

IOX-KEYBOX

For the most up-to-date version of this document, visit: <https://gtb.link/RywD>

The IOX-KEYBOX enables shared vehicle access and works seamlessly with Geotab's Keyless Platform.



Features

- Allows the vehicle key fob to be integrated without damage.
- The key can be extracted from and returned to the unit for vehicles using a bladed key, or to provide the key to the driver during use.
- The IOX-KEYBOX unit can be moved to vehicles with the same key fob type (size, shape and unlock/lock button placements); in future (not yet supported), units can be adapted to new key fob types.

IOX hardware technical specifications

Physical

Dimensions	164 x 139 x 61 mm
Weight	0.6 kg (Excludes key fob weight)
Key fob Compatibility	IOX-KEYBOX Key fob Catalog
Temperature Range	-30°C to +60°C (key fob dependent for ranges from -15 °C to -30 °C)
Protection Class	IP31

Electrical

Voltage Range	9 V - 16 V (24 V not supported)
Current	Low power sleep: 22mA (including GO device) Active key fob presses: <= 3 A (peak motor actuation)
Bluetooth™ Communications	Starting with IOX-KEYBOX Firmware version 0.32 (our GA release), Bluetooth™ communications is handled externally by IOX-BT , included in the IOX-KEYBOX kit (no separate order needed).
Interfaces	CAN 2.0 A/B, CAN FD
Connectors	Male Mini-USB Type-B connector: Daisy chain power and CAN in Female Mini-USB Type-B connector: Daisy chain power and CAN out
Harness Length	3.3 m

Certifications

Compliance: CE, FCC, ISED, RoHS, REACH, WEEE, UKCA, E-Mark

Availability

North America & European Regions: See [Country Info](#) to verify specific countries

Installation

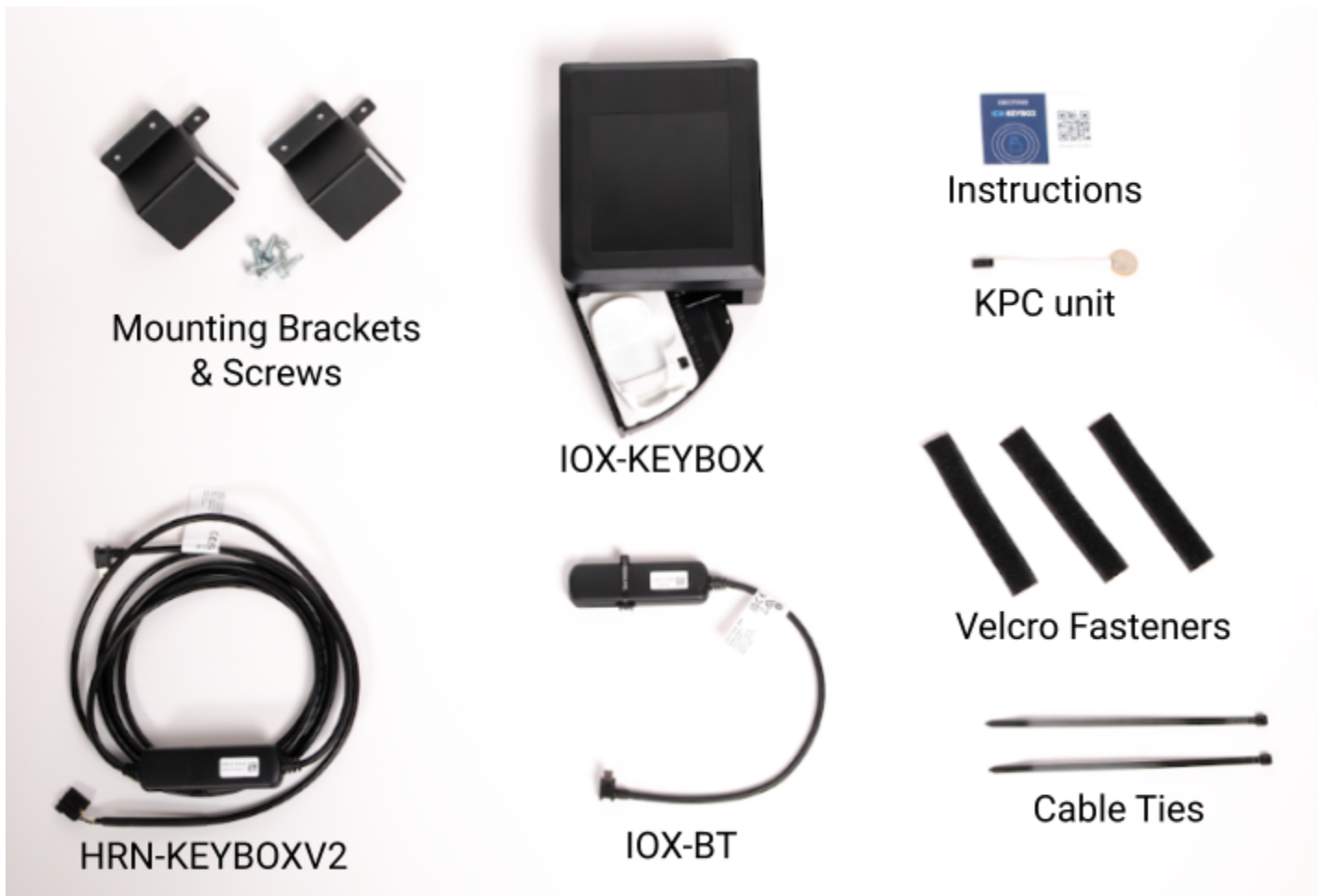
For a video demo that explains how to install the device, refer to [Video: How to Install the IOX-KEYBOX in a Vehicle](#).

A GO9 or later device is required for operation of the IOX-KEYBOX.

Before installing the IOX KEYBOX, do the following to ensure the key fob is compatible:

- Check that the 3 digit KEYBOX type code found inside the drawer on the white key tray matches the key fob's photo found in the [KEYBOX catalog](#).
- Physically place the key fob in the white tray to ensure a snug and secure fit, such that the fob easily snaps in place.

Kit contents



The IOX-KEYBOX container includes the following:

- IOX-KEYBOX unit
- HRN-KEYBOXV2 cable (3.3 meters)
- Three Velcro fasteners
- Mounting brackets and screws
- If Supported: Key Power Controller (KPC)
- IOX-BT for Bluetooth™ communications

Inspect the units for any damage prior to installation. If there is visible damage or a strong odor, contact Geotab Support.

Key Power Controller (KPC)

The KPC replaces the key fob battery with power supplied from the IOX-KEYBOX, so it is only powered when required: unlocking and locking the vehicle, as well as powered on during driving. The KPC aids in preventing the vehicle from being accessed or operated without authorization.

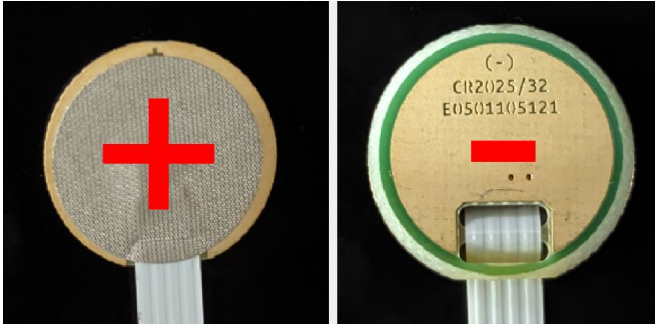
Installation of the KPC means the key is not extractable from the KEYBOX by the driver.

Do not use the KPC if the following conditions apply:

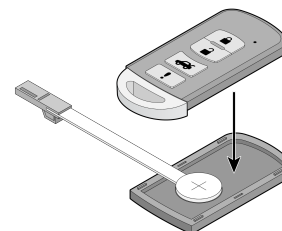
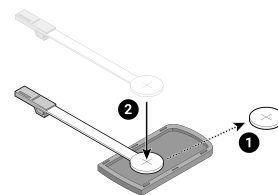
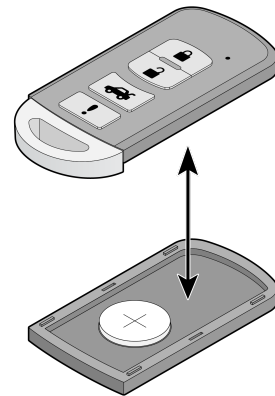
- If the key has a blade which is needed to start the ignition (the vehicle is not push-to-start).
- If it is required for the driver to have access to the key.

Installation

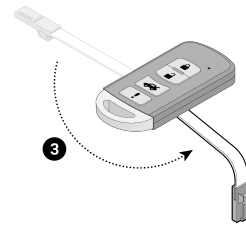
KPC polarity reference:



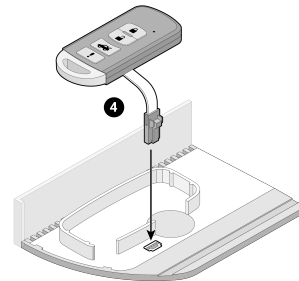
- 1 Open the key fob, in accordance with the manufacturer's instructions.
- 2 Remove the manufacturer's battery from the key fob.
- 3 Place the corresponding KPC in the battery position. Ensure the cable will exit the key fob and pass under the key fob to the power socket. This prevents excess cable from interfering with the IOX-KEYBOX operation.



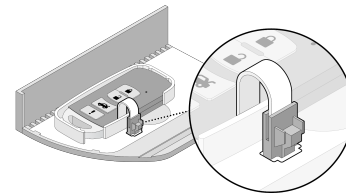
- 4 Reattach the key fob cover removed in step 1. Ensure the cable is not stretched and contours the fob to minimize strain.



- 5 Connect the plug to the socket in the key bed of the box drawer. Ensure the cable exits and passes under the key fob to the power socket. This prevents excessive cable from interfering with the IOX-KEYBOX operation.



- 6 Place the key fob in the key bed.



- 7 Carefully close the drawer of the box, ensuring not to damage any cables.

Guidelines for mounting locations

! IMPORTANT: To ensure the key fob remains in place and the unlock/lock commands function reliably, the IOX-KEYBOX should be mounted horizontally. When mounting inside the glove compartment, where the glove compartment floor may tilt when opened or closed, the KEYBOX unit should not exceed a 45 degrees tilt from horizontal through its travel.

! IMPORTANT: if the glove compartment door needs to be, or will ever be slammed to shut, glove compartment mounting is not recommended.

*** NOTE:** The functionality of the key fob in the installation location must be tested prior to mounting and installation.

Refer to the corresponding T-Harness guide for installation. <https://geotab.dozuki.com/c/Harnesses>

*** NOTE:** The IOX-KEYBOX must be the first IOX accessory connected to the GO device, with a maximum up to 5 connected IOX devices with a maximum of 2.75 amps.

*** NOTE:** If there are any power interruptions (such as battery replacement), please verify installation steps to ensure IOX-KEYBOX is functioning properly.

The IOX-KEYBOX can be installed in a number of locations in the vehicle, depending on its size, configuration, and type. If no modifications can be done to the vehicle, we recommend installing the IOX-KEYBOX in one of the following locations:

- If the key will not be made accessible to the driver: Underneath the driver seat (preferred location).
- If the key will be made accessible to the driver: Inside the glove compartment.

The following alternative mounting locations require additional mounting brackets:

- In the cargo area. (unit must be secured with brackets for safety)
- Under the rear vehicle seats.
- Inside the passenger footwell. (unit must be with brackets secured for safety)

The Installation Technician must consider the mounting locations of the IOX-KEYBOX and cable routing. Evaluate the safety of the installation, and determine an appropriate method to secure the IOX-KEYBOX.

WARNING! If the IOX-KEYBOX is installed inside the cabin area/cargo area of a vehicle, it must be contained or otherwise secured to the vehicle, to prevent it from becoming a projectile in the event of a collision. Failure to properly secure the IOX-KEYBOX using the recommended brackets could result in serious personal injury and/or vehicle damage.

IOX-KEYBOX is NOT to be installed in the following locations:

- Where it is exposed to heating sources.
- Where it is exposed to water/liquids (IOX-KEYBOX is designed to IP31).
- Where it is visible from outside the vehicle.
- Where it can interfere with the safe operation of the vehicle.
- Where it is not contained within, or physically mounted and secured to the vehicle.

Installation instructions

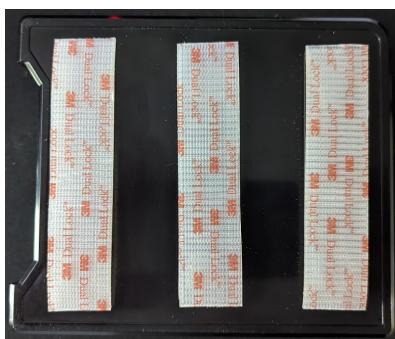
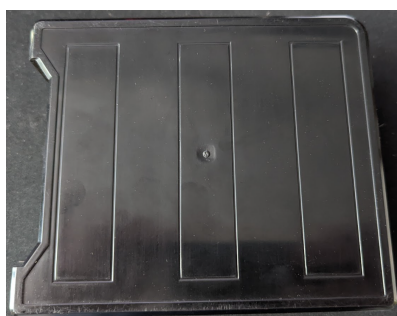
Glove compartment installation - Where the key fob access is required

- Ensure the IOX-KEYBOX has adequate clearance for the tray to fully open.
- Consider how the HRN-KEYBOXV2 cable will exit the location and route to the GO device. Avoid high angle bends that may pinch or damage the cable.
- Determine whether drilling may be required to provide suitable cable routing, in glove boxes that are completely enclosed.





- 1 Prepare the IOX-KEYBOX for installation, and attach the provided dual lock adhesive tape to the bottom of the IOX-KEYBOX.



- 2 Route the HRN-KEYBOXV2 cable from the IOX-KEYBOX through the access or drilled hole to where the GO device will be installed. Ensure cable routing will not be a safety concern, and it is concealed within the dash. Secure the cable using cable ties.
- 3 Using the Velcro fasteners dual lock adhesive tape, mount the IOX-KEYBOX in the selected location. Ensure the IOX-KEYBOX is mounted securely, and the tray can fully open without obstruction.
- 4 **IMPORTANT: If a GO device was previously installed in the vehicle, disconnect it before proceeding.**
 - i) Attach the HRN-KEYBOXV2 cable to the GO IOX port.
 - ii) Install the IOX-BT to the IOX-KEYBOX expansion port.

*** NOTE:** The IOX-KEYBOX must be the first IOX accessory connected to the GO device.
- 5 Install the T-Harness and GO device to the vehicle according to following instructions:
 - T-Harness Guide: [Harnesses - Geotab](#)
 - GO Device: [GO Devices - Geotab](#). **IMPORTANT: Keep vehicle ignition on for at least 5 minutes to ensure Keyless Solution is fully enabled for this device.**

Ensure all cables and connections are secured with cable ties.

IMPORTANT: Ensure all IOX cables are connected to the GO device prior to connecting the GO device and T-Harness to the vehicle.

*** NOTE:** The IOX-KEYBOX must be the first IOX accessory connected to the GO device, with a maximum up to 5 connected IOX devices with a maximum of 2.75 amps.

*** NOTE:** If there are any power interruptions (such as battery replacement), please verify installation steps to ensure IOX-KEYBOX is functioning properly.

Under seat or cargo area installation

- Ensure the IOX-KEYBOX has adequate clearance for the tray to fully open.
- Consider how the HRN-KEYBOXV2 cable will exit the location and route to the GO device. Avoid high angle bends that may pinch or damage the cable.
- Ensure there is clearance to properly install the mounting brackets.
- Mount the IOX-KEYBOX horizontally (flat) and fasten to the vehicle structure.

*** NOTE:** When installing in the cargo or under the rear passenger seat areas, the mounting brackets must be used to ensure the IOX-KEYBOX remains safely mounted.

- 1 Select a suitable mounting location that satisfies the mounting requirements for the IOX-KEYBOX.
- 2 Use the two supplied mounting brackets to securely mount the IOX-KEYBOX under the seat, or in the trunk or cargo area. The brackets install diagonally to each other at the corners of the IOX-KEYBOX and are secured with the supplied screws.
Ensure the door functions and the brackets secure the IOX-KEYBOX from movement or removal.



*** NOTE:** When mounting under the passenger seat, ensure you are not directly in front of the hot air duct or heat source. Example shown:



- 3 Route the HRN-KEYBOXV2 cable from the IOX-KEYBOX to the location of where the GO device will be installed.
- 4 **IMPORTANT: If a GO device was previously installed in the vehicle, disconnect it before proceeding.**
 - i) Attach the HRN-KEYBOXV2 cable to the GO IOX port.
 - ii) Install the IOX-BT to the IOX-KEYBOX expansion port.

*** NOTE:** The IOX-KEYBOX must be the first IOX accessory connected to the GO device.
- 5 Install the T-Harness and GO device to the vehicle according to following instructions:
 - T-Harness Guide: [Harnesses - Geotab](#)
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Ensure all cables and connections are secured with cable ties.

IMPORTANT: Ensure all IOX cables are connected to the GO device prior to connecting the GO device and T-Harness to the vehicle.

*** NOTE:** The IOX-KEYBOX must be the first IOX accessory connected to the GO device, with a maximum up to 5 connected IOX devices with a maximum of 2.75 amps.

*** NOTE:** If there are any power interruptions (such as battery replacement), please verify installation steps to ensure IOX-KEYBOX is functioning properly.

Example of final installation:



Termination Shunt

The IOX comes with a termination shunt installed in the expansion port. If you plan to install more than one IOX in a daisy chain, you must remove the shunt to install an additional IOX.

*** NOTE:** Failure to install the shunt in the last IOX may affect IOX communication. To ensure the shunt remains in place, please secure the shunt with a cable tie.

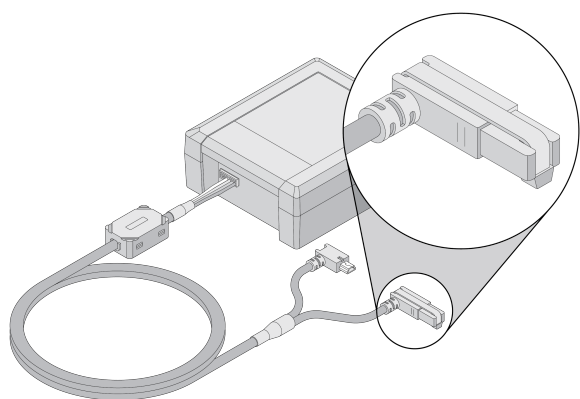


Figure 1: Termination shunt installed

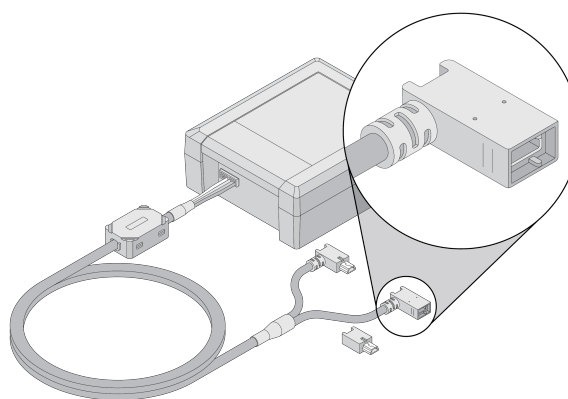


Figure 2: Termination shunt not installed

Important Safety Information and Limitations of Use

For the latest version of Limitations of Use, please visit: goo.gl/k6Fp0w.

WARNING! Do not attempt to install, configure or remove any product from any vehicle while the vehicle is in motion or otherwise in operation. All installation, configuration or removal must be done only in stationary vehicles which are

securely parked. Attempting to service units while being operated could result in malfunctions or accidents, leading to death or serious personal injury.

WARNING! All in-vehicle devices and related cabling must be securely fastened and kept clear of all vehicle controls, including accelerator, brake and clutch pedals. You must inspect devices and cabling on a regular basis to ensure all devices and cabling continue to be securely attached. Loose cabling or devices may impede the use of vehicle controls, resulting in unanticipated acceleration, braking or other loss of vehicle control, which could lead to death or serious personal injury. Improperly fastened in-vehicle devices may detach and impact operators upon sudden acceleration or deceleration, which may cause injury.

WARNING! If at any point after an in-vehicle device is installed a warning light illuminates on the vehicle dash or the vehicle stalls or has a marked drop in performance, shut off the engine, remove the device, and contact your Reseller. Continuing to operate a vehicle with these symptoms can cause loss of vehicle control, and serious injury.

WARNING! Your in-vehicle devices must be kept clear of debris, water and other environmental contaminants. Failure to do so may result in units malfunctioning or short-circuiting that can lead to a fire hazard or vehicle damage or serious injury.

WARNING! Do not attempt to remove the devices from the vehicle in which they are originally installed for installation in another vehicle. Not all vehicles share compatibility, and doing so may result in unexpected interactions with your vehicle, including sudden loss of power or shutdown of the vehicle's engine while in operation or cause your vehicle to operate poorly or erratically and cause death or serious injury and/or vehicle damage.

NOTICE – This product does not contain any user-serviceable parts. Configuration, servicing, and repairs must only be made by an authorized reseller or installer. Unauthorized servicing of these products will void your product warranty.

Regulatory Statements

Warning: RF Exposure Compliance

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. Users and installers must be provided with antenna installation instruction and transmitter operating conditions for satisfying RF exposure compliance.

L'antenne ou les antennes utilisées pour cet émetteur doivent être installées pour fournir une distance de séparation d'au moins 20 cm de toutes les personnes et ne doivent pas être co-localisées ou fonctionner en conjonction avec une autre antenne ou émetteur. Les utilisateurs et les installateurs doivent recevoir des instructions d'installation de l'antenne et les conditions de fonctionnement de l'émetteur pour satisfaire la conformité à l'exposition aux RF.

Canada

CAN ICES-003 (B) / NMB-003 (B)

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 undesired 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.

USA

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.

*** 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 Geotab could void the user's authority to operate the equipment.

 **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

EU

Product Wireless Information:

13.56 MHz: Max -6.52 dBuA/m H-Field strength

2400-2483.5 MHz: Max 0.3 dBm EIRP

SCIP Number(s)

53dfd948-a4a3-4a14-b000-317c1f8f7e91

0b83ba52-1252-4266-b0d7-1814bc08fd76

Germany

Wir besitzen keine Versand- und Lagerfläche in Deutschland und sind nicht von der Rücknahmepflicht nach § 17 ElektroG betroffen.

IOX-KEYBOX is manufactured by WITTE:digital, A Business Unit of WITTE Automotive GmbH, Hoefenstr. 3-15, D-42551 Velbert, Germany