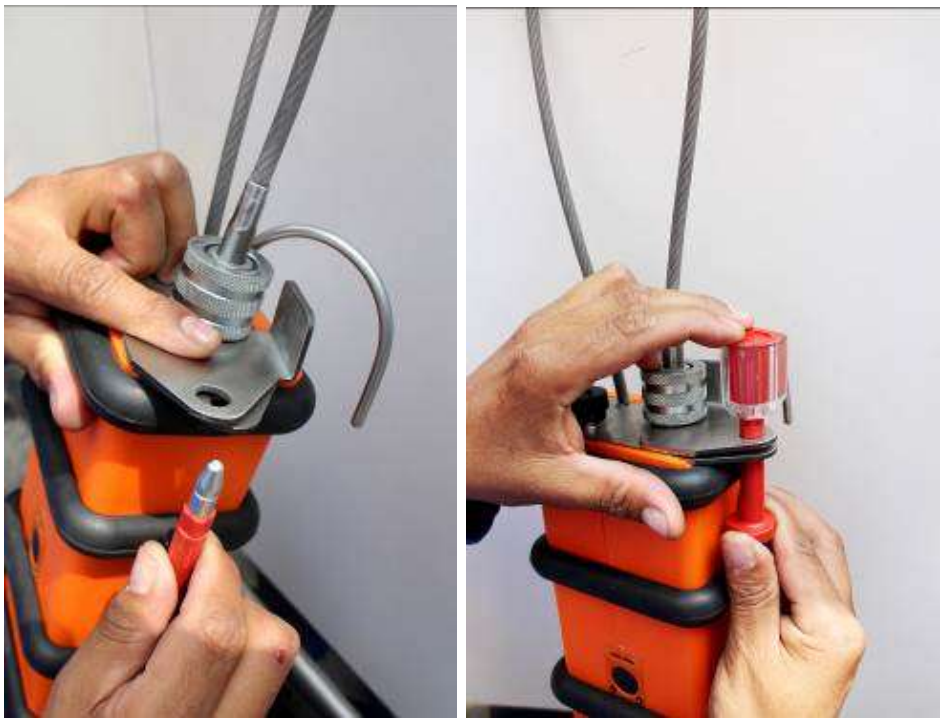

Figure 11: Securing the Security Seal

5. Place the hanging hook though the truck door's handle bar overture and hang the seal from it.

Figure 12: Hanging the Seal from the Truck Door Handle

6. Activate the CelloTrack by pressing the Front Button (FB) and holding it for more than 3 seconds. Please refer to the CelloTrack T Installation Guide for more information regarding activating and deactivating the CelloTrack unit.
7. To uninstall the Security Seal, simply perform the steps above in reverse order.

5 CelloTrack Battery Charging

5.1 Charger Requirements

The power supply for charging the Security Seal battery should be an off-the-shelf charger supporting 12v / 24v and at least 1A. It is recommended that the charger utilizes a LED that indicates when charging is complete.

5.2 Charging Instructions

To recharge the CelloTrack battery, remove the rubber cap of the Security Seal charging connector (indicated below). Connect the power adapter to the charging connector and connect the power adapter wires to the charger.

To guarantee a full charge, leave the charger connected for at least 24 hours or until the charger LED indicates that charging is completed.

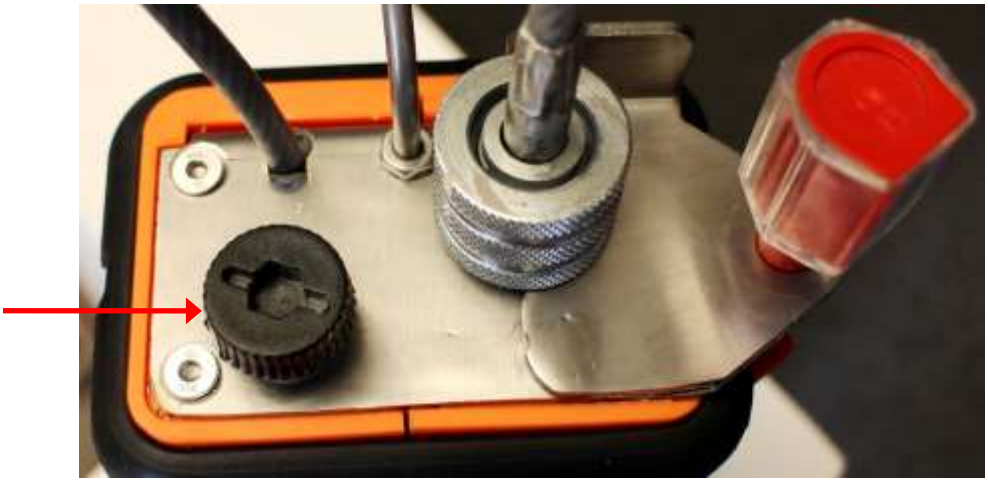

Figure 13: Charging the CelloTrack Battery

6 Specifications

The main structure of the CelloTrack Security Seal consists of the following materials:

- Locking platen material: stainless steel 304, gauge 11
- Enclosure material: High density Polyethylene
- Electronic Wire Rope material: 3/16” stainless steel with nylon coating (1/4”)
- Wire Rope Couple material: stainless steel
- Weight (including CelloTrack unit): 3kg (approximately)