MobileReader.Gate

User Manual V1.1

SKIDATA®
KUDELSKI GROUP

Documentation
& Training

User Manual – MobileReader.Gate
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EU Directives
All devices mentioned in this document were designed and manufactured in compliance with one
or more of the following EU Directives:

Machinery Directive 98/37/EC
Machinery Directive 2006/42/EC
EMC Directive 89/336/EEC, as amended by 91/263/EEC, 92/31/EEC, 93/68/EEC
EMC Directive 2004/108/EC
Low Voltage Directive 73/23/EEC, as amended by 93/68/EEC
Low Voltage Directive 2006/95/EC
R&TTE Directive 1999/5/EC

CE

FCC Statement according to 15.19:
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.

FCC Note according to 15.21:
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

The following regulations apply expressly to all UL certified devices:
If a device is retroactively converted, upgraded or otherwise modified, this automatically voids any existing UL certification of that device. UL certifications apply only to devices in their original condition that have been properly installed in accordance with the appropriate installation instructions and applicable local regulations.
To retain UL certification of a retroactively modified device, an "On-Site Certification" must be obtained from Underwriters Laboratories Inc. (UL) by and at the expense of the device operator.

Table of Contents

1   About this documentation

This document provides **maintenance instructions** for the MobileReader.Gate.
The instructions describe simple maintenance procedures that can be carried out by trained personnel without the use of any special tools.

The procedures described in this manual do not include troubleshooting or repair work. In the event of a system defect, please notify your SKIDATA AG service center, describing the fault as accurately as possible.

In order to get accustomed to the system, please read this manual - if possible before commissioning of the system.

1.1   Printing the manual

For optimum printing, set your printer to **Color** and **Double-Sided** Printing.

1.2   Dimensioning

Dimensions in this documentation are always given in **mm**. When other dimension units are used, this is clearly stated and units are indicated with the corresponding dimensions.

1.3   Symbols

Important text passages and notes are marked by symbols and special typefaces throughout this Manual.

The following symbols are used:

Danger: Precautionary advice to avoid possible injury.

Danger: Risk of electric shock. Do not touch these parts unless the power supply of the device has been disconnected.

Danger: Possible health risks from electromagnetic field. This applies to persons wearing pacemakers or other active or passive medical devices.

Attention: Electrostatic sensitive devices. To prevent ESD damage, you should discharge static electricity from your body before you interact with electronic components.

Note: Information about the proper use of a component to avoid hardware or software damage

Hint: Provides explanations on the proper use of the device or software.

2   Safety Instructions

MobileReader.Gate has been thoroughly security tested. Operating personnel will be advised of possible residual dangers during system training courses and by the information provided in this manual.

- System units may be used only for their intended purpose, as specified by the manufacturer.
- Unauthorized modifications of the units or the use of replacement parts and/or add-on devices not approved by the manufacturer may lead to electric shock or cause other serious bodily harm and will void the manufacturer's warranty.
- The setup, installation, maintenance and configuration of the system units is limited to certified electricians with special training in the prevention of accidents
- The executive technician or project manager is responsible for the unit being installed and configured in compliance with local technical guidelines as well as other applicable local regulations. Relevant parameters include — among others — cable dimensions, protection against risks, earth connections, deactivation, disconnection, insulation testing and overcurrent protection.

2.1   Risk of electric shock

Electrical repair work must be carried out by a professional electrician.

Danger: Electric installation and maintenance work may be carried out only by appropriately qualified, licensed electricians. Network connections must be hard-wired. Please ensure full compliance with all applicable national and international rules and regulations concerning electric connections, and all applicable safety regulations.

2.2   Electrostatic Discharge (ESD)

Attention: Electrostatic Discharge (ESD) events can harm electronic components. Under certain conditions, ESD may build up on your body or an object, such as a peripheral, and then discharge into another object. To prevent ESD damage, you should discharge static electricity from your body before handling electronic components.

2.3   Warranty and liability

Except for all stipulated warranty and liability regulations, all warranty and liability claims shall be excluded, in particular if the harm or damage should be attributed to one or more of these instances:

- Misapplication of the devices used
- Improper installation
- Inadequate or missing warning and/or safety facilities in the danger area
- Irregular or insufficient maintenance
- Use of material that has not been approved by SKIDATA AG
- Insufficient constructional renovation measures
- Insufficient training of operating personnel
- Unauthorized constructional, technical or other modifications of the system; Modifications and/or extensions of the system without approval or explicit consent of SKIDATAAG
- Disaster situations brought about by impact of foreign bodies or acts of God

2.4   Electromagnetic Compatibility (EMC)

Compliance with Electromagnetic Compatibility must be maintained during operation. This requires that:

- Specified max. network connection distances are not exceeded
- Network connections are properly installed and maintained
- Network cable screens are properly installed and maintained
- All system devices and facility installations subject to EMC regulations are inspected regularly and repaired if required

3   Introduction

This manual Operation describes the use and functions of MobileReader.Gate.

Chapter 4 describes the basic functions and provides an overview of the scope of delivery, as well as dimensions and connections.

Chapter 5 provides general details on the operation of MobileReader.Gate and describes the function of the Universal Button. It also explains the meaning of the LEDs and the requirements for Bluetooth connections. In this chapter you will also find details on charging and proper storage of the device.

Chapter 6 provides an overview of accessories and their use.

4   General Description

MobileReader.Gate supports the reading and writing of contactless data carriers; in combination with a PDA it serves as a means of validating access permissions. When a data carrier is moved within its scanning range, MobileReader.Gate will read and verify the stored permissions and data values. The result of the ticket validation can be indicated by the 'traffic light' LEDs (red, yellow, green) or an acoustic beeper, as required. Data exchange is via Bluetooth.

4.1   Basic Functions

- Contactless reading and writing of contactless data carriers (e.g. keycards)
- Data exchange via Bluetooth when used in combination with a PDA (e.g. Handheld.Gate MC55)

4.2   Scope of delivery

4.2.1   Standard Version

- MobileReader.Gate
- Micro-USB cable (1.5 m / 59")
- Lanyard
- Belt clip
- Palm strap

4.2.2   Optional extras

- Belt pouch (with extra space for palm strap)
- Micro-USB charging station (single)

4.3   Dimensions

Fig. 1: Dimensions
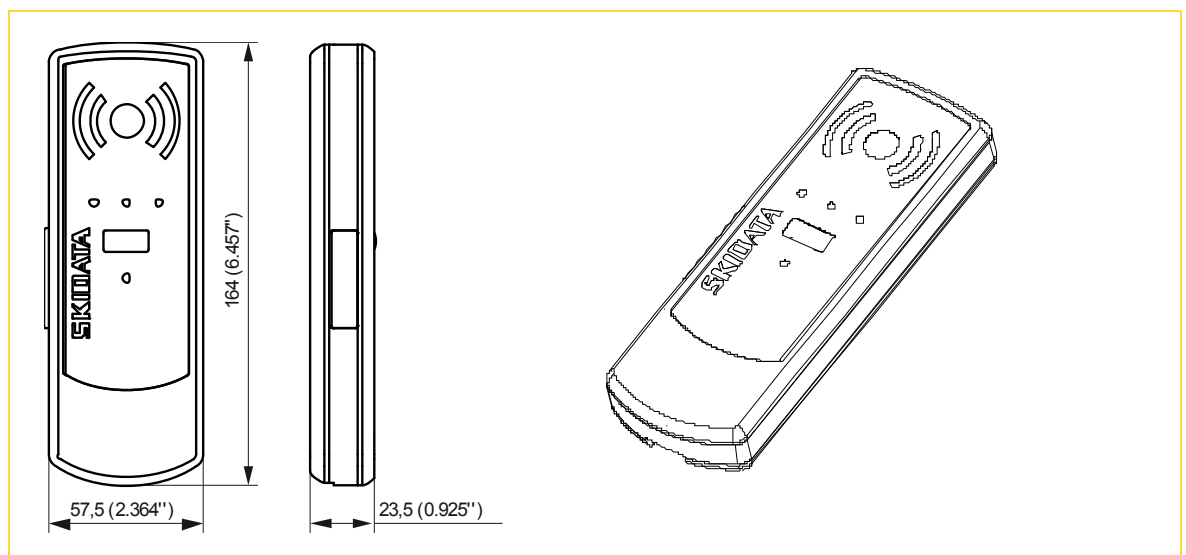
4.4 Exterior view

Fig. 2: Exterior view

① RFID symbol

② 'Traffic light' LEDs (green-yellow-red)

③ Universal Button

④ Status LED

⑤ Micro-USB port (protected by rubber flap)
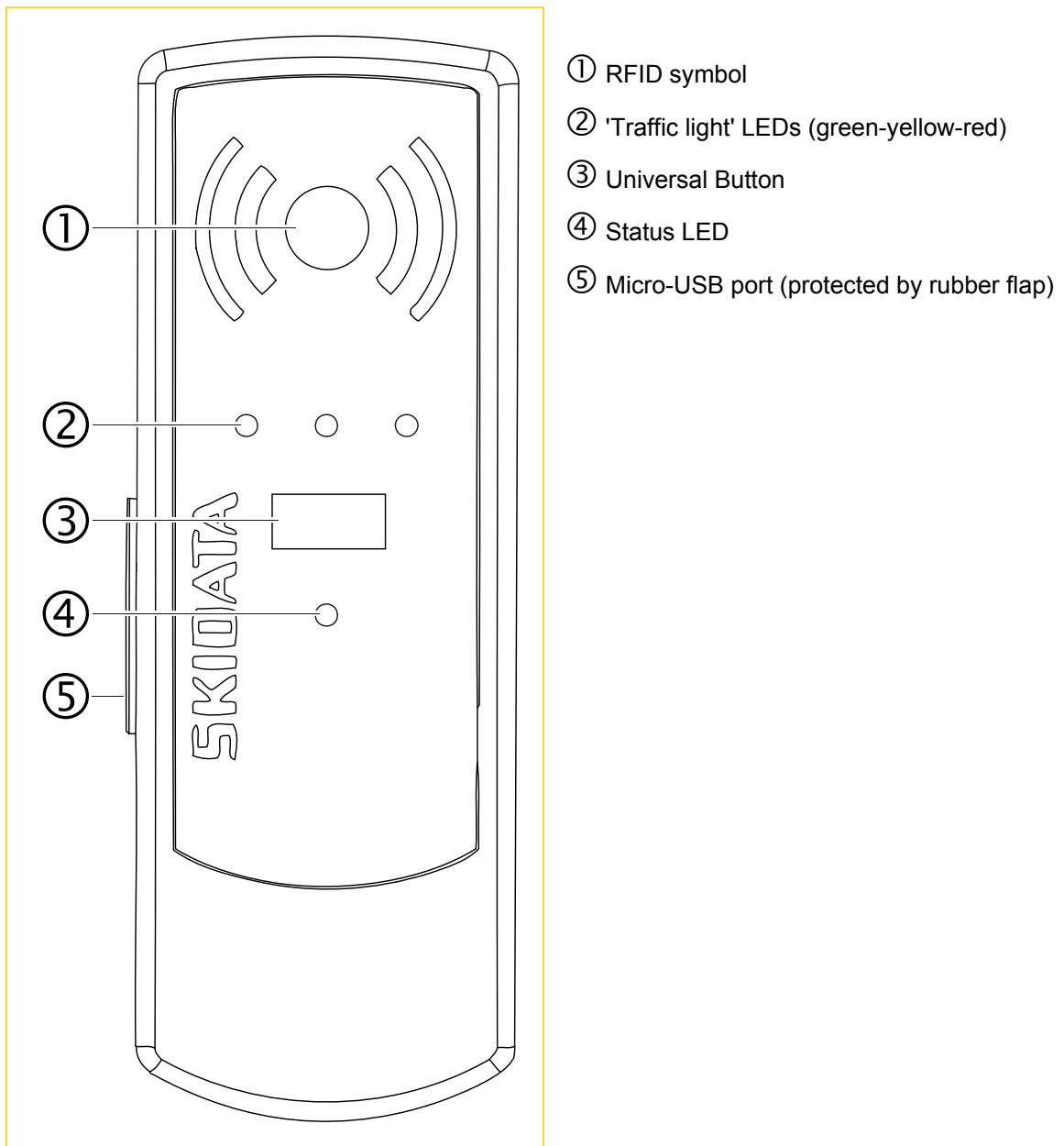
4.5 Connections

■ 1 Micro-USB port on left side

Hint: The USB port is also used for charging the device. Data can be exchanged both via the USB port and Bluetooth.

5   Operation

The device is equipped with a Universal Button for accessing all of the device's functions. The 'traffic light' LEDs and status LED provide visual feedback on the operating state of the device.

To scan a ticket in order to validate its permissions, simply hold it over the scanning point (RFID symbol).

Danger: Mind the potential dangers of the electromagnetic field when carrying the device close to your body (e.g. in your breast pocket). This applies to persons wearing pacemakers or other active or passive medical devices.

5.1   Universal Button

The Universal Button is the only button on the device; it provides access to the following functions:

- **Switching on**: Press the button briefly while the device is switched off. All LEDs will light up briefly as the power-on function test is being performed. Once the device is ready, it will emit a beep.
- **Switching off**: With the device switched on, press the button for approx. 6 seconds. The red, yellow and green LEDs will light up, and the device will emit a long beep. Keep the button pressed until after that beep, then release it.
- **Checking the power status**: With the device switched on, press the button for 2 seconds. This causes the power charging status to be indicated in 20% increments by the 'traffic light' LEDs.
    — 100-81 %: green (battery fully charged)
    — 80-61 %: yellow - green
    — 60-41 %: yellow
    — 40-21 %: red - yellow
    —   20-0 %: red (battery empty).
- **Setting up a Bluetooth connection (pairing)**: While the device is switched off, press the button for 7 seconds; this will cause the device to be detectable via Bluetooth. The yellow LED will start to flash. Once pairing has completed successfully, the green LED will light up briefly. If no Bluetooth connection can be established within 30 seconds, the attempt to connect will be terminated.
- **Reset**: With the device switched off, keep the button pressed for 30 seconds (until all 'traffic light' LEDs light up). Then release the button and briefly press it once again. This will reset the device to its factory settings.

5.2   'Traffic light' LEDs

5.2.1   The following information is indicated by the red, yellow and green (i.e., 'traffic light') LEDs:

- **No Bluetooth connection**: the red LED keeps flashing along with the status LED while the device is waiting for a connection.
- **Battery almost empty**: the device emits one loud beep every three minutes. The first beep is emitted when the battery charging status is down to 20 %. Depending on the age of the battery, there remaining power will last for approximately two hours before it needs to be re-charged.

- **Battery charging status**: To check the battery charging status, press the button for 2 seconds while the device is switched on. The charging level of the battery is indicated by the LEDs. There are five levels (20% increments): Red (battery empty) / Red-Yellow / Yellow / Yellow-Green / Green (battery fully charged).
- **Access permissions**: Depending on the application, further information can be indicated via the LEDs.

5.3   Status LED

- While the device is switched on, the status LED will flash briefly in 2-second intervals.
- While the device is re-charging, the status LED will light up for one second every 2 seconds.
- The LED will also flash while data exchange between the host and MobileReader.Gate is in progress.

5.4   Setting up a Bluetooth connection (pairing)

Hint: Before pairing devices over a Bluetooth connection, consult the user manual of the device you wish to pair with MobileReader.Gate.

5.4.1   Bluetooth default settings

- PIN Code: 5083
- Name of Device: **MobileReader_xxxxx** (5-digit serial number)
- Bluetooth Visibility: not visible

5.4.2   Connecting via Bluetooth

To connect MobileReader.Gate to another device via Bluetooth, do the following:

- While the device is switched off, press the button for 7 seconds; this will cause the device to be detectable via Bluetooth.
- The yellow LED will start flashing.
- Once pairing has completed successfully, the green LED will light up briefly. If no Bluetooth connection can be established within 30 seconds, the attempt to connect will be terminated.

5.5   Default settings

The device comes with the following factory default settings:

- PIN Code: 5083
- Name of Device: **MobileReader_xxxxx** (5-digit serial number)
- Bluetooth Visibility: not visible
- Volume and time interval for beep signals when **battery is empty**: maximum volume, 3 minutes

5.6 Reading RFID-based cards

To scan an RFID data carrier in order to validate its permissions, simply hold it over the scanning point (RFID symbol).

Fig. 3: Reading RFID data carriers
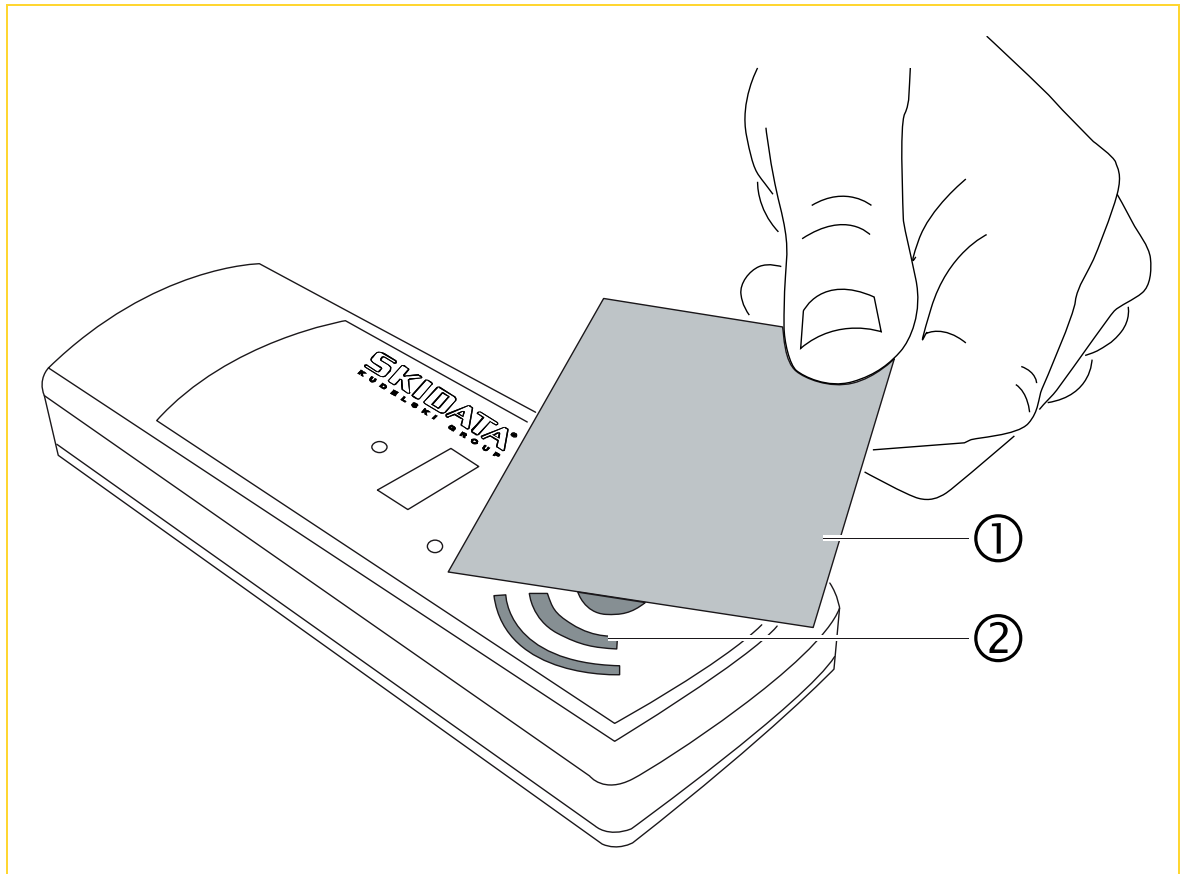
① Ticket (Keycard)   ② RFID symbol

5.7 Automatic deactivation

MobileReader.Gate will power off automatically if the Bluetooth connection remains idle for two hours. Before powering off, the device will emit a long beep (the same beep as when it is switched off manually).

To prevent the device from powering off automatically at that point, press the button briefly while the beep sounds.

5.8   Re-charging the device

MobileReader.Gate must be re-charged via the USB port (on the left side of the device). To do so, use the supplied USB cable to connect the device to the

- High-Power USB port of your computer
  or to the
- Re-charging station (available as an option)

Fig. 4: Connecting the USB cable

① USB cable

② Protective rubber flap
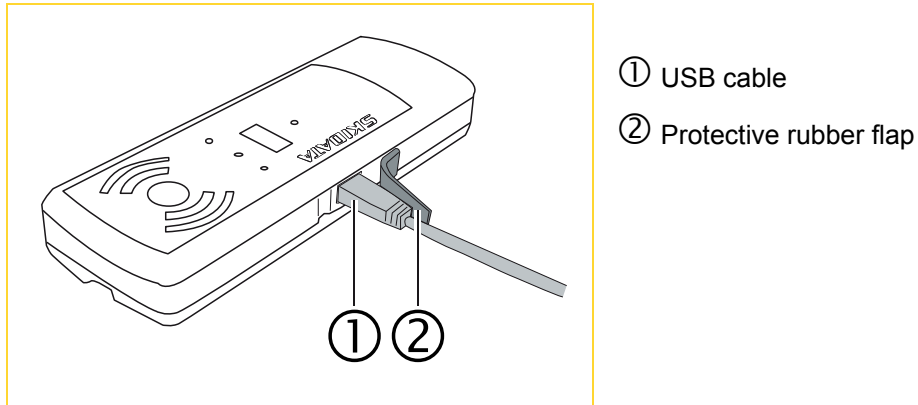
Note: The USB port on the computer must be a High-Power (500 mA) USB port
.

Once the device is connected to the USB port of the base station or a computer, re-charging of the battery will start automatically.

5.8.1   Charging for the first time

When shipped, the device's battery is not fully charged. To ensure a maximum lifetime of the battery:

- Before using the device for the first time, be sure to charge the battery for approx. 12 hours.
- Before using the device for the first time, discharge the battery completely, then fully re-charge it again (this will take approx. 7 hours).

5.8.2   Display of battery charging status

- While the battery is re-charging, the status LED will flash at 2-second intervals, with the LED lighting up longer than when indicating 'power on' status.
- Once the battery is fully charged, the flashing pattern will revert to its normal rhythm.
- To check the battery charging status, press the button for 2 seconds while the device is switched on.

5.9   Storage

Whenever the device is not used for a long time, it is recommended to store it as follows to prolong the lifetime of the battery:

Note: Make sure the device is stored properly, especially when not used for a long time.

- The ideal storage temperature is between 0 °C and 25 °C (32 °F – 77 °F). If the battery is stored at higher temperatures, this will cause an irreparable loss of capacity.
- When storing the battery for longer periods, the capacity should be between approx. 30 % - 50 % (see red and yellow status LEDs for charging level).
- When the battery has been stored for a long time, it may take one or two re-charging cycles until it provides its full capacity again.

Note: Avoid placing the MobileReader.Gate reader on a heat source.

6   Accessories

Depending on the application environment, the following accessories are available for convenient carrying and storage:

- Belt clip (for carrying the device on the belt while not in use)
- Palm Strap
- SKIDATA Lanyard

6.1   Belt Clip

To attach the belt clip to the device, use the screw to fasten it to the rear of the device, then attach the clip to the fixing button from above.

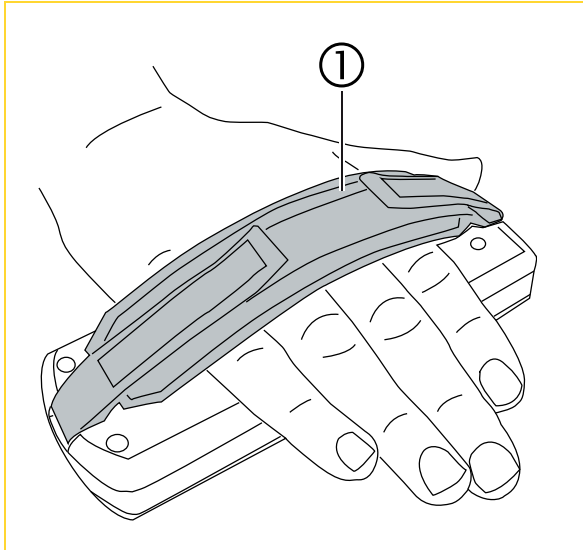The belt clip fits any belt up to a maximum width of 38 mm (1,496").

Fig. 5: Belt Clip

① Screw for attaching the belt clip

② Fixing button

③ Belt Clip
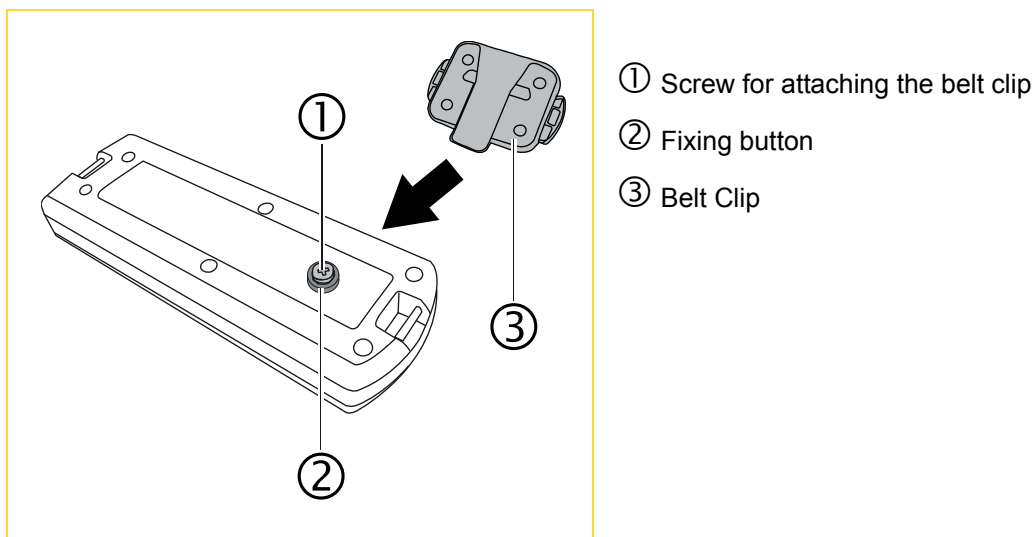
6.2   Palm Strap

Attach the palm strap to the notches at the top and bottom of the device.
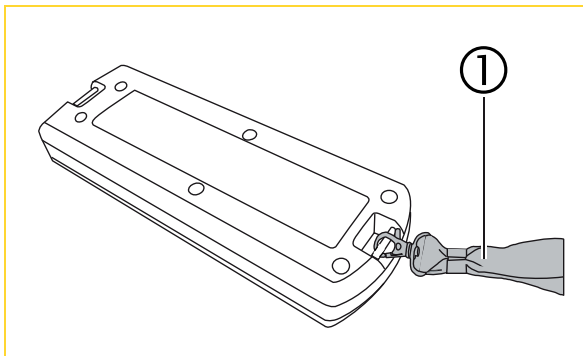
Fig. 6: Palm Strap

① Palm Strap

6.3   SKIDATA Lanyard

Attach the SKIDATA Lanyard to the notch on the top or bottom side of the device.

Fig. 7: SKIDATA Lanyard

① SKIDATA Lanyard