# Mobile Black T2  Driver Manual

# Contents

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# Introduction

2021-01-11

## Definition of symbols

### Hazard statements

⚠ **Notice:** Indicates a potential situation which, if not avoided, might result in property damage or in an undesirable result or state.

⚠ **Caution:** Indicates a potentially hazardous situation which, if not avoided, might result in minor or moderate injury.

⚠ **Warning:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ **Danger:** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

### Others

ⓘ **Tip:** Indicates a shortcut or any other useful indication.

ⓘ **Important:** Indicates an important element to be borne in mind.

❗ **Attention:** Indicates an element which requires extra attention, not necessarily a hazard.

## Important safety instructions

❗ **Attention:**

- Please read this document carefully before installing, using, or interacting with the Mobile Black. This document must be kept for future reference. For any questions, please contact us.
- Please make sure you have read the information and instructions of your electric vehicle.

⚠ **Notice:**

- The Mobile Black must only be used for charging your electric vehicle.
- To determine whether the vehicle is equipped with a charging inlet, please refer to the vehicle manual.
- Do not remove any label from the device.
- Use the Mobile Black only on a fixed socket.
- A wrong use of the Mobile Black can lead to disfunctions and material damages.
- The Mobile Black should be inspected periodically to check for damages to the cabling and the control box. Do not use the Mobile Black if the product is defective or appears damaged. In such case, please contact us for advices.
- When not in use, store the Mobile Black in a safe and dry place.

⚠ **Caution:**

- Always handle the Mobile Black via the plugs.
- Do not attempt to connect not-matching vehicle connectors and charging inlets.
- Avoid too much traction on the cables.
- Do not step on, fold, or knot the cables. Never use the cables as a rope.
- Do not use the Mobile Black with coiled cables.
- Do not exert any unusual mechanical strain on the Mobile Black.
- Do not drop the Mobile Black or place a heavy object on it.
- Do not slide the Mobile Black over sharp edges or rough surfaces.
- Do not run over the Mobile Black's plugs, its control box or the electric cables.
- Do not place the Mobile Black cable near high-temperature objects, dirt, or water.
- Do not place the Mobile Black in an enclosure during a charging session, due to a risk of overheating.
- Do not operate the Mobile Black outside the permissible ambient temperature range from -25 °C and +50 °C. Lower or higher temperatures can damage the device.

## ⚠ Warning:

- Do not unplug the Mobile Black while charging. Always disconnect from the vehicle first.
- Incorrectly installed sockets can lead to electric shock or fire when charging the vehicle.
- Operate the Mobile Black in properly grounded networks only.
- The grid socket used for charging must always be connected to a protected circuit that complies with local laws and standards.
- The socket must be protected by a functioning residual current-operated circuit-breaker.
- Do not use the Mobile Black if it is damaged or soiled. Check the cable and the connector before use.
- Do not use a socket that is damaged. The power plug must be firmly seated in a socket installed in accordance with all local codes and ordinances.
- The operation of the Mobile Black connected to a damaged socket can result in serious injury or fire.
- The Mobile Black is maintenance free. Do not open the device. The Mobile Black does not contain user-serviceable parts. Leave any servicing tasks to qualified personnel only. Contact us for advices.
- Do not apply any overvoltage to the Mobile Black. For the socket voltages suitable for the device, please refer to the specifications provided.
- Do not touch any parts inside the vehicle connector.
- Do not use extension cords, cable drums, multiple sockets, travel adapters, timers, etc.
- Do not touch the contacts on the vehicle charging inlet and on the Mobile Black.
- Do not insert any objects in the vehicle charging inlet or in the Mobile Black.
- Keep sockets, plug connection and the Mobile Black free of moisture, water, snow, ice and other liquids. The Mobile Black is weatherproof. It can withstand heavy rain, however, do not submerge any part in the water. Avoid resting the Mobile Black in a puddle during inclement weather Never immerse the Eneco SmartCable in water.
- Disconnect the Mobile Black from its power supply during a thunderstorm.
- Clean the Mobile Black only if the control unit is completely disconnected from the power grid and from the vehicle.
- The Mobile Black should not be operated by persons under the influence of drugs, alcohol, or medications.

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- The Mobile Black should not be operated by persons who are not familiar with its use or who have not read the user manual.

- Keep the Mobile Black away from persons with disabilities and from children who cannot assess the hazards involved with its handling.

- While performing an unattended charging process, unauthorized persons should not have access to the Mobile Black.

- The Mobile Black contains a Bluetooth Low Energy module which may not be brought into direct body contact with heart stimulation devices for safety reasons.

⚠ **Danger:**

- Do not use the fast-charging speed of the Mobile Black on unfamiliar sockets.

- Fast charging should only be used when electric protection level is ensured.

- Using a damaged or faulty Mobile Black or a damaged or faulty socket, improper use of the charging equipment or failure to comply with the precautions can cause short-circuits, electrocution, explosions, fire and burns.

- Components of the Mobile Black can cause sparks and ignite flammable or explosive vapors.

- Do not use the Mobile Black in potentially explosive environment.

- Only use the Mobile Black for vehicles that do not require ventilation during charging.

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# Description of the device

Mobile Black is the easy way to combine electromobility and reimbursement of the cost incurred by charging at home and on the go: connect Mobile Black to a standard 240 V via the adaptor outlet, connect your car and you're done.

Mobile Black transmits the energy consumption wirelessly and you can make your regular expense report at a click of a mouse.

# Parts



*Figure 1: Mobile Black Type 2*
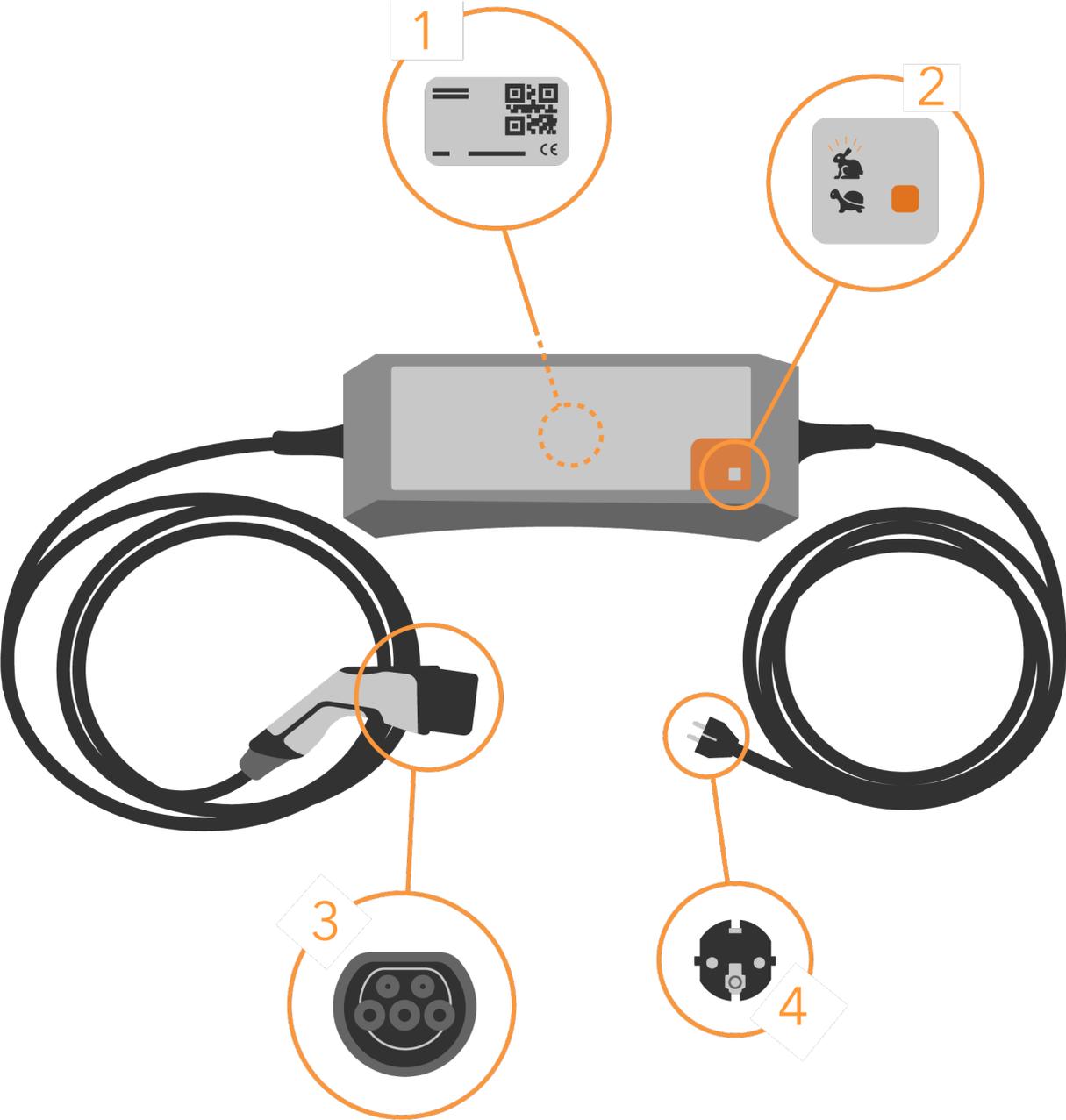
1. Serial Number (on the back of the device)
2. Status LEDs and touch button
3. Car Plug: Type 2 charging cable
4. Power Supply Plug: Domestic Plug

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# Technical data

## FEATURE

| | |
|---|---|
| **User interface** | - Multicolor status LED: status & charging speed<br>- Touch button: select charging speed |
| **Location services** | GPS sensor (while charging) |

## ELECTRICAL

| | |
|---|---|
| **Charging mode** | Mode 2 per IEC 62752:2018 |
| **Input voltage** | 1 x 240 V AC |
| **Grid frequency** | 50 Hz |
| **Input connector** | Schuko® CEE 7/7 |
| **Charging connector type** | Type 2  connector |
| **Charging cable** | Power inlet to in-cable control box: 1,7 m<br>In-cable control box to EV connector: 4 m |
| **Charging output power** | Max. 2,3 kW |
| **Charging output current** | 6 or 10 A |
| **Standby consumption** | 3 W |
| **Electrical safety** | IEC 62752:2018 compliant Residual Current Monitoring (AC 20 mA & DC 6 mA) |

## COMMUNICATION

| | |
|---|---|
| **Connectivity** | Sigfox |
| **Upstream protocol(s)** | Compatible with Nexxtmove |
| **Downstream protocol(s)** | Sigfox ready$^{TM}$ |

## MECHANICAL

| | |
|---|---|
| **Dimension (H x W x D)** | 380 x 115 x 80 mm |
| **Weight** | 3 kg |
| **Material** | Polyamide |
| **Ingress protection** | IP 64 control |
| **Impact protection** | IK 10 |

## ENVIRONMENTAL

| | |
|---|---|
| **Operating Temperature** | -25 °C to +50 °C |
| **Operating Humidity** | Up to 95% RH non-condensing |
| **Operating Altitude** | Maximum 2000 m above sea level |

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| Maintenance | |
|---|---|
| **Firmware upgrade** | Remote software update |

The technical characteristics are subject to change without further notice.

# Communication

## Sigfox

### Description

The Sigfox is a cost efficient communication network used to connect smart objects to the Internet. The Mobile Black uses the Sigfox network to transfer consumption data to the management platform Nexxtmove .

For more information about Nexxtmove, please refer to **About Nexxtmove** *(on page 12)*.

### Connection and data backup

A small battery can power the communication unit of the Mobile Black when it is unplugged and on the move. Every 15 minutes, the Mobile Black —using a small, low-consumption module— sends a message to Nexxtmove servers over the Sigfox network.

⚠ **Notice:** If short charges are done within fifteen minutes, some start and stop messages will be missed. However, the absolute index will be saved in the device memory, and no energy consumption will be ignored. In other words, several short charges can be regrouped into a larger one to keep the total consumption correct.

Those messages will contain charging session information (time, consumption, location).

### Coverage

While the Sigfox network already covers most of Western Europe, please note that it is still in the roll-out phase. You can find an overview of the Sigfox coverage at **https://www.sigfox.com/coverage**.

## Bluetooth Low Energy

### Description

Bluetooth Low Energy (known as BLE) is a wireless personal area network technology intended to provide significantly reduced power consumption and cost while maintaining a similar communication range as conventional Bluetooth technology. The Mobile Black uses the BLE connection of your phone and your internet connection to transfer consumption data to the management platform Nexxtmove.

For more information regarding Nexxtmove, please refer to **About Nexxtmove** *(on page 12)*.

### Connection and data backup

BLE is powered whenever the Mobile Black is plugged in. By pairing a device to a phone via BLE, you can sync the data from your device to your phone and then from your phone to Nexxtmove. This way, if the Sigfox network is not covered, Nexxtmove will still receive charging data records (CDR) from your device via the BLE connection of your phone.

These charging data records will contain information about the charging session (time, consumption, location).

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## Coverage

To optimise the BLE feature, make sure your phone is within 2 meters of the plugged in device during syncing and pairing.

## Coexistence of Sigfox and Bluetooth Low Energy

There are two types of communication embedded in the Mobile Black:

- Sigfox, a cost-effective communication network used to connect smart objects to the Internet. For more information regarding Sigfox, see **Sigfox** *(on page 7)*.
- Bluetooth Low Energy, known as BLE, a wireless personal area network technology. For more information regarding BLE, see **Bluetooth Low Energy** *(on page 7)*.

These means of communication work together to provide an optimal experience connected to an online management platform.
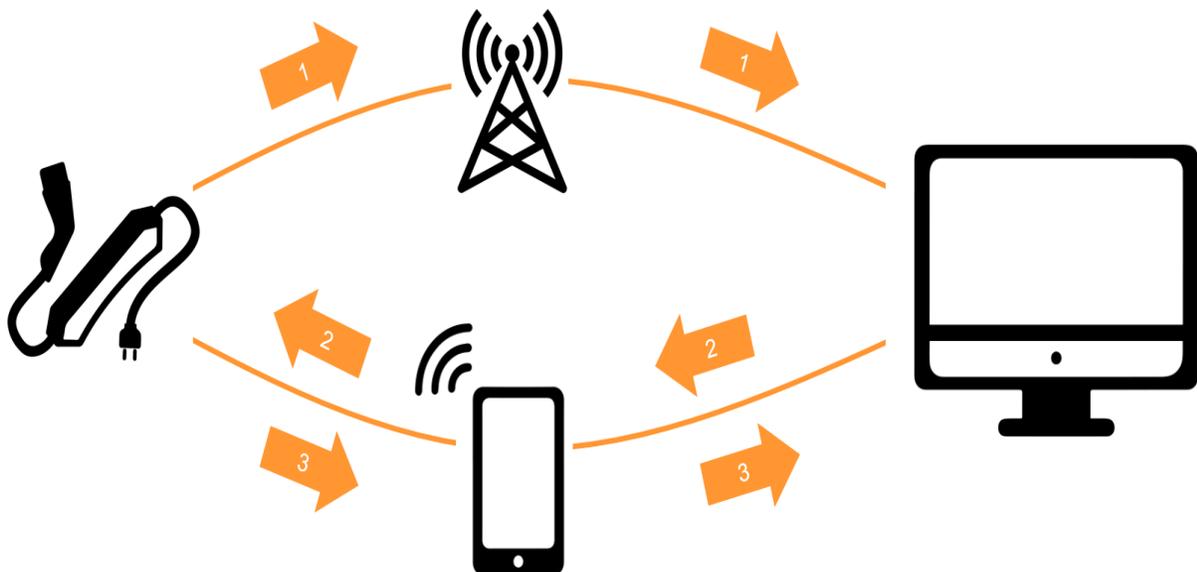


1. Sigfox. The Mobile Black uses the Sigfox network to send a message to the management platform Nexxtmove.
2. Firmware updates. Nexxtmove sends the firmware update to the phone then uploads it onto the paired Mobile Black via the BLE connection of the phone.
3. BLE. The Mobile Black uses the BLE connection of the phone to send a message to the management platform Nexxtmove.

   🛈 **Tip:**

   - These messages will contain charging session information (time, consumption, location).
   - This process is totally independent from the sigfox data transfer. This means that the management platform Nexxtmove will still receive consumption data even if one of the two communication is out of range or coverage.

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# Accessorie

**Soft Bag for Mobile Black**

This bag keeps your Mobile Black protected and safely stored.

# Certificates

The Mobile Black is certified

- **-** IEC 62752: 2018-03, In-cable control and protection device for mode 2 charging of electric road vehicles (IC-CPD).
- **-** IEC 60309-1:1999, Plugs, socket outlets and couplers for industrial purposes – Part 1: General requirements
- **-** IEC 62196-1, Plugs, socket outlets, vehicle connectors and vehicle inlets – Conductive charging of electric vehicles – Part 1: General requirements
- **-** IEC 62196-2, Plugs, socket outlets, vehicle connectors and vehicle inlets – Conductive charging of electric vehicles – Part 2: Dimensional compatibility and interchangeability requirements for a.c. pin and contact-tube accessories
- **-** IEC 61851-1:2010, Electric vehicle conductive charging system – Part 1: General requirements
- **-** IEC 61851-1:2017, Electric vehicle conductive charging system – Part 1: General requirements
- **-** IEC 60364-7-722, Low-voltage electrical installations – Part 7-722: Requirements for special installations or locations – Supplies for electric vehicles

# Using a Mobile Black

## Register a new charging device

**Context:** Before using your Mobile Black for the first time, you must pair it to access the e-mobility management platform.

1. Go to **https://www.nexxtmove.me/pairing**.
2. Already have an account?

    - If you already have an account, enter your login details and click **Login**.
    - If you do not have an account, click on **New user** to create a new account.

3. Follow the on-screen instructions to register the device.

**Result:** Your Mobile Black is now registered and paired to your user, and you can connect to Nexxtmove.

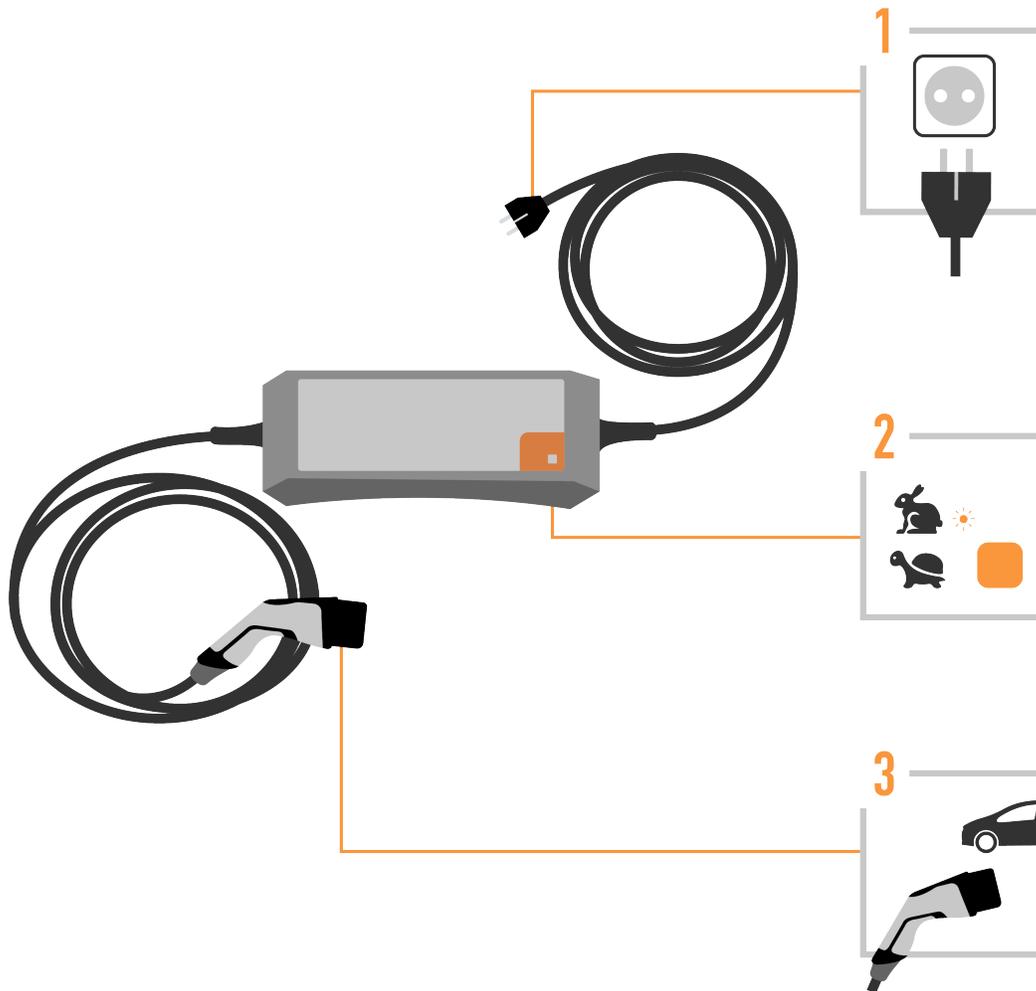&#9432; **Tip:** If you received a badge with your Mobile Black, you can also pair it via **https://www.nexxtmove.me/pairing**.

## Connecting a Mobile Black

**Before you begin:** Ensure that you have registered your Mobile Black.

**Summary:**

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1. Insert the plug into a wall socket.

2. *Optional:* Select the charging speed by clicking on the square ⬜: fast 🐇 or slow 🐢.

    🛈 **Tip:** You may want to select slow charging:
    - To avoid peak power consumption.
    - If other devices with high energy consumption are currently in use, for example a washing machine or an oven.

    **Result:** A LED next to the symbols 🐇 and 🐢 indicates which setting has been selected.

3. Plug the into your electric vehicle.

    ⚠ **Caution:** Before leaving, make sure the Mobile Black is sufficiently secured against rolling away and does not risk moving during your charging session.

**Result:** Charging has started.

    🛑 **Attention:** When the charging cycle is over, unplug the car plug first and then the power plug (see **Disconnecting a Mobile Black** *(on page 12)*).

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# Disconnecting a Mobile Black

**Before you begin:** We recommend that you disconnect when charging is completed.

⚠ **Caution:** Disconnect by pulling on the connector and not the cable, or you might damage it.

1. Disconnect the car plug of the Mobile Black (you will need to unlock your car to do so).
2. Unplug the Mobile Black from the wall socket.

# Status LED colours explaination

| Colour | Description |
|--------|-------------|
| Green | Mobile Black Free connector available for charging. |
| Yellow | The electric vehicle (EV) is connected and on standby. |
| Blue | The EV is charging |
| Red | Error Disconnect and reconnect the Mobile Black at both ends. If the error persists, please contact us. |

# About Nexxtmove

## Purpose

Nexxtmove is a software platform which helps you to get the most out of your electrical vehicles and charging stations.

As a driver, it allows tracking:

- Charging sessions of the charging points
- Energy consumption
- Charging costs
- Tickets, etc.

## Accessibility

You can consult Nexxtmove on any browser, including the one on your smartphone.

Just go to **https://www.nexxtmove.me**.

## Compatibility

Nexxtmove platform is not limited to Powerdale charging stations. Communication between any charging devices and Nexxtmove platform (as well as other central systems) is allowed by a standard protocol.

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# Maintenance and disposal

The Mobile Black is maintenance-free. We advise you to regularly check for possible external damages. If you detect any damage, do not use the device and contact us (see our **contact information** *(on page 15)*).

## Cleaning

If you wish to clean your device, use a damp cloth. Avoid cleaning agents with solvents.

## Disposal

The packaging of the Mobile Black must be disposed of according to applicable local and regional regulations.

Empty or faulty batteries must be disposed of separately in accordance with national and local regulations on environmental protection and recycling. The Mobile Black may not be treated as ordinary waste and must be returned to a collection point for the recycling of electronic components. For more information, contact your local authority or a local waste disposal service.

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# Warranty and returns

On every Mobile Black, the general conditions apply. We guarantee the usability and functionality of our products. If a product is defective due to a production error, the statutory warranty will be invoked.

## Defects not covered by warranty:

- Water damage and submersion
- Any product whose serial number is defaced or removed
- Loss or theft
- Accidents and natural disasters
- Cosmetic damage caused by the owner
- Damage caused by unauthorised third party products or components
- Damage caused by abuse and misuse of the product
- Defects due to normal wear and tear
- If the item is altered without permission from Powerdale
- If the user is unable to prove that he/she is the authorised user of the product.
- Or any of the use cases from the safety guidelines.

## Returns procedure

**Before you begin:** Check the troubleshooting to see if you are able to resolve any issues, unless you have already detected damage on the Mobile Black.

**Context:** If a product is damaged or defective, you can invoke your warranty.

1. **Contact us** *(on page 15)*

   ⓘ **Important:** We will arrange the collection of your product.

2. When you receive our confirmation message, place the Mobile Black in a post parcel.
3. Print your contact form (receive via email).

   ⓘ **Tip:** If you did not receive it, check your junk mail folder before contacting us.

4. Place your contact form inside the parcel.
5. On the day of the collection, GLS will come to pick up your product. Make sure that you are available, in accordance with the arrangement made. Once the collection is done, your product will be delivered to us.

**Result:** When we have received the package, you will receive a confirmation email.

- If the warranty is applicable, you will be sent your repaired device or a replacement within 5 working days after confirmation of receipt.
- If the warranty is not applicable, we will send you a quote. The item will be repaired or replaced after reception of your approval to proceed.

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# Support

There are several ways to get support if you have not found the solution to your problem in this manual.

- **-** Contact your fleet manager or leasing company.
- **-** Contact the supplier of your device.
- **- Create a ticket** *(on page 15)* via Nexxtmove.
- **-** You can also contact us directly using the contact form on our website www.powerdale.com/en/ contact.

## Creating a ticket in Nexxtmove

1. Open the **Tickets** menu.
2. Click on **Create a new ticket** in the top right corner.
3. Enter a specific title that relates to your problem.

    **Recommended:** Use specific titles to receive help faster.
4. Provide a detailed description of your problem under **Message**.
5. *Optional:*  If applicable, select the appropriate charging point from the list. This can only be done if the charging point is attributed to you. If you use a charging point in your network, simply add a reference number in the description (if available).
6. Click **Save**.

**Result:** Your ticket is sent to the Powerdale support team and can be seen by all Nexxtmove managers in your company. You will receive a response as soon as possible.

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