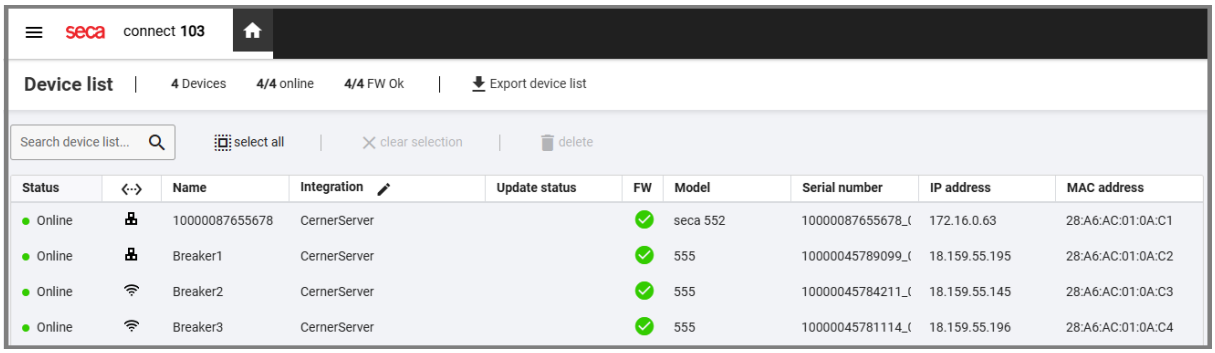
Precision for health

seca 103/452

System Instructions for Use

Software version 3.4

17-10-01-266-002i_2025-01S



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FOR ADMINISTRATORS: SETTING UP AND OPERATING THE SYSTEM

Software version: 3.4
Article number of this document: 17-10-01-266-002i_2025-01S

1. ABOUT THIS DOCUMENT

These instructions for use contain information about the installation and operation of the **seca connect 103** software and of the seca 452 Interface module.

NOTE
- An overview of compatible seca products is available here:
  ➔ Compatible seca products

1.1 Display conventions

Display in the text

Symbol	Description
▸	Action
1. **2.**	Actions which have to be performed in the specified sequence
a) **b)**	Steps of an action which have to be performed in the specified sequence
• •	First level of a list
– –	Second level of a list
Login	Element of the graphical user interface

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Display in graphics

Symbol	Description
	Points to an element the user is clicking or has clicked
	Points to relevant locations in graphics
	Indicates directions of movement of the device or device components
	Indicates data transmission routes
	Correct action Correct result of action
	Incorrect action Incorrect result of action
	End of a procedure, e.g. the installation of a part

1.2 Download/updating

The current instructions for use in each case can be found as a download in the Support area at www.seca.com.

NOTE

The contents of the instructions for use may change (for example as a result of a new software version).

- Check at regular intervals whether a new version of the instructions for use is available.

2. SYSTEM DESCRIPTION

➔ Intended use of the seca connect 103 software

➔ Intended use of the seca 452 Interface module

➔ Functional description

➔ User qualification

2.1 Intended use of the seca connect 103 software

The **seca connect 103** software is mainly used in hospitals, medical practices, and inpatient care facilities in accordance with national regulations.

The **seca connect 103** software is an accessory product for seca measuring devices. The product is used for automated data transmission (measured results, patient ID, user ID) between seca measuring devices and EMR systems from third parties.

The **seca connect 103** software can be used to set up and adapt interfaces for automated data transmission.

Operation of the product is not necessary when in measuring mode.

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2.2 Intended use of the seca 452 Interface module

The **seca 452** Interface module is mainly used in hospitals, medical practices, and inpatient care facilities in accordance with national regulations.

The **seca 452** Interface module is an accessory product for seca measuring devices. In conjunction with the **seca connect 103** software, the product is used to assign measured results to patient data (patient ID) and to users (user ID) as well as for automated data transmission between seca measuring devices and EMR systems from third parties.

2.3 Functional description

➔ seca connect 103

➔ seca measuring devices with a seca 452 external Interface module

➔ seca measuring devices with an internal Interface module

➔ Connecting to EMR systems

➔ Data storage

➔ Compatibility

➔ Technical modifications/new software releases

➔ Access rights

➔ Administration of tenants

seca connect 103

The **seca connect 103** software is installed on a server. Using the browser-based user interface of the software, seca measuring devices can be connected to the **seca connect 103** software and configured.

seca measuring devices with a seca 452 external Interface module

The **seca 452** Interface module is connected by a cable to seca measuring devices which do not have their own (WiFi/LAN) network interface. The **seca 452** Interface module transmits data between the seca measuring device and the **seca connect 103** software. A separate **seca 452** Interface module is required for each seca measuring device.

Data is transmitted between the **seca 452** Interface module and **seca connect 103** via WiFi or LAN. Barcode scanners can be connected to the USB interface of the **seca 452** Interface module.

Operating state and measurement procedure are indicated by visual signals.

Network functions can be configured via the integrated **seca web server** using a mobile terminal (smartphone, tablet).

seca measuring devices with an internal Interface module

seca measuring devices with an internal Interface module (➔ Compatible seca products) can transmit data directly to the **seca connect 103** software via WiFi or – depending on device – via a LAN interface. The **seca 452** Interface module is not required.

seca measuring devices with an internal Interface module are equipped with a USB interface to which a barcode scanner can be connected.

Operating state and measurement procedure are indicated by visual signals.

Network functions can be configured via the integrated **seca web server** using a mobile terminal (smartphone, tablet).

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Connecting to EMR systems

To connect to EMR systems, integration modules are configured in the user interface of the **seca connect 103** software. Direct modifications to the respective EMR system may be necessary. To ensure a reliable connection, we recommend having the connection implemented exclusively with the support of the manufacturer of your EMR system.

Transmitting configuration files to seca mVSA 535

The **seca connect 103** software can transmit configuration files for clinical observations to the seca medical Vital Signs Analyzer 535.

Data storage

No patient data are stored in the **seca connect 103** software. Only the login credentials for the **seca connect 103** software are stored in the software database.

Device data (device identification, connection data, workflow settings) are stored on the seca measuring device (devices with internal Interface module) or on the connected **seca 452** Interface module. The data are called up and displayed for administration with the **seca connect 103** software.

Compatibility

The system is compatible solely with seca products ➔ Compatible seca products.

Measuring devices from third-party suppliers cannot be connected.

The following EMR systems are currently supported:

- EMR systems from Cerner that have a VitalsLink interface
- EMR systems that use the Health Level 7 (HL7) standard (supported HL7 versions: 2.5, 2.6)

Integration modules for connection to other EMR systems are in development and will be provided in later versions of the software.

Technical modifications/new software releases

Details of technical modifications and new software releases can be found in this section ➔ Technical modifications.

Access rights

For the software installation, an administrator login is created and secured with a password. For cloud application, the administrator login is shared in the course of project implementation. Initial access to the software is possible only with this administrator login. The **seca connect 103** software administers user accounts to which user roles with different rights can be assigned.

External user accounts are administered in the respective EMR system connected. With local installation, the **seca connect 103** software supports authentication of external user accounts via the Lightweight Directory Access Protocol (LDAP).

Administration of tenants

Tenants can be administered in the **seca connect 103** software. A tenant represents a subunit within an organization, for example a department in a hospital. Each seca measuring device and each user account is assigned to a tenant.

2.4 User qualification

➔ seca connect 103 software

➔ seca 452 Interface module

➔ Connected seca measuring devices

seca connect 103 software

The **seca connect 103** software may only be installed and administered by experienced administrators or hospital technicians.

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seca 452 Interface module

The device may only be set up and incorporated in a network by experienced administrators or hospital technicians.

Connected seca measuring devices

Local configuration of the system affects the measurement procedure and operation of the connected measuring devices. Persons who are to operate the connected measuring devices must be informed about these effects.

3. SAFETY PRECAUTIONS

➔ Safety precautions in these instructions for use

➔ Basic safety precautions

3.1 Safety precautions in these instructions for use

DANGER!
Used to identify an extremely hazardous situation. If you fail to take note of this information, serious irreversible or fatal injuries will occur.

WARNING!
Used to identify an extremely hazardous situation. If you fail to take note of this information, serious irreversible or fatal injuries may result.

CAUTION!
Used to identify a hazardous situation. If you fail to take note of this information, minor to moderate injuries may result.

NOTICE!
Used to identify possible incorrect usage of the device/software. If you fail to take note of this information, the device/software may be damaged, incorrect measuring results may arise or data may be misused or lost.

NOTE
Contains additional information about how to use the device/software.

3.2 Basic safety precautions

➔ Using the software

➔ Handling the device

➔ Preventing electric shock

➔ Preventing damage to device

➔ Handling measured results

➔ Handling packaging material

Using the software

- Please take note of the information in these instructions for use.
- Keep the instructions for use and the declaration of conformity they include in a safe place. The current version of the instructions for use can be found at www.seca.com. The instructions for use are a component of the software and must be available at all times.
- In the interest of patient safety, you and your patients are obliged to report serious events that occur in connection with this product to the manufacturer and the authority responsible in your country.

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CAUTION!
Patient hazard, malfunction

- Only install the **seca connect 103** software on PCs equipped with an antivirus program. Always keep your antivirus program and operating system up to date to protect your computer system from current and future malware. The **seca connect 103** software is protected against manipulation and is checked regularly for malware.
- Use the **seca connect 103** software only for the specified intended use.
- Use only compatible measuring devices from seca in combination with the **seca connect 103** software.
- Keep other electrical medical devices, e.g. high-frequency surgical devices, a minimum distance of approx. 1 meter away to prevent incorrect measurements or wireless transmission interference.
- Keep HF devices such as cell phones and televisions, for example, a minimum distance of approx. 1 meter away to prevent incorrect measurements or wireless transmission interference.
- The actual transmission output of HF equipment may require minimum distances of more than 1 meter. Details can be found at www.seca.com.

NOTICE!
Loss of data, access to data by unauthorized persons

- Never pass on your access data. seca will never ask you for your access data.

Handling the device

- Please take note of the information in these instructions for use.
- Keep the instructions for use in a safe place. The instructions for use are a component of the device and must be available at all times.
- In the interest of patient safety, you and your patients are obliged to report serious events that occur in connection with this product to the manufacturer and the authority responsible in your country.

DANGER!
Risk of explosion
Do not use the device in an environment in which one of the following gases has accumulated:
– Oxygen
– Flammable anesthetics
– Other flammable substances/air mixtures

CAUTION!
Patient hazard, damage to device

- Additional devices which are connected to electrical medical devices must provide evidence of compliance with the relevant IEC or ISO standards (e.g. IEC 60950 for data-processing devices). Furthermore, all configurations must comply with the requirements of standards for medical systems (see IEC 60601-1-1 or Section 16 of edition 3.1 of IEC 60601-1 respectively). Anyone connecting additional devices to electrical medical devices is considered a system configurer and is therefore responsible for ensuring that the system complies with the requirements of standards for systems. This also applies to additional devices recommended by seca. Your attention is drawn to the fact that local laws take precedence over

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the above-mentioned requirements of standards. In the event of any queries, please contact your local specialist dealer or Technical Service.

- Have servicing carried out regularly as described in the relevant section of this document.
- Technical modifications may not be made to the device. The device does not contain any parts for servicing by the user. Only have servicing and repairs performed by an authorized seca Service partner. You can find service partners in your area at www.seca.com or by sending an e-mail to service@seca.com.
- Only use original seca accessories and spare parts, otherwise seca will not grant any warranty.

CAUTION!
Patient hazard, malfunction

- Keep other electrical medical devices, e.g. high-frequency surgical devices, a minimum distance of approx. 1 meter away to prevent incorrect measurements or wireless transmission interference.
- Keep HF devices such as cell phones a minimum distance of approx. 1 meter away to prevent incorrect measurements or wireless transmission interference.
- The actual transmission output of HF equipment may require minimum distances of more than 1 meter. Details can be found at www.seca.com.

Preventing electric shock

WARNING!
Electric shock

- Set up devices which can be operated with the electricity supply so that the power supply socket is within easy reach and the power supply can be disconnected quickly.
- Ensure that your local power supply matches the details on the device.
- Connect this device only to a power supply with a protective earth facility.
- Do not connect the device to a power supply network if there is any uncertainty about whether the protective earth is functioning. In this case, use the device exclusively in rechargeable battery mode.
- Do not connect the device to sockets that are switched by an on/off switch or a dimmer.
- Never touch the power supply cable with wet hands.
- Do not use extension cables or power strips.
- Make sure that cables are not pinched or damaged by sharp edges.
- Make sure that cables do not come into contact with hot objects.
- Do not operate the device at an altitude of more than 3000 m above sea level.

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Preventing damage to device

NOTICE!
Damage to device

- Ensure that no liquids enter the device. They can damage the electronics.
- Switch off the device (if option is provided) before you take the power supply connector out of the power supply socket.
- If you are not going to use the device for an extended period, disconnect the power supply connector from the power supply socket and remove the rechargeable battery (if present and removable). Only then is the device de-energized.
- Make sure not to drop the device.
- Do not expose the device to any impacts or vibrations.
- Perform function controls regularly as described in the relevant section in this document. Do not operate the device if it is damaged or not working properly.
- Ensure that the air openings of the device (if present) are not covered.
- Ensure that there is no heat source in the immediate vicinity. Do not expose to direct sunlight. The excessive temperature could damage the electronics.
- Avoid rapid temperature fluctuations. When the device is transported so that a temperature difference of more than 20 °C occurs, it must stay turned off for at least 2 hours before it can be turned on again. Otherwise, condensation water will form which can damage the electronics.
- Use the device only in the intended ambient conditions.
- Store the device only in the intended storage conditions.
- Use only disinfectants free of chlorine and alcohol which are explicitly suitable for acrylic sheet and other sensitive surfaces (active ingredient: quaternary ammonium compounds, for example).
- Do not use aggressive or abrasive cleaning agents.
- Do not use organic solvents (e.g. white spirit or petroleum spirit).

Handling measured results

CAUTION!
Patient hazard
In order to avoid misinterpretations, measuring results for medical use must be displayed and used in SI units (weight: kilogrammes, length: metres) only. Some devices offer the ability to display measuring results in other units. This is only an additional function.

- Use the results exclusively in SI units.
- The use of measuring results in non-SI units is the sole responsibility of the user.

NOTICE!
Inconsistent measuring results

- Before you electronically save measured values determined using this device and use them further (e.g. in seca software or in an EMR system), make sure that the measured values are plausible.
- If measured values are transmitted to seca software or an EMR system, make sure prior to further use that the measured values are plausible and are assigned to the correct patient.

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Handling packaging material

WARNING!
Risk of suffocation
Packaging material made of plastic foil (bags) is a choking hazard.

- Keep packaging material out of reach of children.
- In the event that the original packing material may not be available anymore, only use plastic bags with security holes in order to reduce the risk of suffocation. Use recyclable materials if possible.

NOTE
Keep the original packing material for future use (e.g. returning for servicing).

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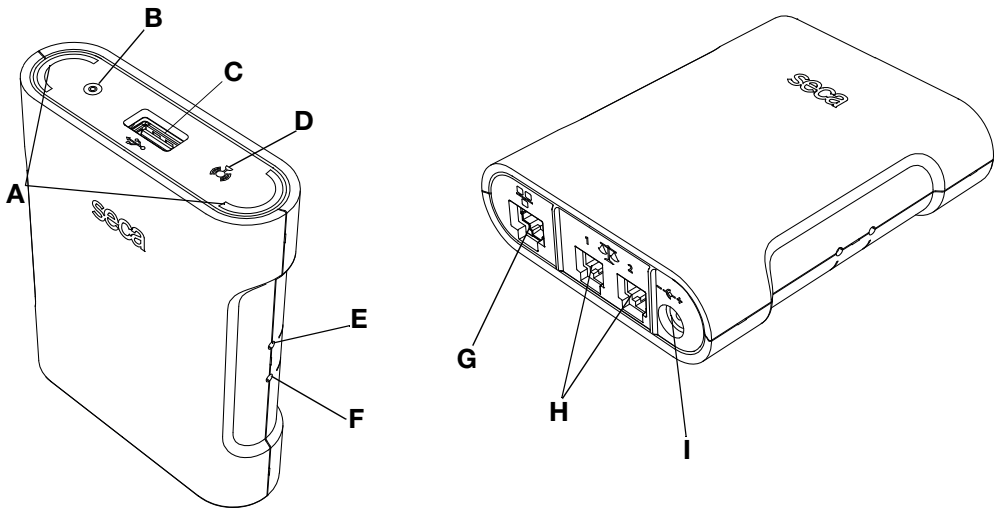
4. OVERVIEW

➔ Controls for seca 452 Interface module

➔ Symbols in the software

➔ Symbols on the packaging (seca 452 Interface module)

4.1 Controls for seca 452 Interface module



No.	Symbol	Function
A		Workflow LED • Steady green: Measurement procedure is active • Flashes green: Data being transmitted • Turns green for approx. 5 seconds: Data successfully transmitted • Turns red: Error in data transmission/in measurement procedure
B		Power LED • Steady green: Device is ready for use • Turns red: Device is defective • Flashes green: Device is active as access point
C		USB interface (only for medical devices)
D		Network LED • Flashes green: Establishing network connection • Steady green: Network connection established • Turns red: Network connection interrupted
E		WPS button: Establishing WiFi connection via WPS
F		Reset button • Press and hold (approx. 8 seconds): Reset settings • Press briefly (approx. 1 second): Activate/deactivate access point function
G		LAN interface
H	1 2	Interface for seca products
I	− +	Power supply connection

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4.2 Symbols in the software

Text/symbol	Meaning
	Name and address of manufacturer
UDI	Unique Device Identifier (product identification number)
	Article number
	Lot number
	Date of manufacture
	Follow instructions for use
	Medical device in accordance with Regulation (EU) 2017/745
	Device complies with EU directives

4.3 Symbols on the type plate (seca 452 Interface module)

Symbol	Meaning
ProdID	Product identification number, serial number
Mat. no.	Variant number
	Serial number
	Article number
	Follow instructions for use
	Device complies with EU directives
	Medical device in accordance with Regulation (EU) 2017/745
	Name and address of manufacturer, date of manufacture
	Symbol of the US Federal Communications Commission (FCC)
FCC ID	Device license number from the US Federal Communications Commission (FCC)
IC ID	Device license number from Industry Canada
	Do not dispose of with household waste

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4.4 Symbols on the packaging (seca 452 Interface module)

Text/symbol	Meaning
	Protect from moisture
	Arrows indicate top of product Transport and store in an upright position
	Fragile Do not throw or drop
	Permitted min. and max. temperature for transport and storage
	Permitted min. and max. humidity for transport and storage
	Open packaging here
	Packaging material can be disposed of through recycling programs

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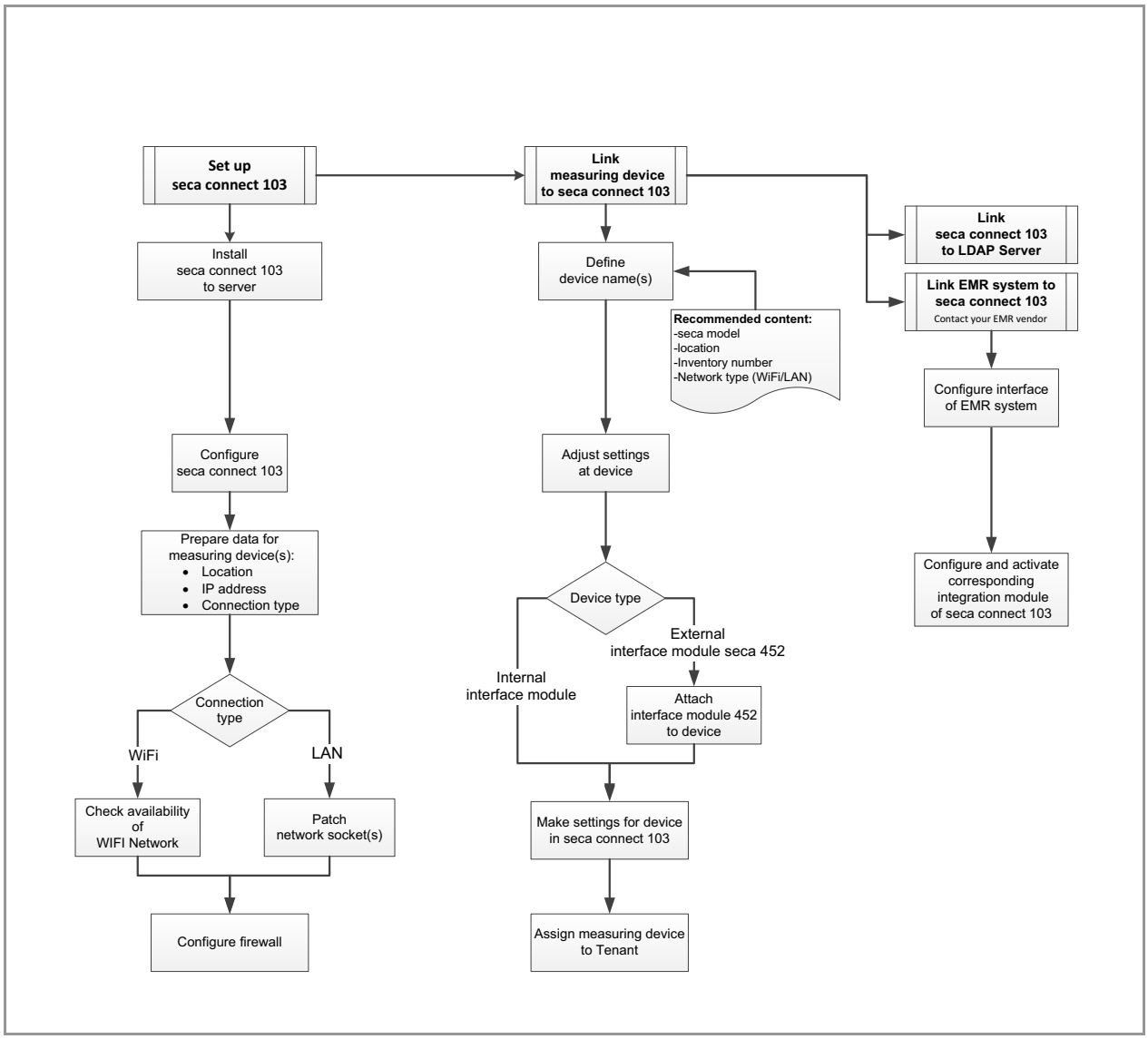
5. SETTING UP THE SECA CONNECT 103 SYSTEM AS A LOCAL INSTALLATION

5.1 Work steps

This graphic provides an overview of the steps required to set up an integrated measuring system with the **seca connect 103** software as a local installation. Details can be found on the following pages.



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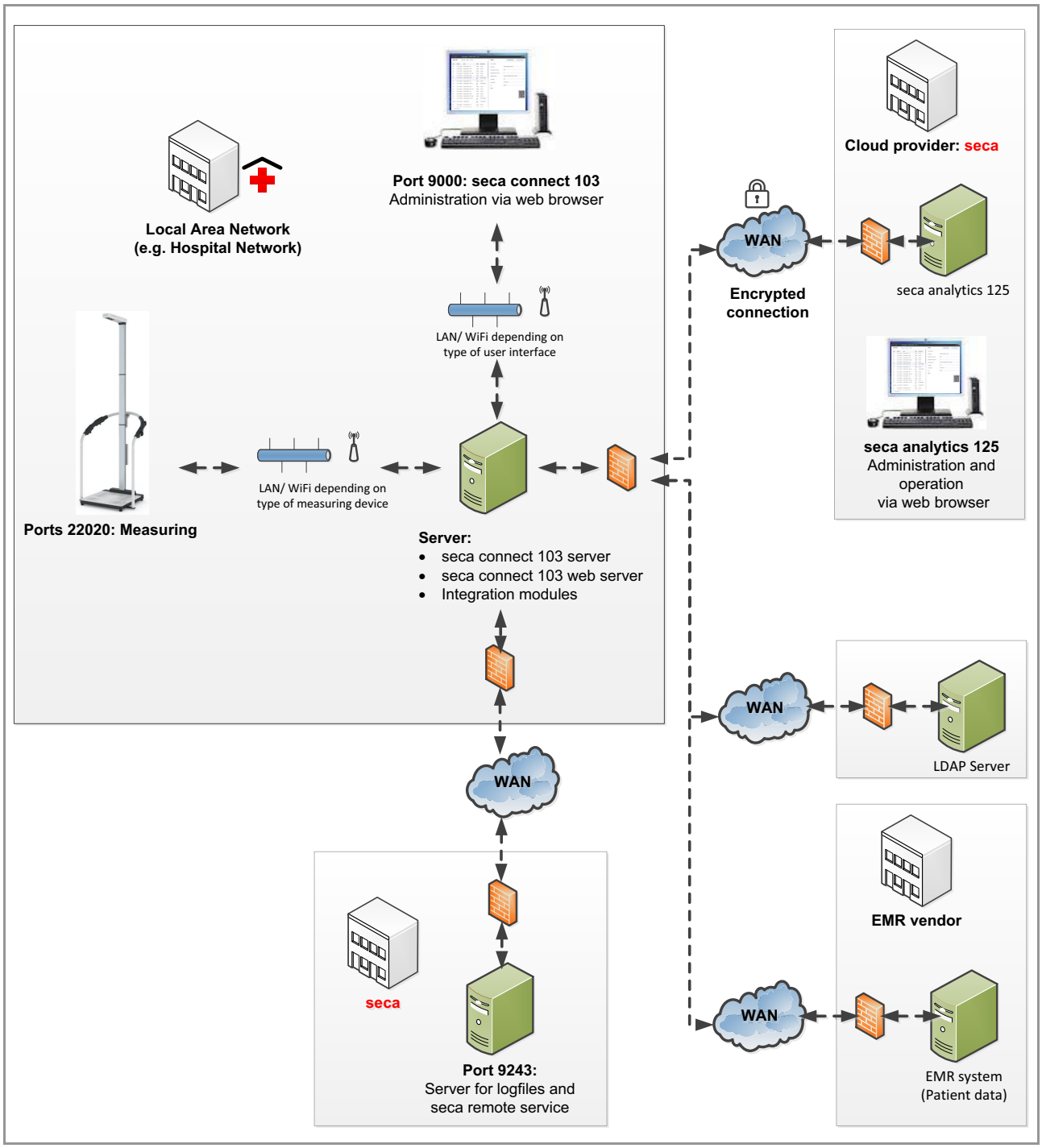
5.2 System structure

This graphic provides an overview of the system structure with the **seca connect 103** software as a local installation (here with an externally-hosted EMR system).



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5.3 System requirements

System component	Requirement
Operating system, server:	Windows® Server 2019 Datacenter 64-bit Windows® Server 2022 Datacenter 64-bit Windows® Server 2025 Datacenter 64-bit (32-bit systems not supported)
Server hardware: • RAM • Processor • Free hard disk storage	 min. 16 GB Intel Xeon CPU Q 2.30 GHz min. 200 GB
Browser	Google Chrome Release 64 and higher Microsoft Edge Version 96 and higher
Data transmission	LAN WiFi: • V1.2 and higher: WPA2 Enterprise PEAP TLS • V1.1 and higher: WPA2 Enterprise PEAP RADIUS • V1.0 and higher: WPA2 with PSK
Ports	Recommended: • 9000: seca 103 web browser • 22020: port for seca measuring devices
EMR systems: • Supported interfaces • Supported authentication protocols	 Cerner VitalsLink Health Level 7 (HL7) (Versions 2.5, 2.6) LDAP, Imprivata

Windows®, Windows® Server 2016 and Windows® Server 2019 are registered trademarks of the Microsoft Corporation.

5.4 Installing and configuring seca connect 103

➔ Performing setup

➔ Configuring the firewall

➔ Configuring the security program

NOTE
Integrating software and devices in a PC network containing other devices may lead to previously unknown risks for patients, operators or third parties. It is the responsibility of the operating company to determine, analyze, rate, and manage these risks.

Performing setup

The **seca connect 103** installation package is exclusively available as a download. The corresponding link will be sent to you in the course of project implementation.

NOTE
You need a Microsoft SQL database in order to use the software. You can use an existing database or install a database in the course of installation. Enter the access data for the database in the course of installation.

1. Provide a separate server for the **seca connect 103** software.
2. Follow the link sent to you in the course of project implementation to download the installation package.

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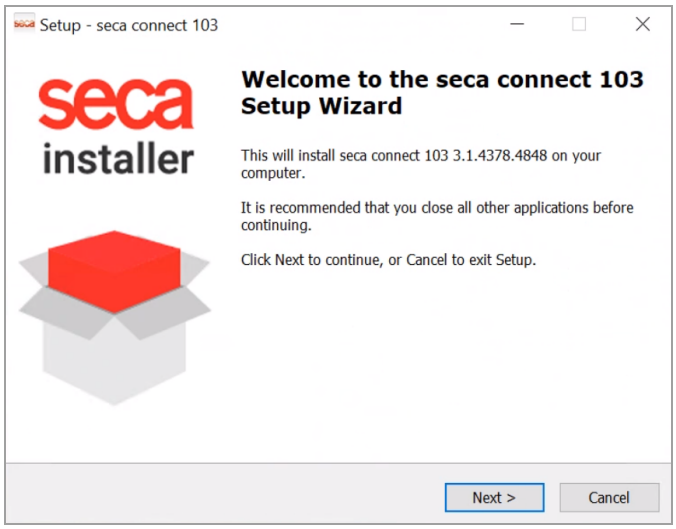
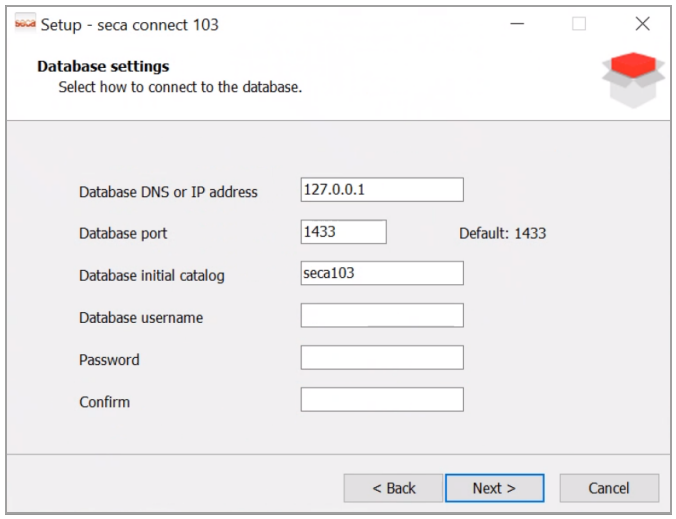
3. Save the installation file to the server provided for the **seca connect 103** software.
4. Open the **seca connect 103** Setup Wizard (here: seca 103 3.1.4378.4848) by double-clicking it.



5. Click **Next** to start the **seca connect 103** setup process.
6. Follow the on-screen instructions until the **Database settings** dialog is displayed.



7. Enter the settings for the database of the **seca connect 103** software:
   - **Database DNS or IP address** (default: local; only change default if using an existing database)
   - **Database port**: Port for the database (only change default if using an existing database)
   - **Database initial catalog**: Name of database (only change default if using an existing database)
   - **Database username**: Username for the database
   - **Password**: Password for the user of the database

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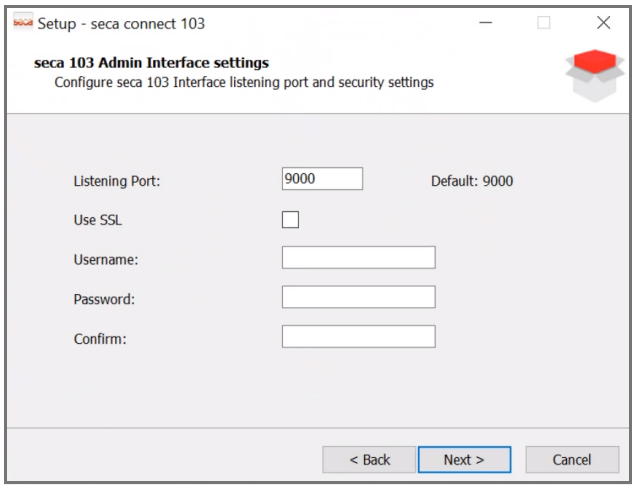
8. Click **Next**.
   The **seca 103 Admin Interface settings** dialog is displayed.



9. Enter the **Listening port** via which you want to reach the **seca 103 Admin Interface** in the browser.
10. Ensure that the setting for use of an SSL certificate (**Use SSL**) is correct:
    - SSL certificate in use: Ensure that the SSL certificate is incorporated, activate the **Use SSL** checkbox
    - No SSL certificate in use: Leave the **Use SSL** checkbox deactivated

    NOTE
    The software will not start if the **Use SSL** checkbox is activated but no SSL certificate has been incorporated. Information about how to proceed in this case is available here: ➔ Troubleshooting\➔ Faults in the system
11. Assign **Username** and **Password** for the initial user for access to the user interface of the **seca connect 103** software.

    NOTICE!
    Data access by unauthorized persons
    An insecure password may allow unauthorized persons to access data.
    - Select a password which satisfies your institution's security requirements.
    - Follow the general recommendations for a safe password:
      – At least eight characters long
      – Use large and small letters as well as numbers and special characters
      – Do not use words
      – Do not use logical series of numbers or letters

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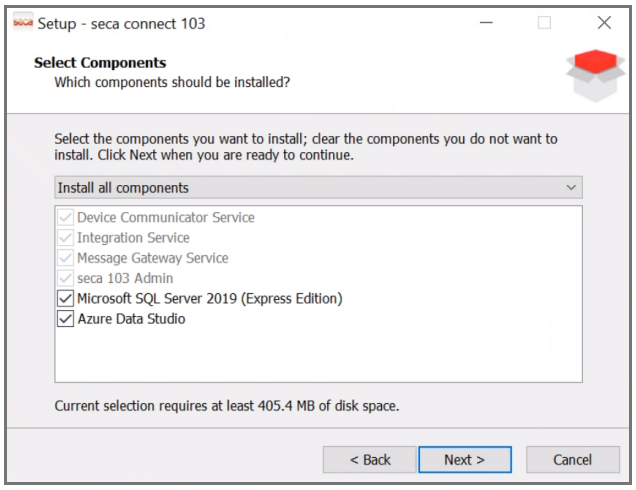
12. Click **Next**.
    The **Select Components** dialog is displayed.



13. Select the components you would like to install:
    - Accept the default (recommended)
    - Deselect installation of Microsoft SQL Server and/or Azure Data Studio
14. Click **Next**.
    The selected components will be installed.
    This may take a few minutes.
15. In the **Completing the seca 103 Setup Wizard** wizard screen, select the desired option:
    - Restart your computer now (recommended)
    - Restart your computer later

    You have the following options for continuing following installation/restart:
    - ➔ Preparing the data connection (WiFi/LAN) for seca measuring devices
    - ➔ Administering seca measuring devices
    - ➔ Administering integration modules

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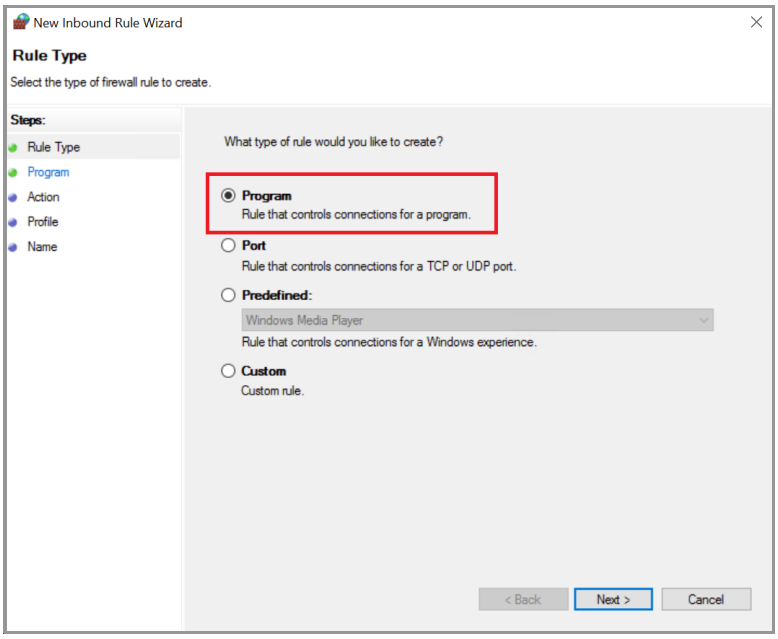
Configuring the firewall

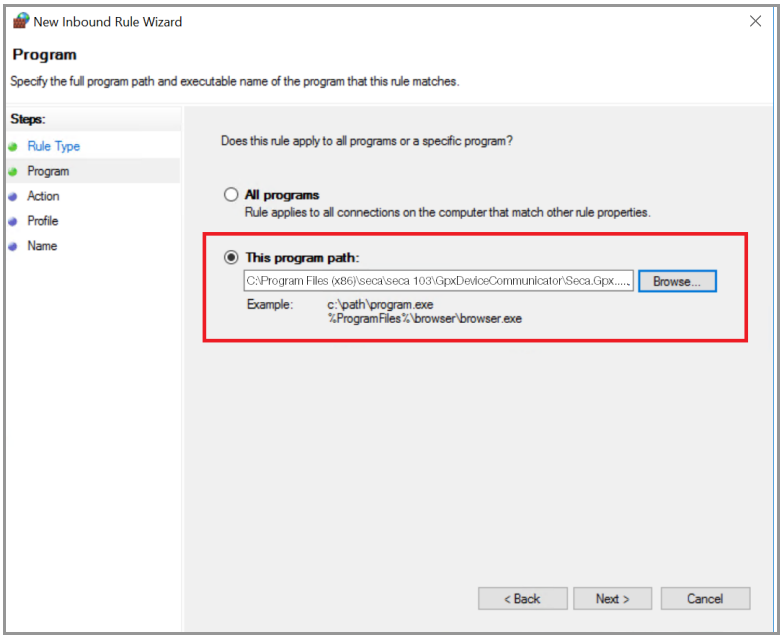
The settings in the Windows® Defender firewall are described in the following text as an example. If you use a different firewall, make the settings there accordingly. Work through the individual dialog windows and click **Next** after each one.

Creating an inbound rule

1. Open the dialog window of the firewall (here: “Windows Administrative Tools\Windows Defender Firewall with Advanced Settings”).
2. Create a new inbound rule:
   a) Click “Inbound Rules”
   b) Click “New Rule”
3. Under “Rule Type”, click “Program”.



4. Under “Program”, select the setting “This program path:”. Enter the following program path: C:\Program Files (x86)\seca\seca103\GpxDeviceCommunicator\Seca.GpxDeviceCommunicatorService.exe



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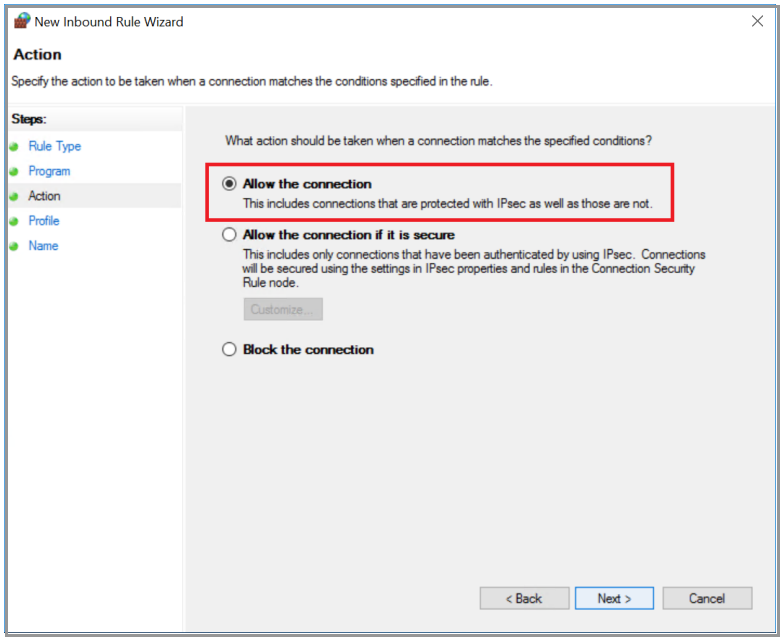
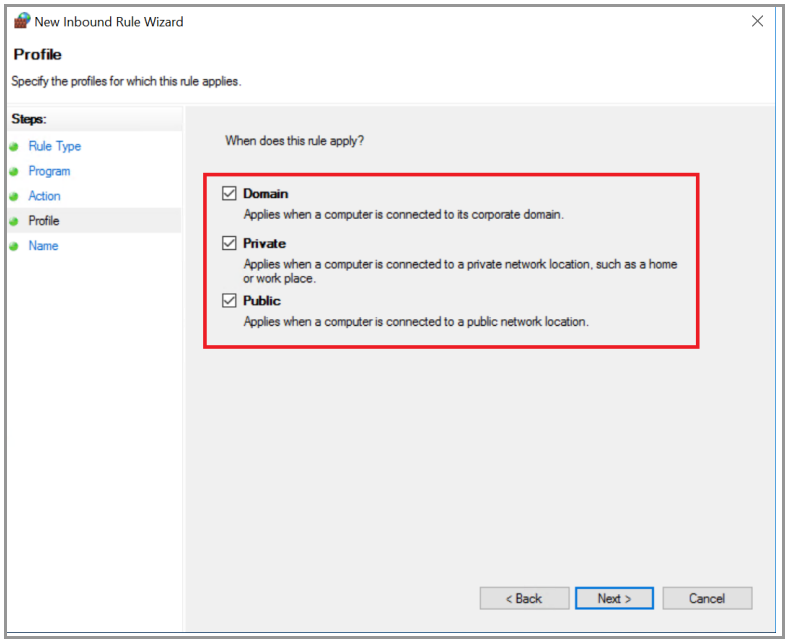
5. Under “Action”, select the setting “Allow the connection”.



6. Under “Profile”, select the settings to suit your network requirements (here: all options selected).



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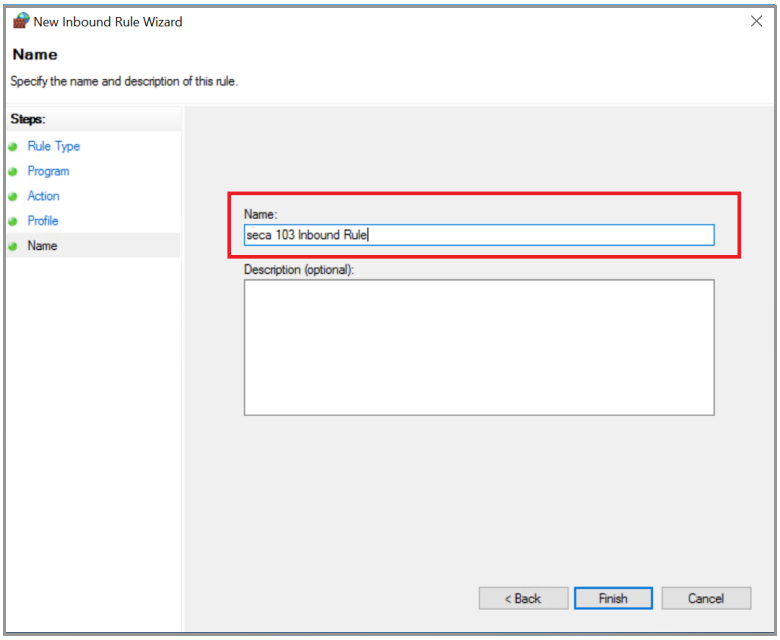
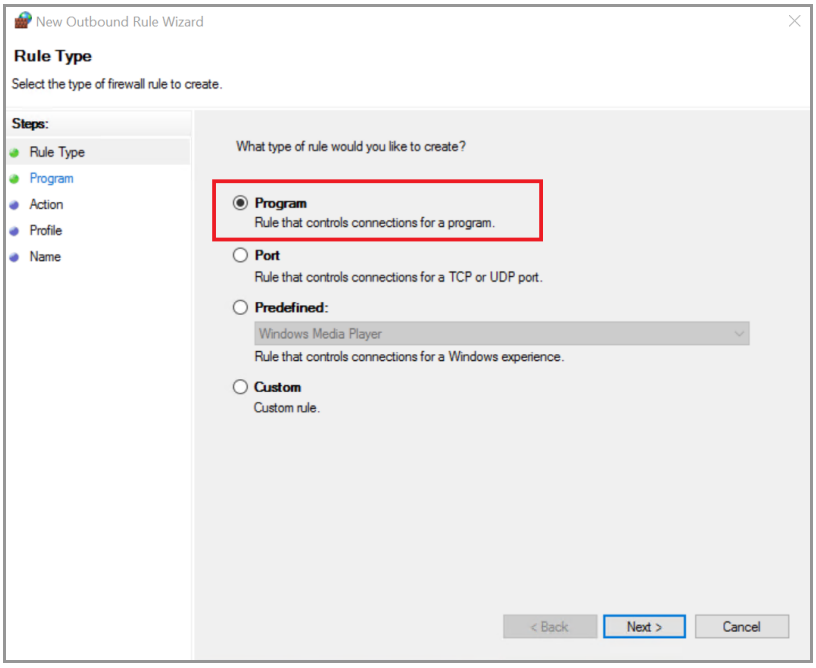
7. Under “Name”, assign a name for the new rule to suit the guidelines of your institution (here: “seca 103 Inbound Rule”).



8. Click **Finish**. The inbound rule has been created.

Creating an outbound rule

1. Open the dialog window of the firewall (here: “Windows Administrative Tools\Windows Defender Firewall with Advanced Settings”).
2. Create a new outbound rule:
   a) Click “Outbound Rules”
   b) Click “New Rule”
3. Under “Rule Type”, click “Program”.



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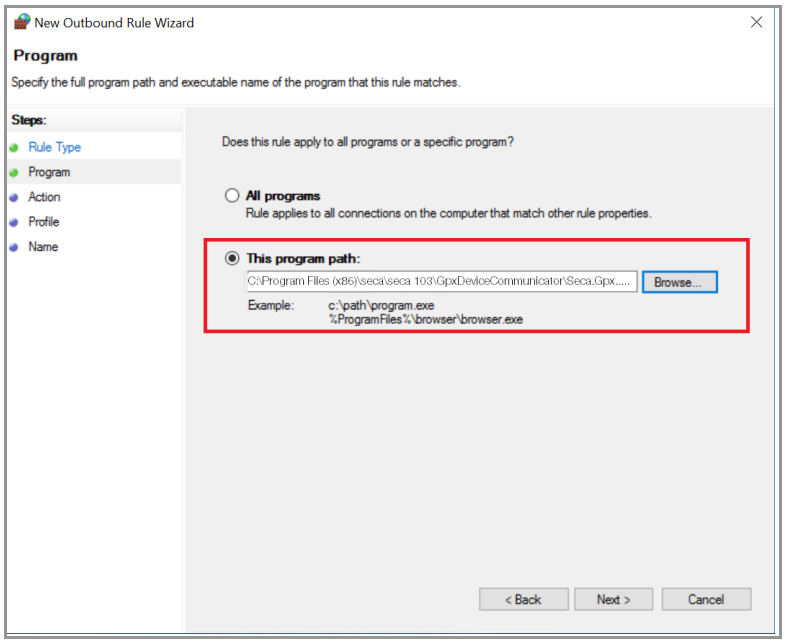
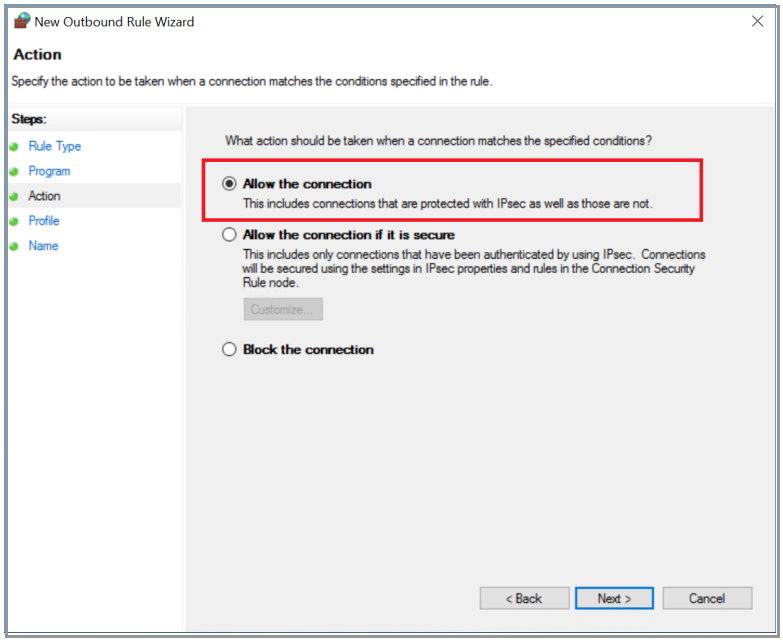
4. Under “Program”, select the setting “This program path:”. Enter the following program path: C:\Program Files (x86)\seca\seca 103\GpxDeviceCommunicator\Seca.GpxDeviceCommunicatorService.exe



5. Under “Action”, select the setting “Allow the connection”.



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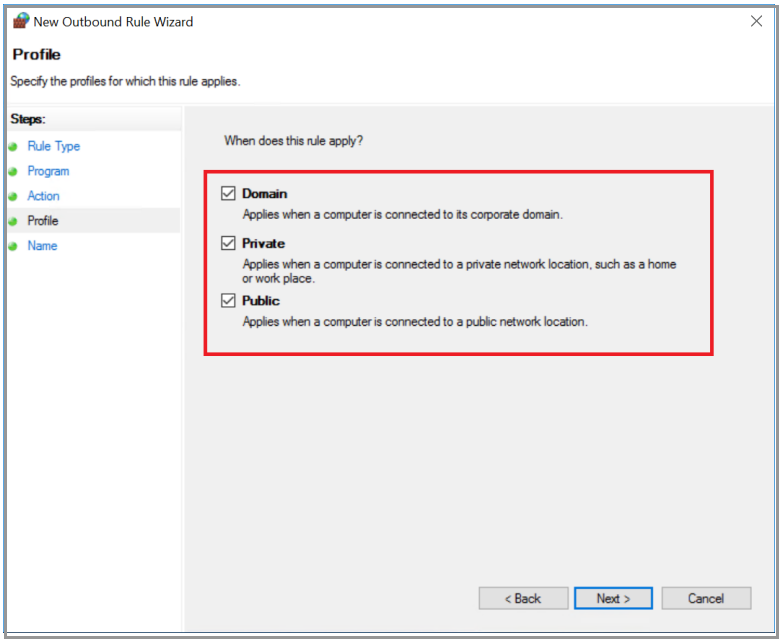
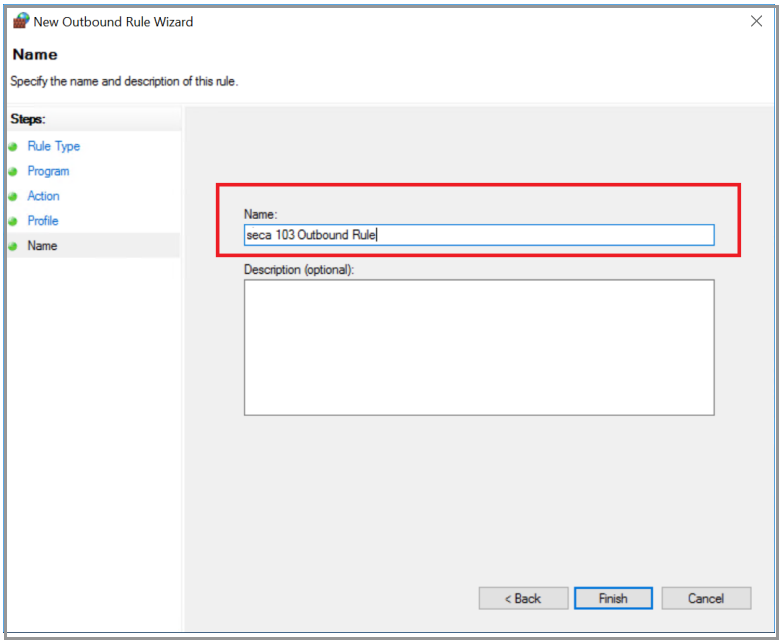
6. Under “Profile”, select the settings to suit your network requirements (here: all options selected).



7. Under “Name”, assign a name for the new rule to suit the guidelines of your institution (here: “seca 103 Outbound Rule”).



8. Click **Finish**. The outbound rule has been created.

NOTE
If your system is secured by multiple firewalls, make the appropriate settings in **all** firewalls.

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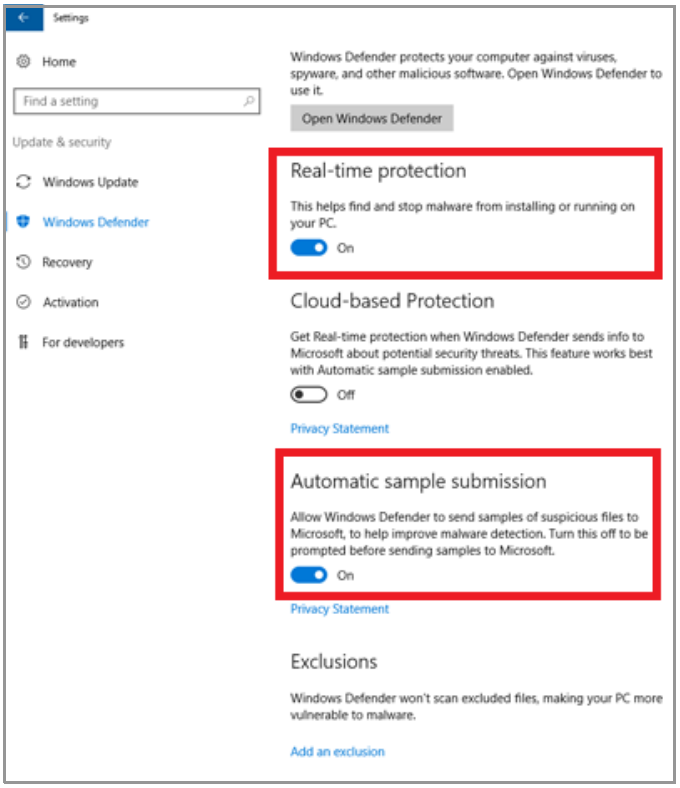
Configuring the security program

The following procedure describes the settings in Windows® Defender by way of an example. If you use a different security program, make the settings there accordingly. Work through the individual dialog windows and click **Next** after each one.

1. Open Windows® Defender (Settings\Update & Security\Windows® Defender).
2. Ensure that the following settings are in place:
   - Realtime protection: on
   - Cloud-based protection: off
   - Automatic sample submission: on



3. Under “Exclusions”, click “Add an exclusion”.

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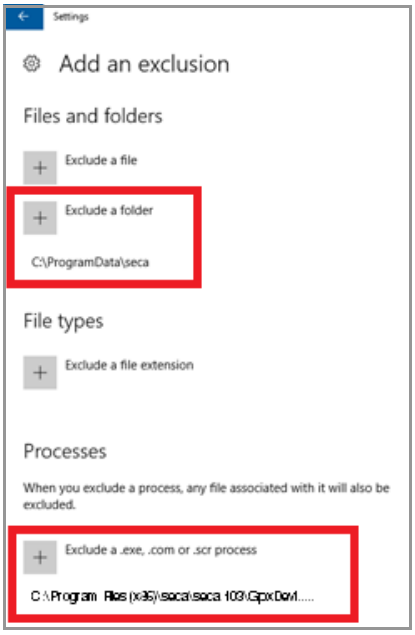
4. Enter the following exclusions:
   - Exclude a folder: C:\ProgramData\seca
   - Exclude an .exe, .com or .scr process: Seca.GpxDeviceCommunicatorService.exe



NOTE
If your system is secured by additional security programs, make appropriate settings in **all** the security programs.

6. OPERATING SECA CONNECT 103

➔ Primary functions
➔ Administering seca measuring devices
➔ Interface module: Updating the firmware
➔ Administering integration modules

6.1 Primary functions

➔ Logging in
➔ Changing a password
➔ Viewing product information
➔ Logging out

Logging in

1. Open the **seca connect 103** software in your browser:
   - ► Local installation: Enter the IP address of the **seca connect 103** server (default: localhost:9000/login)
   - ► Cloud application: Use the link given to you by seca Service in the course of project implementation

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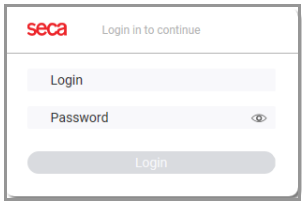
2. In the **Login** dialog window, enter the login credentials.



   - Initial login for local installation: Use the login credentials you created in ➔ Performing setup\Step 11.
   - Initial login for cloud application: Use the login credentials given to you by seca Service in the course of project implementation

3. Click **Login**.
   The **seca connect 103** software is opened.

Changing a password

1. Click ☰.
   The main menu opens.
2. Click **Change password**.
3. Enter the old password.
4. Enter the new password.

   NOTICE!
   Data access by unauthorized persons
   An insecure password may allow unauthorized persons to access data.
   - Select a password which satisfies your institution's security requirements.
   - Follow the general recommendations for a safe password:
     - At least eight characters long
     - Use large and small letters as well as numbers and special characters
     - Do not use words
     - Do not use logical series of numbers or letters

5. Confirm the new password.
6. Click **Change password**.
   The new password is active.

Viewing product information

1. Click ☰.
   The main menu opens.

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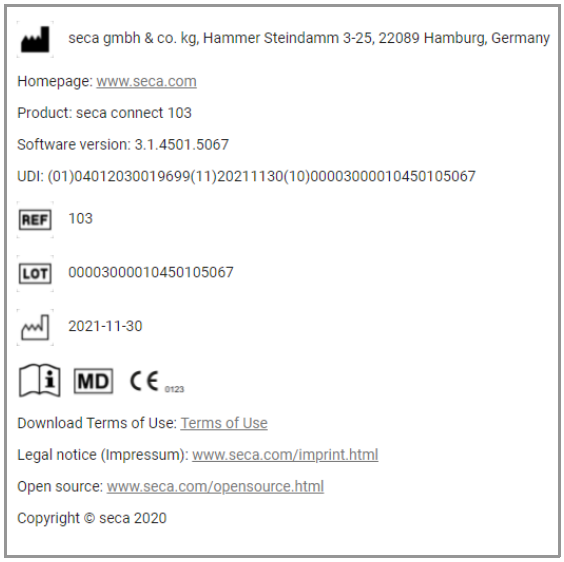
2. Click **About the software**.
   The following data are displayed:
   - Manufacturer details
   - Version status
   - Product identification (➔ Symbols in the software)
   - Link to Terms of Use



Logging out

1. In the menu bar, click **Logout**.
2. Close the browser.

6.2 Administering seca measuring devices

➔ Preparing the data connection (WiFi/LAN) for seca measuring devices

➔ Preparing a seca measuring device

➔ Adding a seca measuring device

➔ Connecting a seca measuring device to the network

➔ Changing the setting for a seca measuring device

➔ Exporting the device list

➔ Deleting a device

NOTE
The procedure described in this section assumes that a compatible barcode scanner (➔ Optional accessories and spare parts) is connected to the seca measuring devices. Information on how to proceed without a barcode scanner can be found here: ➔ Using the web server of the seca 452 Interface module.

Preparing the data connection (WiFi/LAN) for seca measuring devices

seca measuring devices can transfer data to the **seca connect 103** software via WiFi or via LAN. The type of data connection can be selected separately for each seca measuring device connected.

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When preparing the data connection (WiFi/LAN), the following factors must be taken into account:

- seca measuring devices used ➔ Technical modifications:
  - seca measuring devices with an internal Interface module (for example, **seca 333 i**, **seca 336 i** and **seca 797**: Exclusively WiFi
  - seca measuring devices with an internal Interface module (for example **seca 655**, **seca mBCA 555**): LAN or WiFi
  - seca measuring devices with a **seca 452** Interface module (for example, **seca 704**): LAN or WiFi
- Technical and structural conditions in your institution:
  - Network structure and capability
  - Length of the data transmission paths
  - Location of the seca measuring device, possible obstacles between transmitter and receiver, for example, other medical devices, furniture
  - Properties of ceilings and walls

Depending on the data connection, the following preparation work is necessary:

► Set the DHCP server so that the MAC address of a seca measuring device always receives the same IP address

► WiFi: Define network/set up new network

LAN: Patch network sockets at the location of the seca measuring device

Preparing a seca measuring device

Default settings need to be made on the seca measuring device to ensure reliable system function.

NOTICE!

Malfunction and incorrect data assignment

Incorrect or incomplete settings on seca measuring devices can lead to the transmission of invalid measured values, to incorrect assignment of measured values, or to malfunctions in the system or in individual devices.

► Ensure that all seca measuring devices to be connected are correctly configured.

► Follow the instructions for use for the respective seca measuring device.

1. Make the following settings on the seca measuring device:

Function	Setting	Device type
Autohold	**On**	**All**
seca 360° wireless[a]	**Off**	**seca 360° wireless measuring devices**

a. This function must remain activated for the **seca 285**/**seca 284** measuring stations in order to be able to transmit height values from the head slide to the multifunctional display.

2. Ensure that the seca measuring device is **not** connected to the following devices:
   - Stadiometer: **seca 274**, **seca 264**
   - Wireless printer: **seca 465**, **seca 466**, **seca 467**
3. Continue based on the type of seca measuring device (➔ Technical modifications ➔ Compatible seca products):
   - ► Devices with an internal Interface module (e.g. **seca 336 i**): continue at section ➔ Adding a seca measuring device
   - ► Device requires a **seca 452** Interface module: continue at section ➔ Connecting and installing seca 452 interface module

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Adding a seca measuring device

NOTE
The seca **seca mVSA 535** does not support the transmission of connection data via QR code. Enter the connection data directly on the device as described in the instructions for use for the device. You can then access the device and perform configuration from the user interface of **seca connect 103**.

The **Add a device** view can be called up in the main menu. Configure the parameters described below to suit your network situation and the requirements of your institution. You can transmit the settings to the device by QR code. QR codes are generated as soon as entries have been made in the dialog field.

1. Click ☰.
   The main menu opens.
2. Click **QR-Code Generator**.
   A submenu is displayed.
3. Click **Add device**.
   The **Add a device** view opens.

4. Enter the following data for the seca measuring device (minimum requirement: **ServerAddress**):

Parameter	Description	Values
Device name	Name of the seca measuring device	Recommended naming elements: • seca model number • Setup location • Inventory number • Connection type: WiFi/LAN
OrgID	ID of a ward in your hospital (e.g. Oncology)	Organization IDs are assigned in the integration modules: ➔ Cerner VitalsLink integration module, ➔ Health Level 7 integration module (HL7Module)

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Parameter	Description	Values
PatientTimeout	Once the timeout has expired, temporarily saved patient data are discarded.	• Min: 5 s • Max: 3600 s
MessageTimeout	Once the timeout has expired, the **seca connect 103** software assumes that a transmission error has occurred.	• Min: 5 s • Max: 60 s The **seca connect 103** software tries to reach the EMR system twice. Error messages are issued after twice the amount of time set here.
ServerAddress	Address of the **seca connect 103** server	Enter the IP address of the server on which the **seca connect 103** software is installed.
ServerPortTLS	Port via which the seca measuring device is to communicate with **seca connect 103**	Leave the default entry as it is

5. Scan the QR code with the scanner connected to the seca measuring device or to the respective **seca 452** Interface module.
   The settings are transmitted to the seca measuring device or to the respective **seca 452** Interface module.
   You have the following options for continuing:
   - ► To add another seca measuring device, return to step 1.
   - ► To define **WiFi** settings: Continue with ➔ Connecting a seca measuring device to the network

Adding several seca measuring devices in one step

1. Open **Add a device** view.
2. Enter the corresponding data for **ServerAddress**.
3. Enter the corresponding data for **ServerPortTLS**.
4. Scan the QR code with the scanner connected to the seca measuring device or to the respective **seca 452** Interface module.

   NOTE
   If necessary, print out the QR code to facilitate scanning.

   The settings are transmitted to the seca measuring device or to the respective **seca 452** Interface module.
5. Repeat the scan procedure for all the seca measuring devices you want to add.
   The added devices appear in the **Device list**.
6. Now define any additional settings for the added devices ➔ Changing the setting for a seca measuring device or ➔ Exporting the device list.

Connecting a seca measuring device to the network

To complete connection of a seca measuring device to the **seca connect 103** software, you must connect it to the network. The network connection is made via the Interface module (**seca 452** or internal module) of the device. You have the following options for making the connection:

- ➔ Communication via WiFi
- ➔ Communication via LAN

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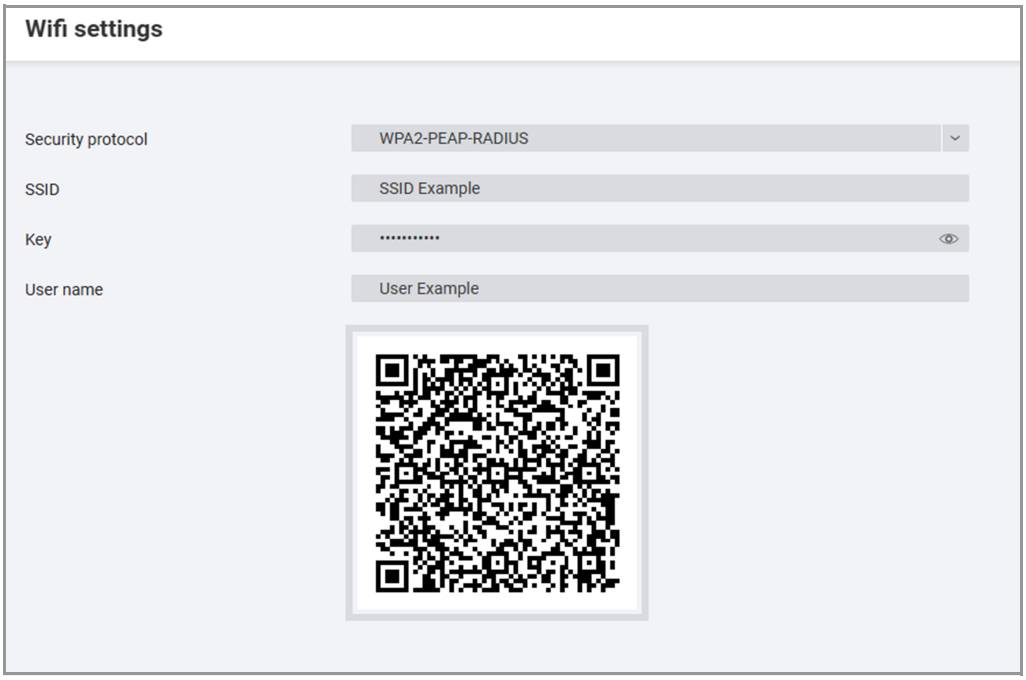
Communication via WiFi

The settings for the WiFi connection are located in the **Add device into WiFi** view. Configure the parameters described below to suit your network situation and the requirements of your institution. The parameters vary depending on the firmware version of the Interface module. The QR code is generated as soon as entries have been made in the dialog field.



1. Click ☰.
   The main menu opens.
2. Click **QR-Code Generator**.
   A submenu is displayed.
3. Click **Add device into WiFi**.
   The **Add device into WiFi** view opens.
4. Enter the parameters of the WiFi network under **WiFi Settings**.
   - Security protocol (options vary depending on the firmware version. If “TLS” is selected ➔ Using the TLS security protocol)
   - SSID
   - Key (Password)
   - Username (display of the parameter varies depending on the Security Protocol)

   The QR code for the **WiFi** settings is generated automatically.
5. Scan the **WiFi** QR code with the scanner connected to the seca measuring device or to the respective **seca 452** Interface module.
   The settings are transmitted to the seca measuring device or to the respective **seca 452** Interface module.
   Connection of the seca measuring device is complete.
6. Repeat the procedure for all seca measuring devices you want to connect to **seca connect 103**.

Using the TLS security protocol

If you want to use the TLS security protocol for a WiFi connection, proceed as follows:

1. Have your institution create a certificate for the TLS security protocol (file format: .pfx or .pem).

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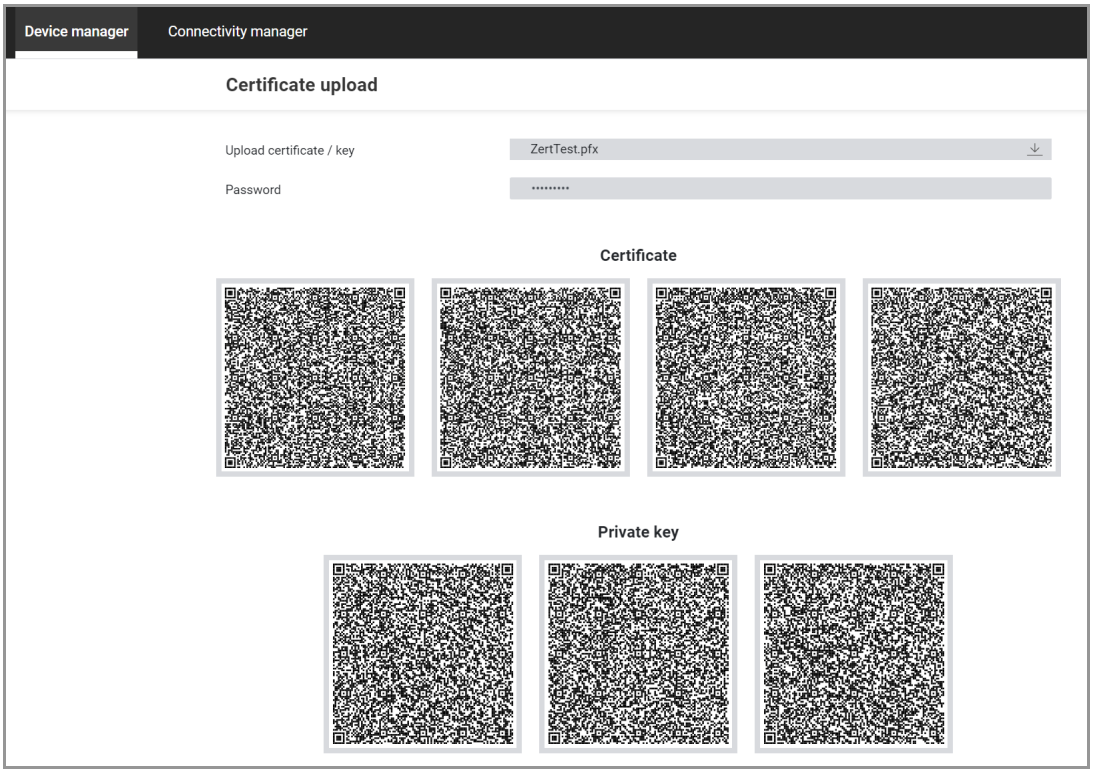
2. Save the certificate to the server on which the **seca connect 103** software is running.
3. Open the **Add device into WiFi** view.
4. In the **WiFi Settings** menu, select the **WPA2-TLS** option for the **Security Protocol** parameter.
5. Enter the SSID.
6. Click **Upload certificate**.
   The **Certificate upload** dialog window opens
7. Click  in the upload field to upload the certificate.
8. Enter the password for the certificate.
   The certificate is loaded, this may take a few seconds. Multiple QR codes are then displayed for the certificate and for the private key.



9. Print the QR codes using the print function of the browser.
10. Individually scan the QR codes under **Certificate** with the scanner connected to the seca measuring device or to the respective **seca 452** Interface module.
    a) Scan from top left to bottom right.

    The Workflow LED of the Interface module flashes green while the QR code is being transmitted. Transmission of the QR code is complete when the flashing stops.

    b) Scan the next QR code.

    NOTE

    If necessary, cover the other QR codes to make scanning easier. After you have scanned all the QR codes of the certificate, a beep will sound and the measuring device will restart.

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11. Individually scan the QR codes under **Private key** using the scanner.
    a) Scan from top left to bottom right.

    The Workflow LED of the Interface module flashes green while the QR code is being transmitted. Transmission is complete when the flashing stops. Only then scan the next QR code.

    b) If necessary, cover the other QR codes to make scanning easier.

    After you have scanned all the QR codes of the private key, a beep will sound and the measuring device will restart.

12. In **Certificate upload** view, click < to return to the **Add a device** dialog window.
13. Scan the QR code in the **WiFi** menu to connect the device to the network. The Workflow LED remains steady green once the connection is established. The measuring device is displayed in **Device list** view as **Online**.

Communication via LAN

To establish the network connection via LAN (device-dependent), you must connect the Interface module of the measuring device to the network socket via a network cable ➔ Connecting and installing seca 452 interface module.

You have the following option for continuing:

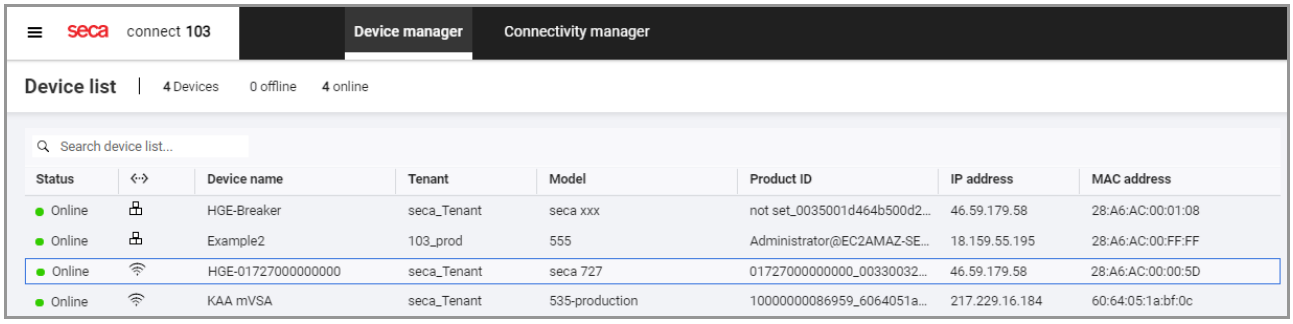
- Connect another seca measuring device ➔ Connecting a seca measuring device to the network

Changing the setting for a seca measuring device

NOTE

- The devices for all tenants to which the user currently logged in is assigned are displayed in **Device manager** view.
- Settings for seca measuring devices which are **Offline cannot** be changed.

1. In the menu bar, click **Device manager**.
2. In the **Device list**, click the seca measuring device whose setting you would like to change (here seca 727).



3. Select **Device settings** from the dropdown menu.
   The settings of the seca measuring device are shown under **Device settings**:

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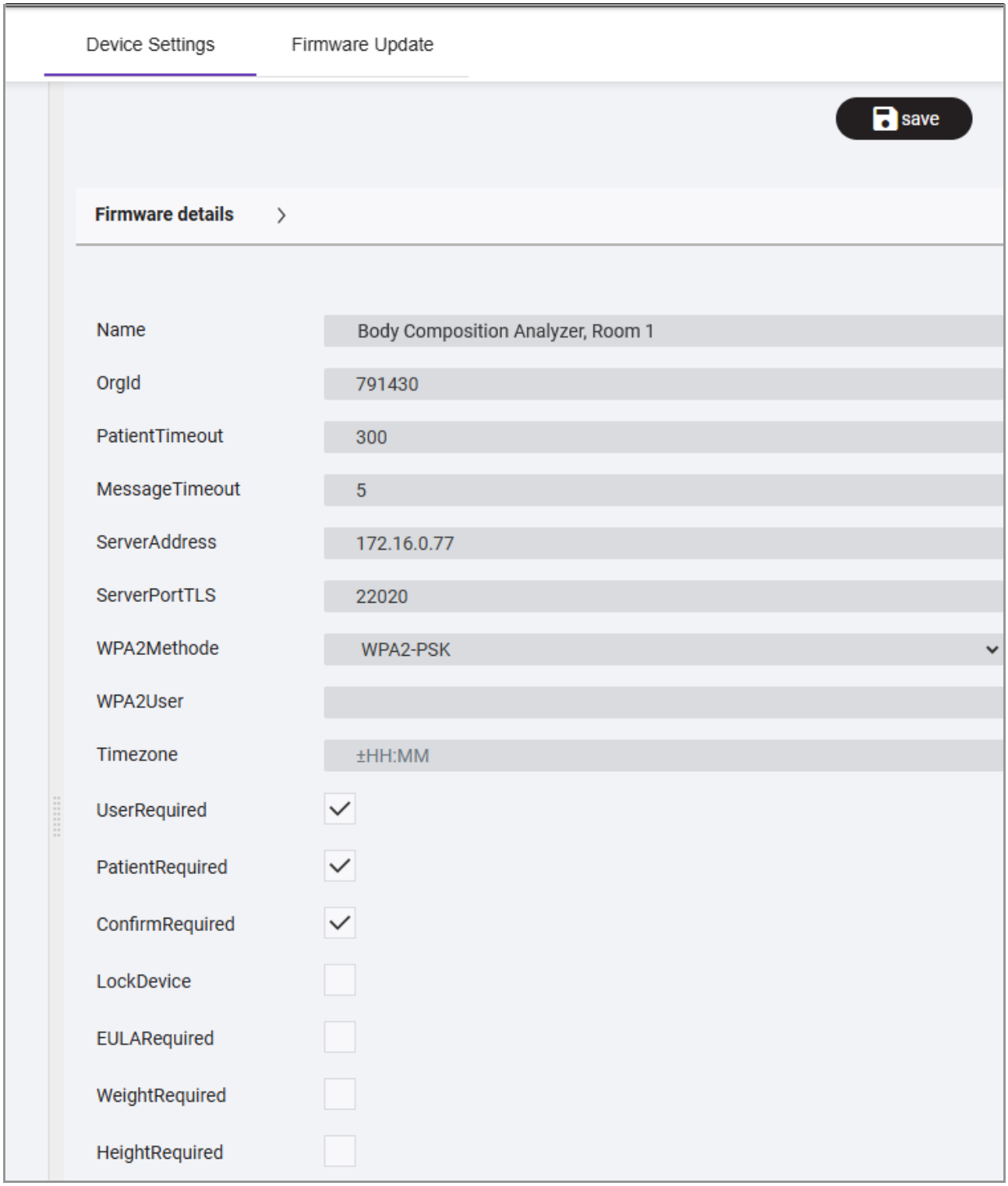
NOTE
The setting options shown in the **Change device settings** dialog window are not part of the **seca connect 103** software, but of the respective seca measuring device. The setting options are sent by the measuring device as soon as it is selected in the device list of the **seca connect 103** software. As a consequence, the actual setting options may deviate from those shown here.



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4. Change the settings for the seca measuring device (cf. sections ➔ Adding a seca measuring device and ➔ Assigning a device to an integration).

Parameter	Description	Setting options
Firmware version	Display firmware version of the Interface module	To suit the firmware version in question
Workflow settings	Specify settings for measuring mode	• **Tenant**: Assign the measuring device to a tenant (**Device** user role required) • **ServerPortTLS**: Port for communication via TLS • **WPA2Method**: Select the WPA2 encryption method • **WPA2User**: Enter WPA2 username • **Timezone**: Time zone in which the device is set up • **UserRequired** (recommended): Scan user ID • **PatientRequired** (recommended): Scan patient ID • **ConfirmRequired** - Activated (recommended): Measurement must be confirmed using the Confirm key (device-dependent) or the scanner - Not activated: Measurement is automatically sent to the EMR system once there is a stable weighing value (Autohold) and the patient then leaves the scale • **SoundEnabled**: Acoustic status message (measurement procedure successful/unsuccessful) • **LockDevice**: Scan ID before the measurement procedure • **WeightRequired** (recommended): Measurement procedure can only be completed when weight has been measured • **BIARequired** (device-dependent): Measurement procedure can only be completed when bioimpedance has been measured • **HeightRequired** (device-dependent): Measurement procedure can only be completed when height has been measured • **WaistCircumferenceRequired** (device-dependent): Measurement procedure can only be completed when waist circumference has been measured • **PatientCacheTimeout** (device-dependent): Number of seconds for which a patient ID scanned on the measuring device remains saved if the user is not yet logged in • **UserPasswordRequired** (device-dependent): User has to authenticate himself or herself with a password. Setting is effective only if no other value is required by the EMR system connected. • **UnconfirmedPatientEnabled** (device-dependent): In the offline workflow, measurements can be assigned to a patient who has not yet been confirmed • **SearchPatientByName** (device-dependent): Calling up patient data from the EMR system by searching by name is activated, whilst scan patient ID or enter patient ID manually are deactivated

5. Click **Save**.
   The settings are transmitted to the seca measuring device or to the respective **seca 452** Interface module.
6. Repeat the procedure for all seca measuring devices whose settings you want to change.

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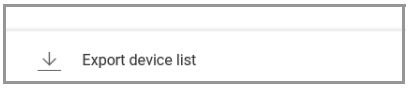
Exporting the device list

You can export the device list in the form of a .json file for the purposes of documentation, for example.

1. Click **Export device list**.



   The device list is exported.
2. Save the device list as specified in your institution.

NOTE
It is **not** possible to import device lists.

Deleting a device

You can clean up the **Device list** by deleting seca measuring devices with the status **Offline** from the list.

seca measuring devices are displayed as **Offline** under the following conditions:

- Switched off/no power supply
- WiFi connection disconnected
- LAN cable removed

Connection data are saved on the seca measuring device or on the respective **seca 452** Interface module. For this reason, the seca measuring device automatically reappears in the **Device list** once it is **Online**.

To delete **Offline** devices from the **Device list**, proceed as follows:

1. In the **Device list**, click the **Offline** device.
2. Click **delete device**.
   The seca measuring device is deleted from the **Device list**.
3. Get the **Offline** device ready for operation if required ➔ Troubleshooting.
   The seca measuring device appears in the **Device list** once it is back **Online**.

NOTE
If a measuring device has received a new IP address, it will be displayed twice in the **Device list**. Both entries will have the same serial number and the same device name, but different IP addresses. One device will be displayed as **Online**, one device as **Offline**.

► Delete the device that is displayed as **Offline**.

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6.3 Interface module: Updating the firmware

NOTE
Integrating software and devices in a PC network containing other devices may lead to previously unknown risks for patients, operators or third parties. It is the responsibility of the operating company to determine, analyze, rate, and manage these risks.

We recommend updating all the Interface modules in a network simultaneously. The following module types can be updated:

- **seca 452** external Interface module
- Internal Interface module, e.g. for the **seca 336 i** baby scale

Both Interface modules use the same firmware. As a result, you can update both module types in the same working step.

Providing firmware update packages

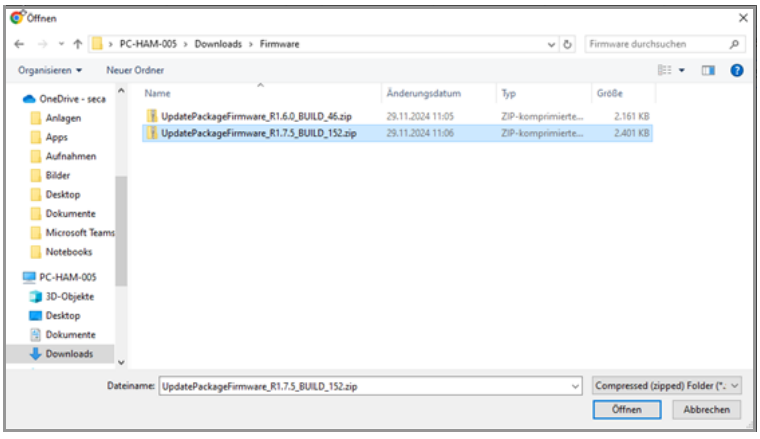
The **seca connect 103** software enables you to upload firmware updates to connected devices. These updates are not included during installation but can be manually uploaded via the graphical user interface (GUI) to make them available for updates.

Only one firmware update package can be active at a time. Uploading a new package to the **seca connect 103** software will overwrite any previously uploaded package, regardless of its version. Older packages can also be uploaded if needed.

NOTE
Unlike earlier versions, the uploaded package is no longer stored in the file system. Instead, it is saved in the internal database of the **seca connect 103** software.

Proceed for uploading firmware update packages as follows:

1. Click ☰.
   The main menu opens.
2. Click **Upload**.
   A submenu is displayed.
3. Click **Firmware Package**.
   A standard file selection dialog will be displayed.



4. Choose the desired firmware package file.

NOTE
Any ZIP file can be selected and uploaded.

5. Confirm the upload by clicking the **Open** button.
   A notification confirms the successful upload of the file.

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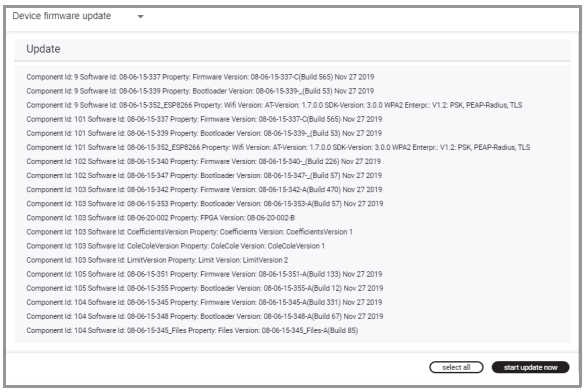
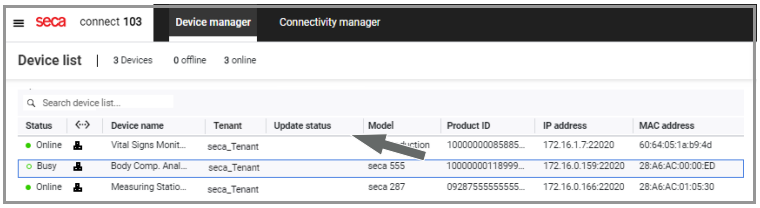
NOTE
After uploading, the file is validated to ensure that the uploaded ZIP file is a valid update package. If the validation is successful, the file is saved and will be used for firmware updates. A confirmation notification is displayed. If the validation fails, the file will be discarded, and an error notification is displayed.

Performing a firmware update

1. In the menu bar of the **seca connect 103** software, click **Device manager**.
2. Select **Device updater** from the dropdown menu.
   The **Update** dialog field is displayed.
   The details on the firmware update are displayed in the **Update** dialog field.



   The **Update status** column appears in the **Device list**.



3. In the **Device list**, select devices you would like to update:
   - Individual device: Select device by clicking it
   - Several devices: Select devices using click + Ctrl key
   - Update all devices: Click **select all**

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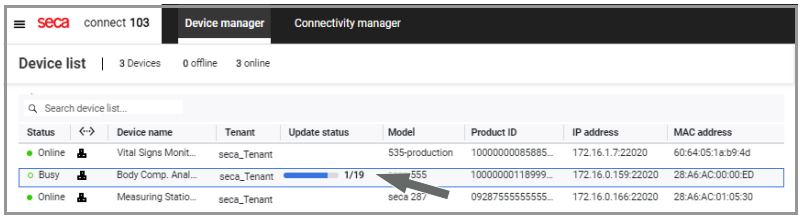
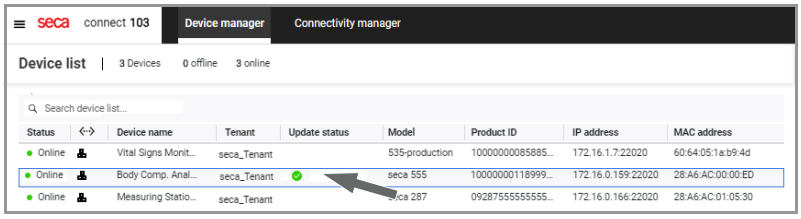
4. Click **start update now**.

The firmware of all the Interface modules selected is updated.



Updating has been successful if the following symbol appears in the **Device list**:



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6.4 Administering integration modules

➔ Calling up the list of integrations

➔ Adding a new integration

➔ Editing an integration

➔ Configuring an integration

➔ Assigning a device to an integration

➔ Assigning multiple devices to an integration

➔ seca TestModule: Barcodes

➔ QR code for scanner test (character set)

➔ Cerner VitalsLink integration module

➔ Health Level 7 integration module (HL7Module)

An integration refers to a combination of a selected module or module type and its corresponding configuration. Multiple integrations can be created using the same module type. Devices can then be assigned to these integrations. The assigned integration determines the destination where device measurements are sent through the **seca connect 103** software, typically a hospital information system (EMR).

A default integration exists. New devices, or devices not yet assigned to an integration, are automatically assigned to this default integration upon their first login to the **seca connect 103** software.

To connect seca measuring devices to an EMR system, you have to make settings in the **seca connect 103** software for the integration module which matches the EMR system. You can select one integration module per tenant.

Integration module	Use
Cerner VitalsLink	Connection to Cerner EMR systems with VitalsLink interface
HL7Module	Connection to EMR systems with the Health Level 7 standard
seca TestModule	For test purposes during system set up

NOTICE!

Malfunction and incorrect data assignment

Incorrect or incomplete settings in the respective EMR system or in the integration modules can lead to malfunction in the overall system or to incorrect assignment of measured results.

- Only make settings for your EMR system in consultation with the manufacturer of your EMR system.

Calling up the list of integrations

1. Click ☰.

   The main menu opens.

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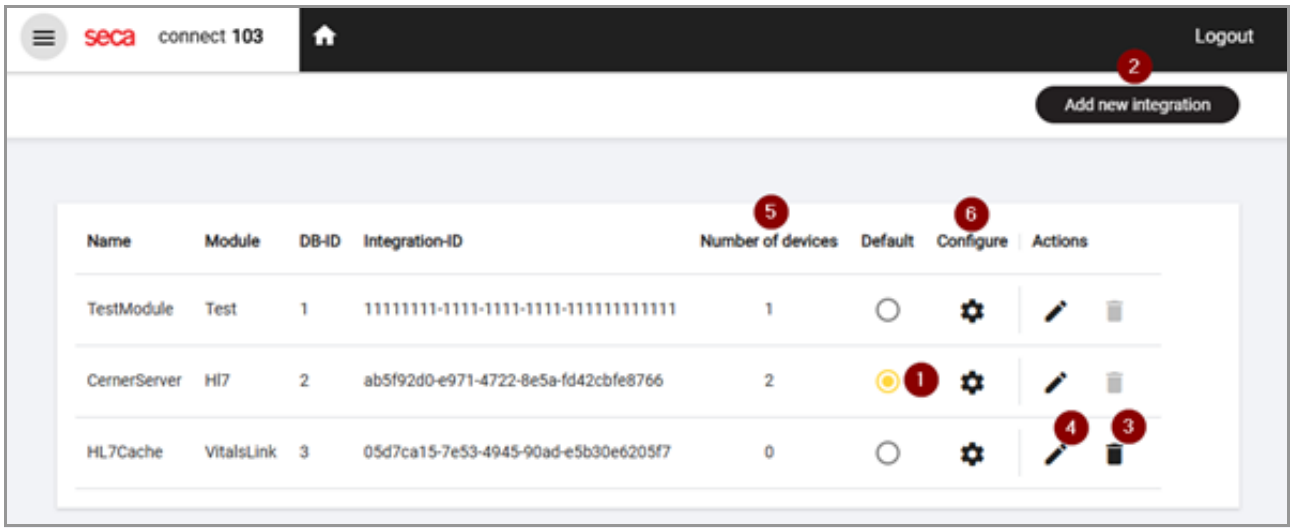
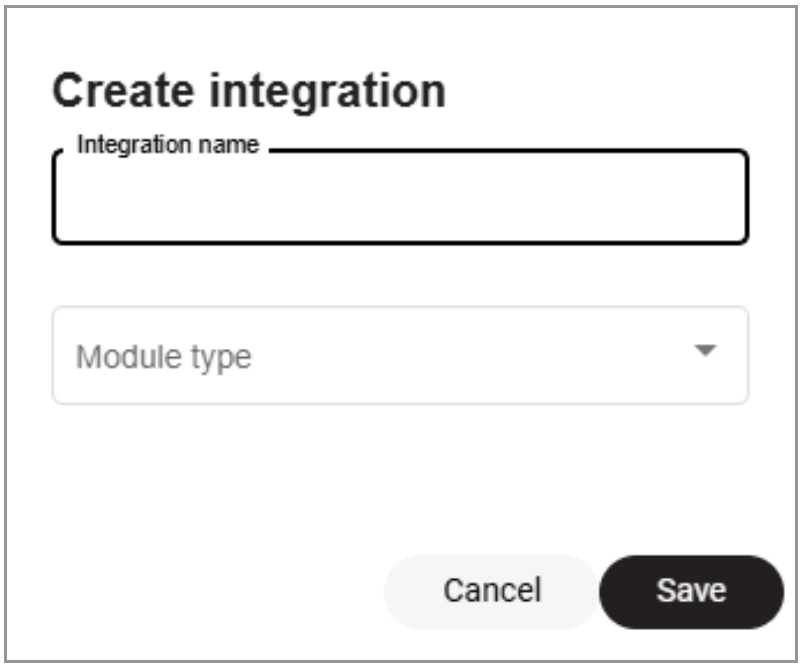
2. Click **Integration**.
   The list of integrations is displayed.



No.	Control	Function
1	Default radio button	Marks and sets the current default integration
2	**Add new integration** button	Creates a new integration
3	**Delete** button	Deletes the integration. Note: An integration cannot be deleted if it is set as the default or if devices are assigned to it.
4	**Edit** button	Edits the selected integration.
5	Number of devices	Displays the number of devices assigned to the integration
6	**Configure** button	Opens the configuration dialog for the integration

Adding a new integration

1. ➔ Calling up the list of integrations
2. Click **Add new integration**.
   The dialog for adding a new integration is displayed.



3. Enter a name for the new integration.
4. Select a module type (optional).

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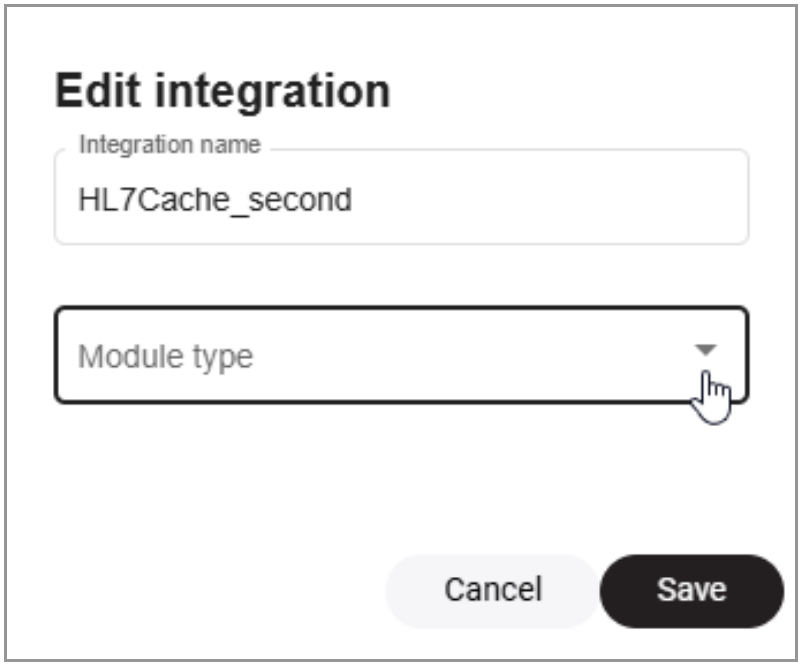
NOTE
The module type can be selected either during creation or later (➔ Editing an integration). The module type can only be selected once and cannot be changed later.

5. Click **Save**.
   The integration is saved.
   The new integration is displayed in the list.

Editing an integration

1. ➔ Calling up the list of integrations
2. Click **Edit**.
   The dialog for editing an integration is displayed.



3. Modify the integration name as needed.
4. Select a module type (optional).

NOTE
The module type can only be selected once and cannot be changed later. If a module type has already been assigned, it will not be editable in this dialog.

5. Click **Save**.
   The integration is saved.
   The changed integration is displayed in the list.
   played in the list.

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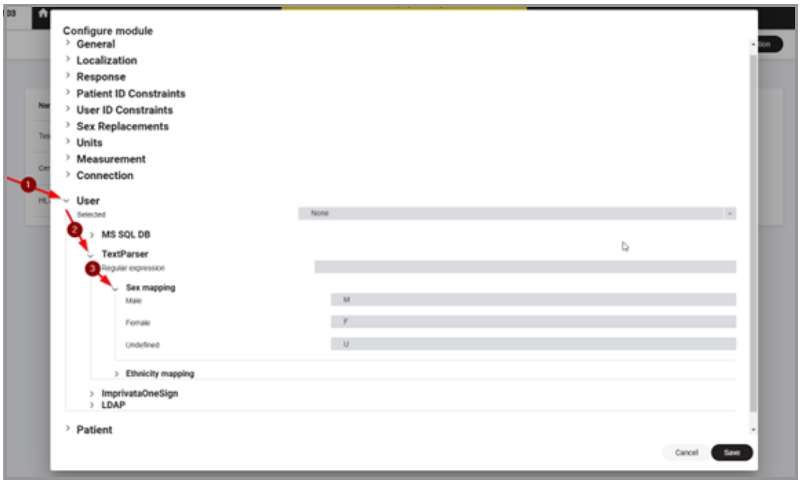
Configuring an integration

1. ➔ Calling up the list of integrations
2. Click **Configure** for the desired integration.
   The dialog for configuring an integration is displayed.
   Here: **HL7Module**

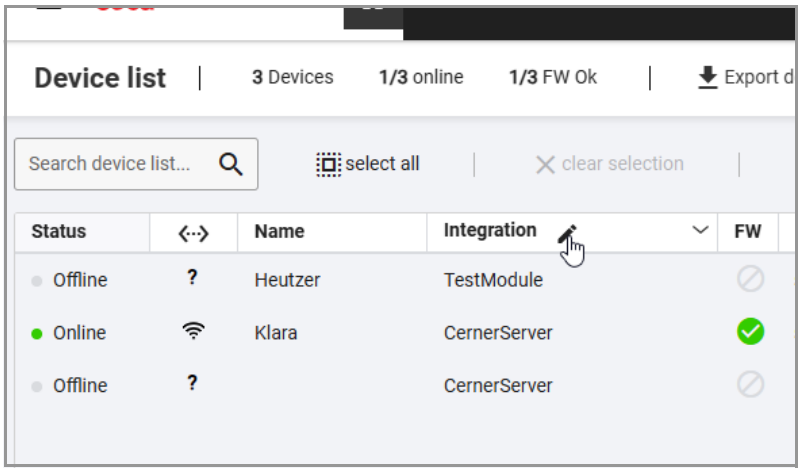


3. Open the desired section by clicking on the collapsable tree structure.
4. Configure the module as desired.

   NOTE
   Initial preconfigured values reflect the default settings of the module configuration.
5. Click **Save**.
   The configuration is saved.

Assigning a device to an integration

1. Click ☰.
   The main menu opens.
2. Click **Devices**.
   The device list is displayed.



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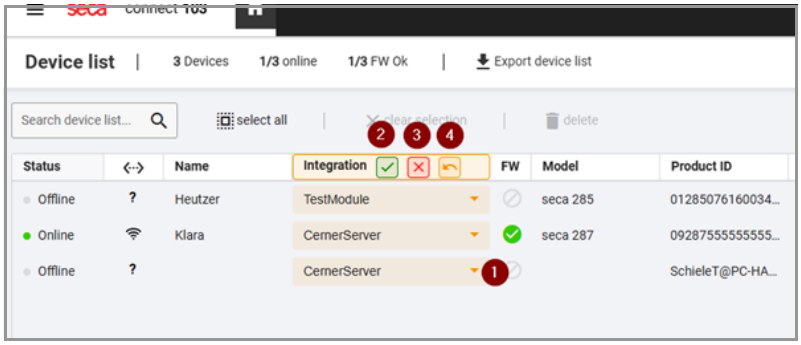
3. Click  in the header of the Integration column.
   The edit mode for the column is activated.



NOTE
In edit mode, you can assign integrations to individual or multiple devices. The column entries will be highlighted, and a dropdown menu (1) will be available for selecting integrations.

4. Select the appropriate integration in the dropdown menu (1) for the desired device.

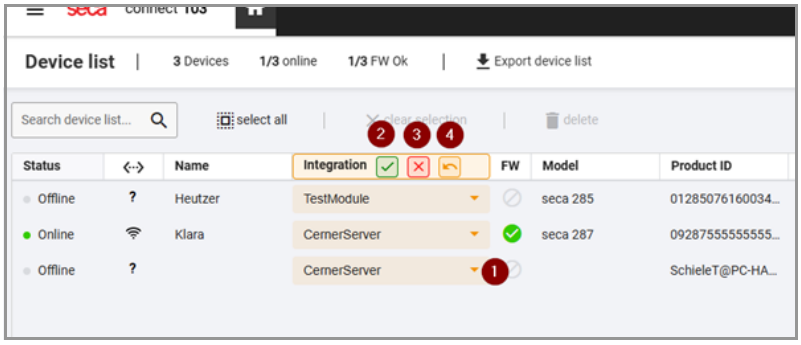
NOTE
Modified entries will be displayed in bold and will include an Undo button, allowing you to revert changes for that specific entry.

5. Click  in the column header (2) to save your changes.
   The device is assigned to the selected integration.

Assigning multiple devices to an integration

1. Click  .
   The main menu opens.
2. Click **Devices**.
   The device list is displayed.

3. Click  in the header of the Integration column.
   The edit mode for the column is activated.



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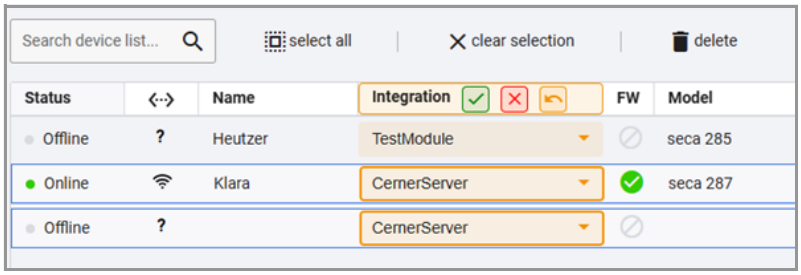
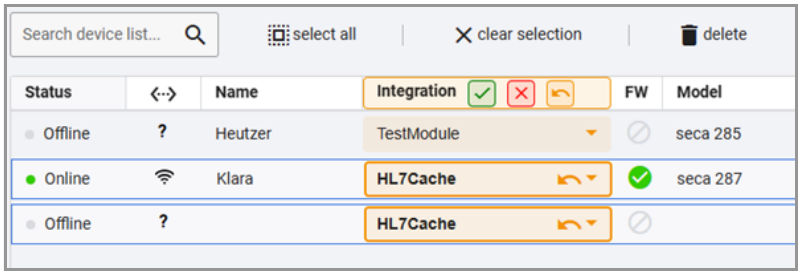
4. To select multiple devices, use one of the following methods:
   - Hold the Ctrl key and click on devices (similar to selection in Windows Explorer)
   - Use the **select all** button above the device list



The selected devices are outlined with an orange border in the Integration column, indicating they are in edit mode.

NOTE
The orange border indicates that changes made to one selected device's integration will automatically apply to all selected devices. For example, updating the integration for one selected device updates it for all others in the selection.

5. Select the appropriate integration in the dropdown menu (1) of any selected device.



The integration is applied to all selected devices.

NOTE
The Undo button in a specific row only reverts changes for that device.

6. Click ✓ in the column header (2) to save your changes.
   The devices are assigned to the selected integration.

seca TestModule: Barcodes

You can use the following barcodes to perform system tests with the **seca TestModule** integration module. Please contact seca Service if you have any questions on this.

Barcodes for function test with seca TestModule	
Function	**Barcode**
User ID	IESECA
Patient ID	FN2222225852

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Barcodes for function test with seca TestModule	
Function	**Barcode**
Confirm	secaConfirm

QR code for scanner test (character set)

You can scan the following QR code to test the character set settings of your scanner (for Interface modules with firmware with release date 4/10/2019 and higher).

QR code for scanner test	
Code	**Description**
	• ASCII codes 33 to 126): !"#$%&'()*+,-./ 0123456789:;<=>?@ABCDEFGHIJKLM-NOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstu-vwxyz{|}~ • Correct character set is set on scanner: Workflow LED on device (device-dependent) or on **seca 452** Interface module flashes green 5x

Cerner VitalsLink integration module

NOTE

- ► Only make settings in the integration module with support from the manufacturer of your EMR system.
- ► Contact seca Service to make settings to the **Cerner VitalsLink** integration module.

A description of the **Cerner VitalsLink** integration module can be found in the document **seca connect 103 Cerner VitalsLink module description**. Please contact seca Service for this.

Health Level 7 integration module (HL7Module)

NOTE

- ► Only make settings in the integration module with support from the manufacturer of your EMR system.
- ► Contact seca Service to make settings to the Health Level 7 **HL7-Module** integration module.

A description of the Health Level 7 integration module can be found in the document **seca connect 103 HL7 module description**. Please contact seca Service for this.

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7. CONNECTING AND INSTALLING seca 452 INTERFACE MODULE

NOTE
Devices not mentioned in this section have an internal interface module or are not compatible ➔ Compatible seca products.

NOTE
seca chair scales and the **seca 703** column scale cannot be retrofitted by the customer. Please contact seca Service to retrofit these models.

7.1 Scope of delivery

The **seca 452** interface module is available in several variants. The complete scope of delivery can be found in the device description included with the **seca 452** variant.

seca 452 product no.	Device type	Models
452 0000 009	Measuring stations	**seca 284**, **seca 285**, **seca 286**, **seca 287**
452 0030 009	Chair scales	**seca 954**, **seca 959**, **seca 963**
452 0040 009	Baby scales	**seca 727**, **seca 757**
452 0050 009	Multifunctional scales	**seca 634**, **seca 635**, **seca 644**, **seca 645**, **seca 656**, **seca 657**, **seca 664**, **seca 665**, **seca 667**, **seca 674**, **seca 675**, **seca 676**, **seca 677**, **seca 684**, **seca 685**
	Column scales	**seca 703**, **seca 704**
452 0060 009	Measuring stations	**seca 787**

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7.2 Selecting a location

The **seca 452** interface module can be mounted on the wall or placed next to the scale. For column scales and measuring stations, the **seca 452** interface module is installed directly on the measuring device.

► Take the following into account when you select the location for the **seca 452** interface module:
  - For wall installation: At the installation point, there must be no cables in the wall that could be drilled into.
  - Fluids cannot penetrate into the connections.
  - Cables are not kinked and not under mechanical strain.
  - Cables are sufficiently long to allow the measuring device to be moved or tilted (for cleaning, for example).
  - The scanner cable is long enough to be able to operate the scanner.
  - LEDs can be read easily.

NOTICE!

Damage to device due to incorrect device set up

If the original location of the measuring device changes due to retrofitting, the device must be correctly set up at the new location.

► Follow the information in the section “Setting up the device” in the corresponding instructions for use.

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7.3 Retrofitting 757/727 baby scales

➔ Preparing the scale

➔ Connecting a seca 452 interface module

➔ Mounting the seca 452 interface module on the wall

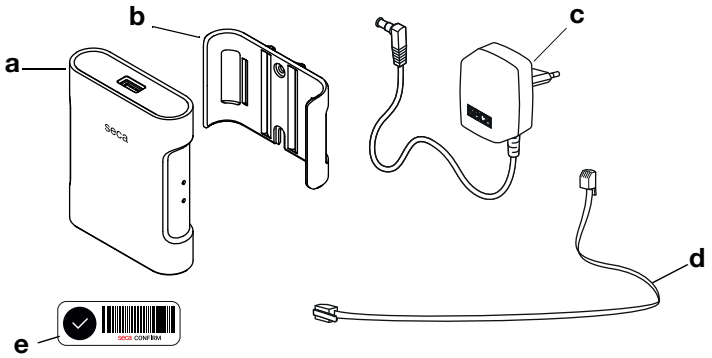
➔ Connecting the seca 454 mobile power supply

➔ Performing final work

NOTE
Retrofitting of **seca 757**/**seca 727** baby scales on **seca 402/403** Baby Scale Carts: ➔ Retrofitting 757/727 baby scales to 402/403 Baby Scale Carts

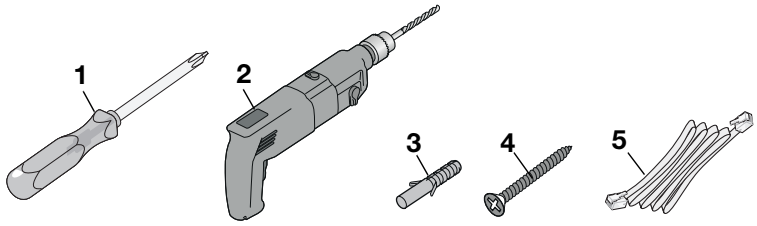
NOTE
When using the **seca 454** mobile power supply: Instructions for fitting the parts for **seca 454** (product no. 454 0000 009) can be found in the Product Description included with the product.

You need the following parts of **seca 452**, product no. 452 0040 009:



Item	Component	Pcs.
a	**seca 452** interface module	1
b	Bracket (for wall installation)	1
c	Plug-in power supply unit	1
d	Connecting cable	1
e	Label with Confirm barcode	1

Depending on the installation and connection version, you may need the following tools (not included in the scope of delivery):



Item	Component	Size	Pcs.
1	Cross-head screwdriver	PH 2	1
2	Drill	Ø 5 mm	1
3	Wall plug	Ø 5 mm	2
4	Cross-head screw	Ø 3.5-4 mm	2
5	LAN cable	n/a	1

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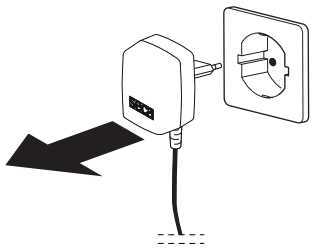
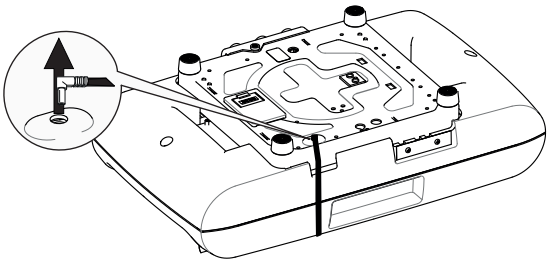
Preparing the scale

1. Clean and disinfect the scale as described in the respective instructions for use.
2. Switch off the scale.
3. Disconnect the plug-in power supply unit from the power supply socket.

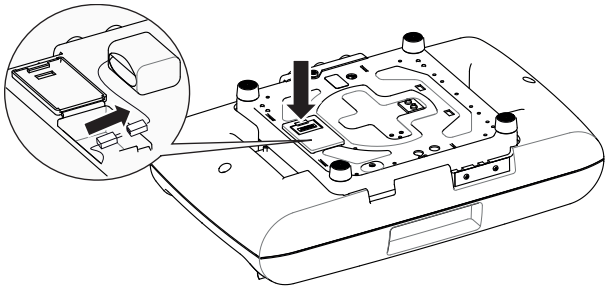


4. Carefully turn the scale over.
5. Pull the power cable out of the scale.



NOTE
After the retrofit, the scale is supplied with power via the **seca 452** interface module.

6. Remove the battery block:
   a) Press the latch of the battery compartment in the direction of the word “Battery” printed on the compartment
   b) Open the lid
   c) Disconnect the battery block from the connector cable
   d) Remove the battery block and close the lid again



7. Store the plug-in power supply unit and the battery block or dispose of them properly (➔ Disposal).

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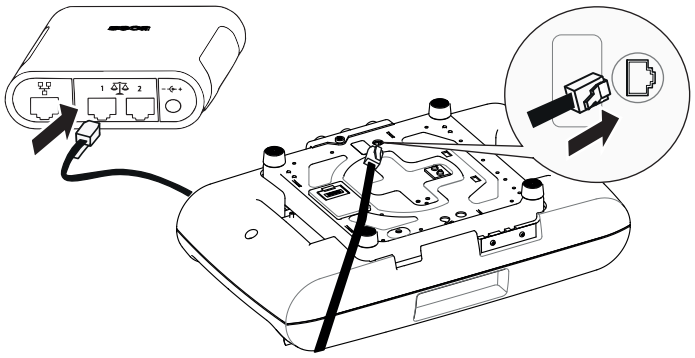
Connecting a seca 452 interface module

1. Connect the scale to the **seca 452** interface module:
   a) Connect the connecting cable to interface 1 of the **seca 452** interface module
   b) Connect the connecting cable to the interface of the scale

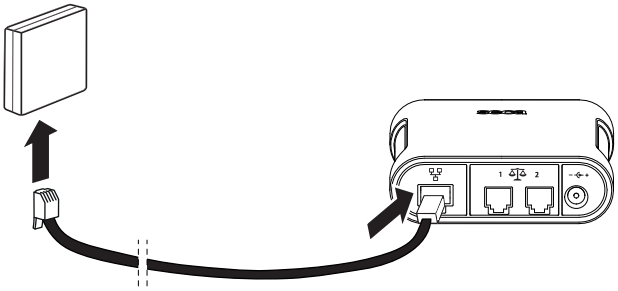


   c) Turn the scale over

   You have the following options for continuing:

   - Communication via LAN (stationary use only): continue at step 2.
   - For communication via WiFi, continue at step 3.

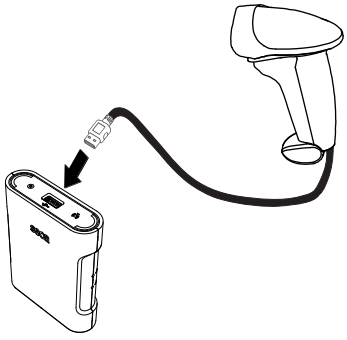
2. Connect a LAN cable to the **seca 452** interface module:
   a) Connect the LAN cable to the LAN interface of the **seca 452** interface module
   b) Connect the LAN cable to the network socket



NOTICE!
Malfunction caused by an incompatible scanner
Incompatible scanners can lead to faulty data transmission or system malfunction.

- Only use scanners that are listed in the section ➔ Optional accessories and spare parts.

3. Connect a scanner to the **seca 452** interface module:
   a) Connect the scanner cable to the USB interface of the **seca 452** interface module
   b) Attach the scanner to the scanner bracket (if present)



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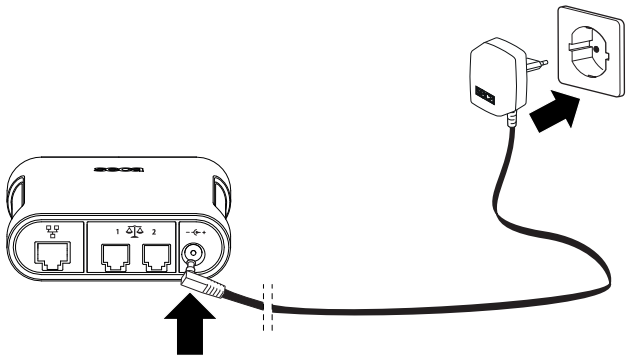
4. Apply the label with the Confirm barcode to a place you can reach easily with the scanner.
   You have the following options for continuing:
   - Scale powered by a plug-in power supply unit (stationary use only): continue at step 5.
   - Scale powered by a mobile power supply: continue at ➔ Connecting the seca 454 mobile power supply

   NOTICE!
   Damage to device due to incorrect power supply unit
   The plug-in power supply unit of the scale is not suitable for operation with the **seca 452** interface module.
   - Only use the seca plug-in power supply unit included in the scope of delivery of **seca 452** (product no. 452 0040 009).
5. Connect the plug-in power supply unit to the **seca 452** interface module:
   a) Connect the power cable to the power supply connection of the **seca 452** interface module
   b) Insert the plug-in power supply unit into a power supply socket

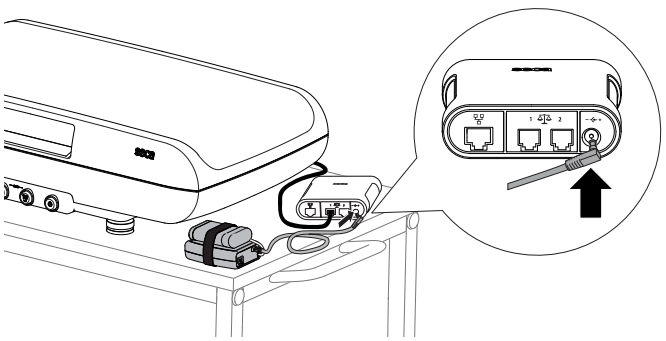


You have the following options for continuing:
- **seca 452** interface module positioned next to the scale: continue at ➔ Performing final work
- Mounting the **seca 452** interface module on the wall: continue at ➔ Mounting the seca 452 interface module on the wall

Connecting the seca 454 mobile power supply

NOTE
Instructions for fitting the parts for **seca 454** (product no. 454 0000 009) can be found in the Product Description included with the product.

1. Fit and charge the **seca 454** mobile power supply as described in the **seca 454** Product Description.
2. Connect the power cable to the power supply connection of the **seca 452** interface module.



3. Perform the final work necessary, ➔ Performing final work.

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7.4 Retrofitting 757/727 baby scales to 402/403 Baby Scale Carts

➔ Fitting the seca 452 interface module

➔ Preparing the scale

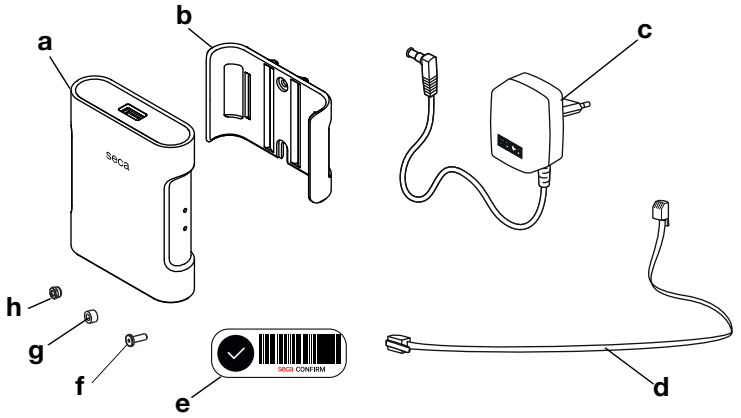
➔ Connecting a seca 452 interface module

➔ Connecting the seca 454 mobile power supply

➔ Performing final work

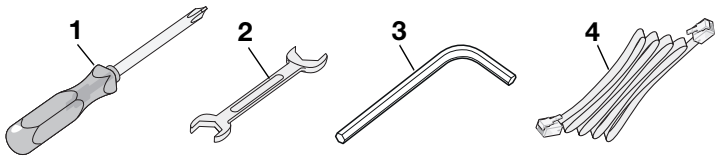
NOTE
This fitting variant is for use with the **seca 454** mobile power supply. Instructions for fitting the parts for **seca 454** (product no. 454 0010 009) can be found in the Product Description included with the product.

You need the following parts of **seca 452**, product no. 452 0040 009:



Item	Component	Pcs.
a	**seca 452** interface module	1
b	Bracket	1
c	Plug-in power supply unit	1
d	Connecting cable	1
e	Label with Confirm barcode	1
f	Hex head socket screw	2
g	Spacer sleeve	2
h	Nut	2

Depending on the installation and connection version, you may need the following tools (not included in the scope of delivery):



Item	Component	Size
1	Cross-head screwdriver	PH 1
2	Wrench	Size 7
3	Hex socket wrench	Size 2.0
4	LAN cable	n/a

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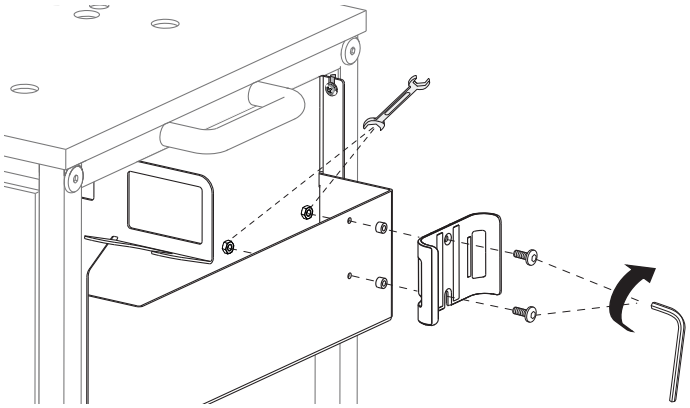
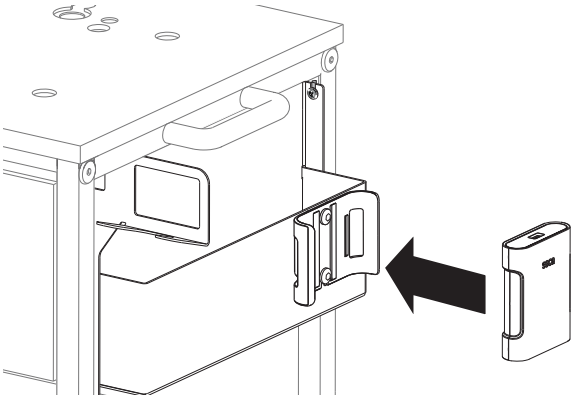
Fitting the seca 452 interface module

1. Clean and disinfect the scale and the Baby Scale Cart as described in the respective instructions for use.
2. Screw the bracket to the storage compartment using two hex head socket screws, two spacer sleeves and two nuts.

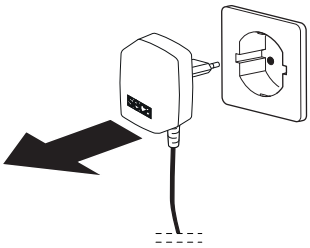


3. Press the **seca 452** interface module into the bracket.

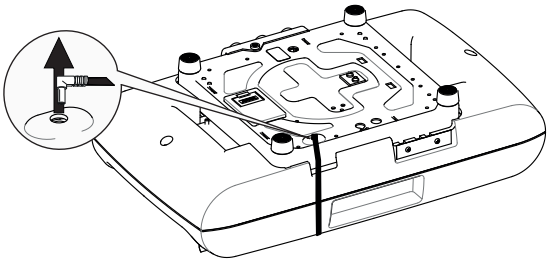


Preparing the scale

1. Switch off the scale.
2. Disconnect the plug-in power supply unit from the power supply socket.



3. Carefully turn the scale over.
4. Pull the power cable out of the scale.



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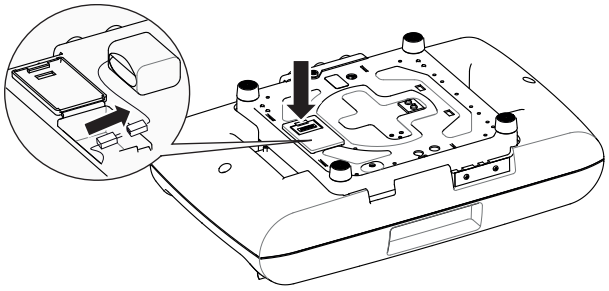
NOTE
After the retrofit, the scale is supplied with power via the **seca 452** interface module.

5. Remove the battery block:
   a) Press the latch of the battery compartment in the direction of the word “Battery” printed on the compartment
   b) Open the lid
   c) Disconnect the battery block from the connector cable
   d) Remove the battery block and close the lid again



6. Store the plug-in power supply unit and the battery block or dispose of them properly (➔ Disposal).

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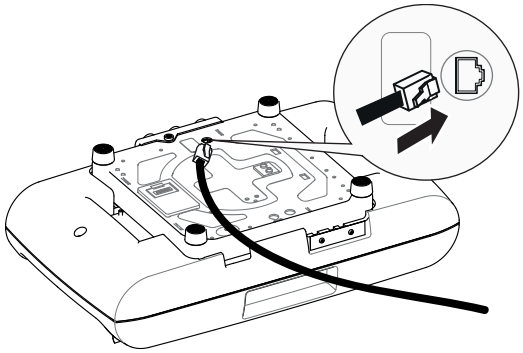
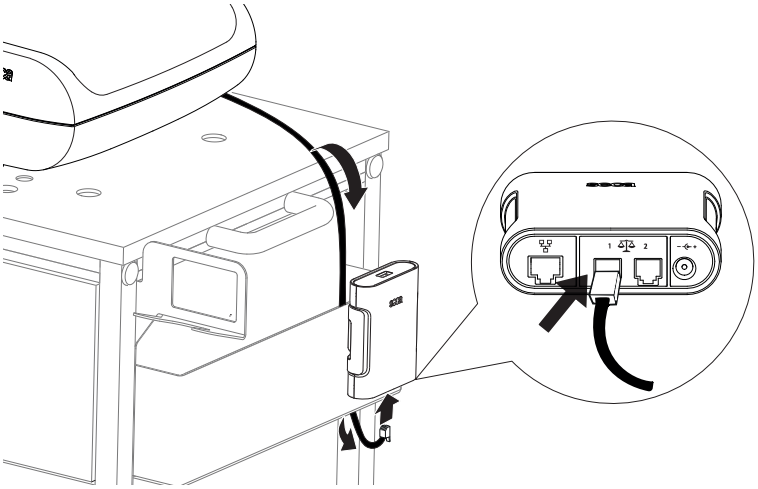
Connecting a seca 452 interface module

1. Connect the scale to the **seca 452** interface module:
   a) Connect the connecting cable to the interface of the scale



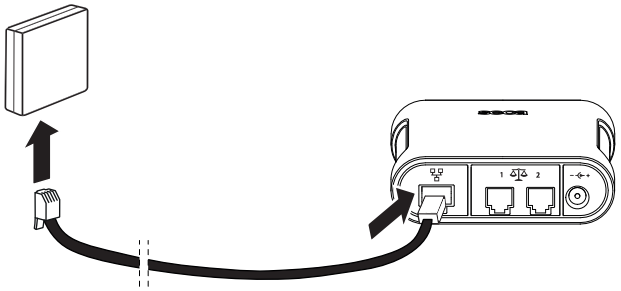
   b) Turn the scale over
   c) Guide the connecting cable through the recess in the storage compartment of the Baby Scale Cart
   d) Connect the connecting cable to interface 1 of the **seca 452** interface module



You have the following options for continuing:

- Communication via LAN (stationary use only): continue at step 2.
- For communication via WiFi, continue at step 3.

2. Connect a LAN cable to the **seca 452** interface module:
   a) Connect the LAN cable to the LAN interface of the **seca 452** interface module
   b) Connect the LAN cable to the network socket



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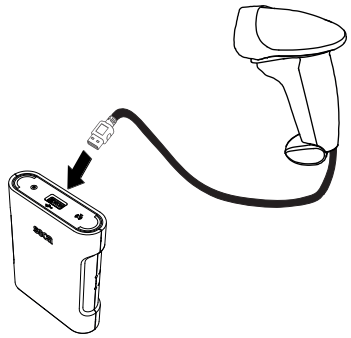
NOTICE!

Malfunction caused by an incompatible scanner

Incompatible scanners can lead to faulty data transmission or system malfunction.

- Only use scanners that are listed in the section ➔ Optional accessories and spare parts.

3. Connect a scanner to the **seca 452** interface module:
   a) Connect the scanner cable to the USB interface of the **seca 452** interface module
   b) Attach the scanner to the scanner bracket



4. Apply the label with the Confirm barcode to a place you can reach easily with the scanner.
   You have the following options for continuing:
   - Scale powered by a plug-in power supply unit (stationary use only): continue at step 5.
   - Scale powered by a mobile power supply: continue at ➔ Connecting the seca 454 mobile power supply

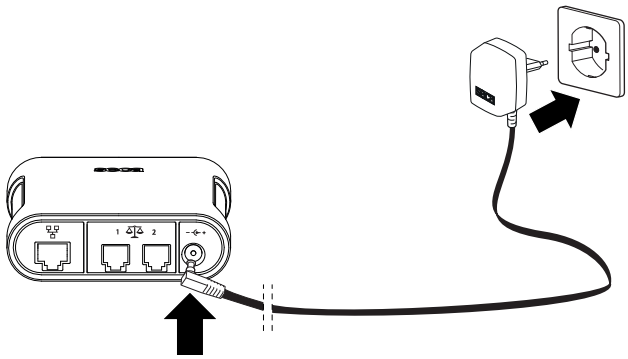
NOTICE!

Damage to device due to incorrect power supply unit

The plug-in power supply unit of the scale is not suitable for operation with the **seca 452** interface module.

- Only use the seca plug-in power supply unit included in the scope of delivery of **seca 452** (product no. 452 0040 009).

5. Connect the plug-in power supply unit to the **seca 452** interface module:
   a) Connect the power cable to the power supply connection of the **seca 452** interface module
   b) Insert the plug-in power supply unit into a power supply socket



6. Perform the necessary final work, ➔ Performing final work.

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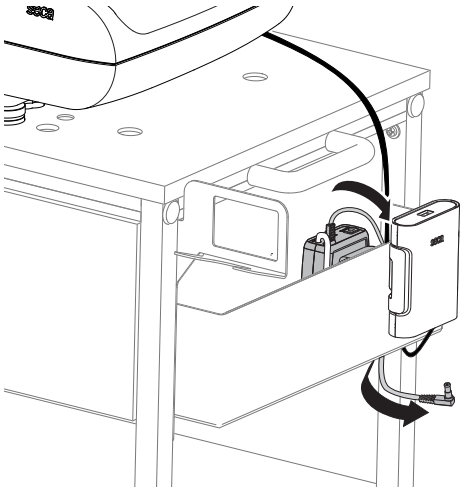
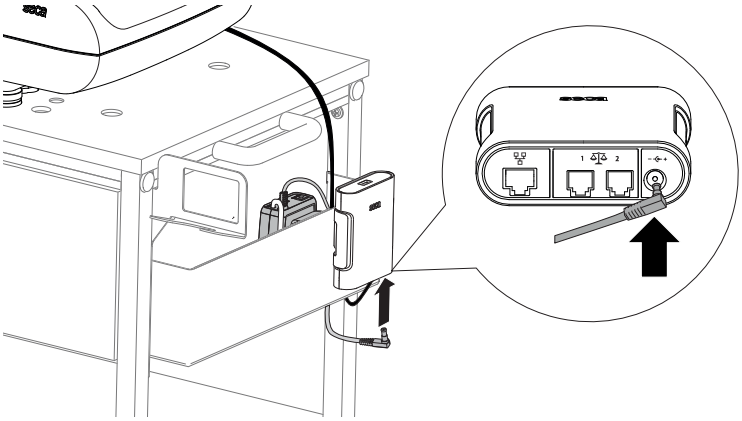
Connecting the seca 454 mobile power supply

NOTE
Instructions for fitting the parts for **seca 454** (product no. 454 0010 009) can be found in the Product Description included with the product.

1. Fit and charge the **seca 454** mobile power supply as described in the **seca 454** Product Description.
2. Guide the power cable of **seca 454** through the recess in the storage compartment of the Baby Scale Cart.



3. Connect the power cable to the power supply connection of the **seca 452** interface module.



4. Perform the necessary final work, ➔ Performing final work.

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7.5 Retrofitting 635/634, 657/656, 675/674 multifunctional scales (models with cabled remote display)

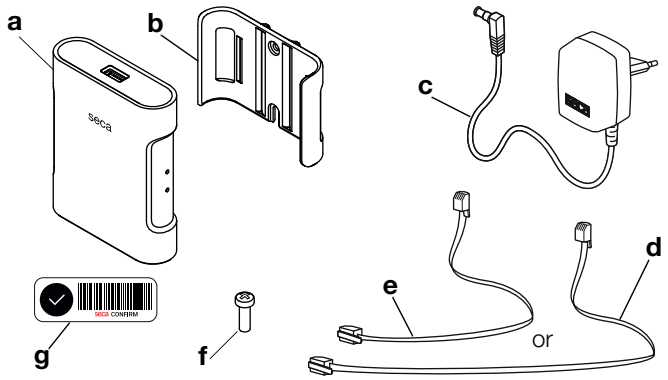
➔ Preparing the scale

➔ Connecting a seca 452 interface module

➔ Mounting the seca 452 interface module on the wall

➔ Performing final work

You need the following parts of **seca 452**, product no. 452 0050 009:

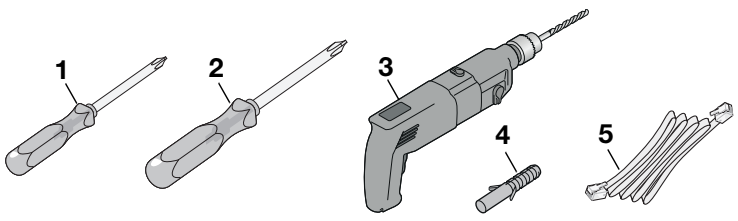


Item	Component	Pcs.
a	**seca 452** interface module	1
b	Bracket (for wall installation)	1
c	Plug-in power supply unit	1
d	Connecting cable, long	1
e	Connecting cable, short	1
f	Cross-head screw (for wall installation)	2
g	Label with Confirm barcode	1

NOTE

- The **seca 452** interface module is connected between the cabled remote display and the scale. Select the short or long connecting cable, depending on the distance of the cabled remote display from the scale.
- The scanner brackets from the scope of delivery of **seca 452** are not intended for wall installation. Use a suitable scanner bracket from the scanner manufacturer. Follow the instructions in the respective installation instructions.

Depending on the installation and connection version, you may need the following tools (not included in the scope of delivery):



Item	Component	Size	Pcs.
1	Cross-head screwdriver	PH 1	1
2	Cross-head screwdriver	PH 2	1
3	Drill	Ø 5 mm	1
4	Wall plug	Ø 5 mm	2
5	LAN cable	n/a	1

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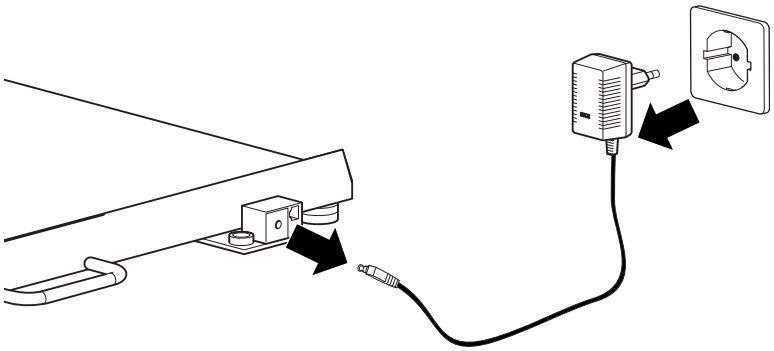
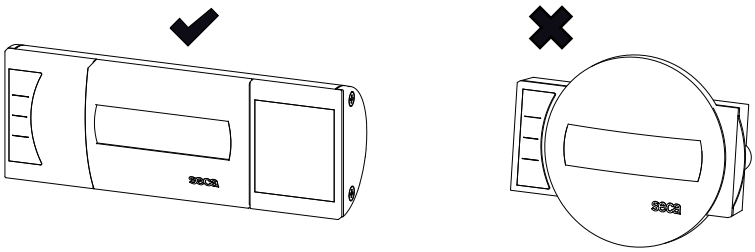
Preparing the scale

1. Clean and disinfect the scale as described in the respective instructions for use.
2. Switch off the scale.
3. Disconnect the plug-in power supply unit from the power supply socket.
4. Pull the power cable out of the scale.

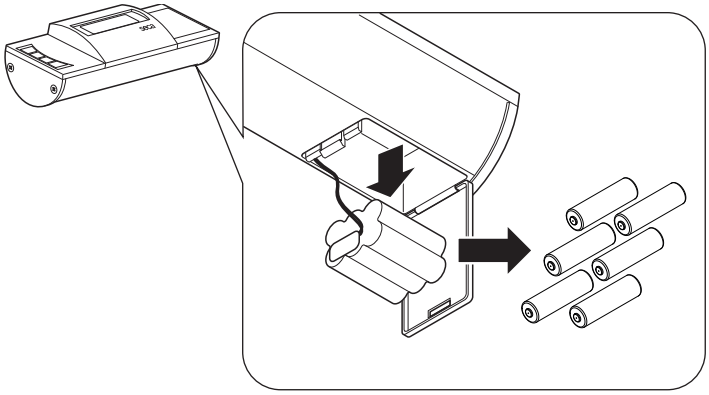


NOTE
After the retrofit, the scale is supplied with power via the **seca 452** interface module.

5. Only for models **seca 635** and **seca 634** (indicated in the following figure by a checkmark): Remove the batteries from the cabled remote display:



a) Press the latch of the battery compartment
b) Open the lid of the battery compartment
c) Remove batteries from the battery holder
d) Put battery holder back and close lid again



6. Store the plug-in power supply unit and the batteries or dispose of them properly (➔ Disposal).

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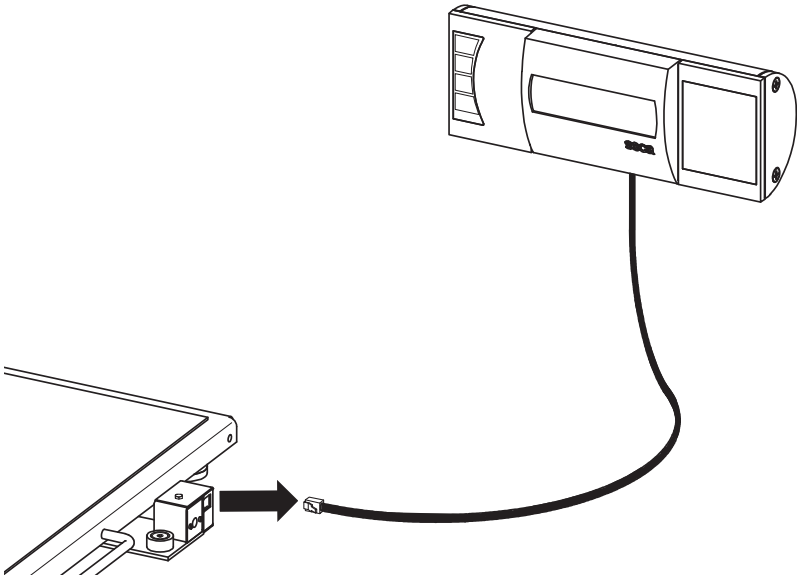
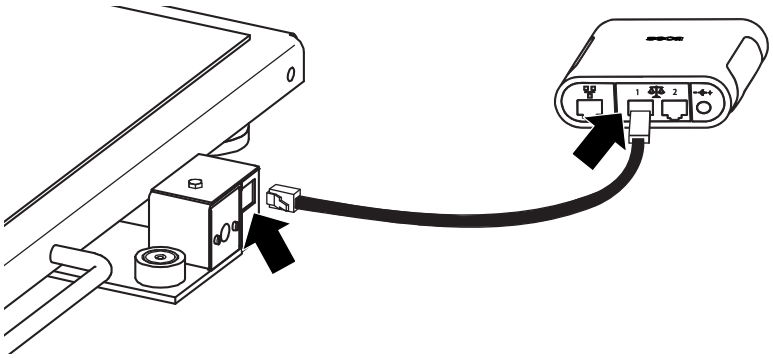
Connecting a seca 452 interface module

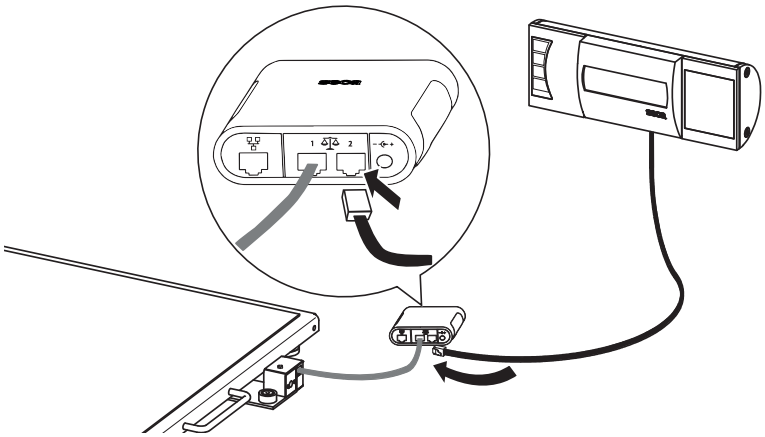
1. Connect the scale to the **seca 452** interface module:
   a) Remove cable of cabled remote display from the scale



   b) Connect the connecting cable to the connection of the electronics box
   c) Connect the connecting cable to interface 1 of the **seca 452** interface module



   d) Connect cable of cabled remote display to interface 2 of the **seca 452** interface module



You have the following options for continuing:

- For communication via LAN, continue at step 2.
- For communication via WiFi, continue at step 3.

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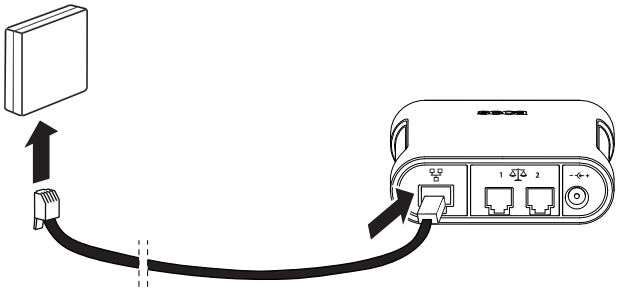
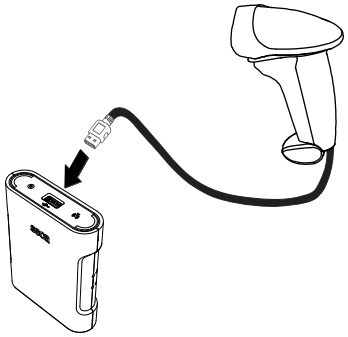
2. Connect a LAN cable to the **seca 452** interface module:
   a) Connect the LAN cable to the LAN interface of the **seca 452** interface module
   b) Connect the LAN cable to the network socket



NOTICE!
Malfunction caused by an incompatible scanner
Incompatible scanners can lead to faulty data transmission or system malfunction.

- Only use scanners that are listed in the section ➔ Optional accessories and spare parts.

3. Connect a scanner to the **seca 452** interface module:
   a) Connect the scanner cable to the USB interface of the **seca 452** interface module
   b) Attach the scanner to the scanner bracket (if present)



4. Apply the label with the Confirm barcode to a place you can reach easily with the scanner.

NOTICE!
Damage to device due to incorrect power supply unit
The plug-in power supply unit of the scale is not suitable for operation with the **seca 452** interface module.

- Only use the plug-in power supply unit included in the scope of delivery of **seca 452** (product no. 452 0050 009).

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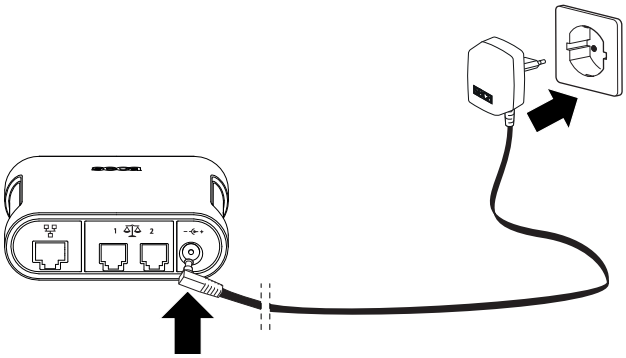
5. Connect the plug-in power supply unit to the **seca 452** interface module:
   a) Connect the power cable to the power supply connection of the **seca 452** interface module
   b) Insert the plug-in power supply unit into a power supply socket



You have the following options for continuing:

- **seca 452** interface module positioned next to the scale: continue at ➔ Performing final work
- Mounting the **seca 452** interface module on the wall: continue at ➔ Mounting the seca 452 interface module on the wall

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7.6 Retrofitting 645/644, 665/664, 667, 677/676, 685/684 multifunctional scales (models with fitted display)

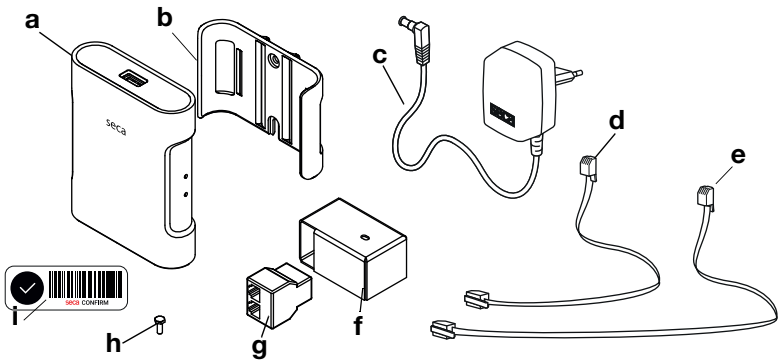
➔ Preparing the scale

➔ Connecting a seca 452 interface module

➔ Mounting the seca 452 interface module on the wall

➔ Performing final work

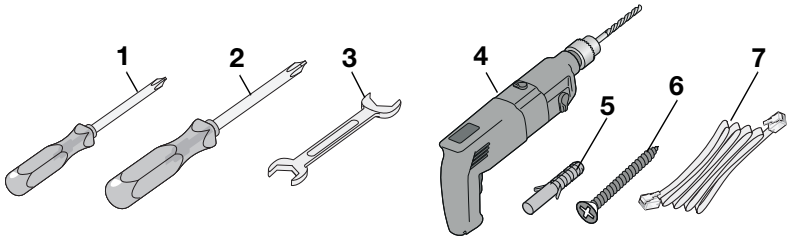
You need the following parts of **seca 452**, product no. 452 0050 009:



Item	Component	Pcs.
a	**seca 452** interface module	1
b	Bracket (for wall installation)	1
c	Plug-in power supply unit	1
d	Connecting cable, short	1
e	Connecting cable, long	1
f	Adapter housing for Y adapter	1
g	Y adapter	1
h	Hexagon bolt	1
i	Label with Confirm barcode	1

NOTE
The scanner brackets from the scope of delivery of **seca 452** are not intended for wall installation. Use a suitable scanner bracket from the scanner manufacturer. Follow the instructions in the respective installation instructions.

Depending on the installation and connection version, you may need the following tools (not included in the scope of delivery):



Item	Component	Size	Pcs.
1	Cross-head screwdriver	PH 1	1
2	Cross-head screwdriver	PH 2	1
3	Wrench	Size 5.5	1
4	Drill	Ø 5 mm	1

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Item	Component	Size	Pcs.
5	Cross-head screw	Ø 3.5-4 mm	2
6	Wall plug	Ø 5 mm	2
7	LAN cable	n/a	1

NOTICE!

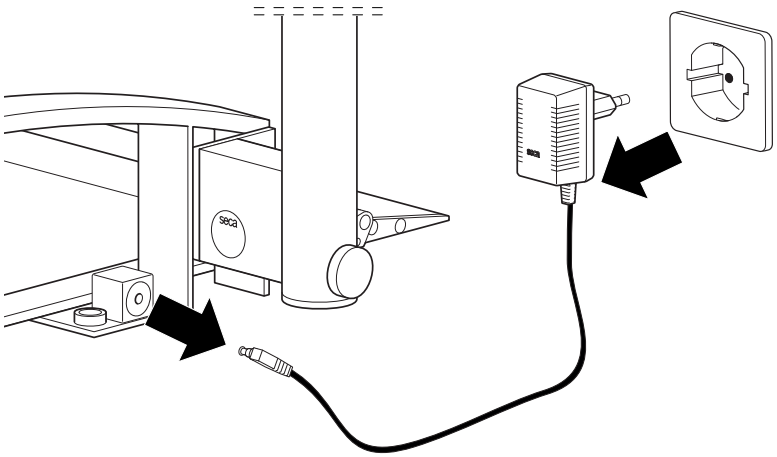
Incorrect measurement as a result of force shunt

If the accessories are fitted directly to the scale, faulty measurements can result.

- ► Do not attach a scanner bracket to the scale.
- ► Do not attach the **seca 452** interface module to the scale.

Preparing the scale

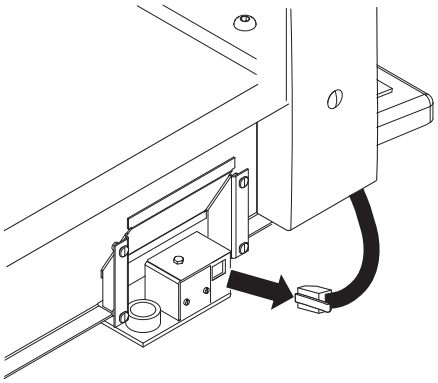
1. Clean and disinfect the scale as described in the respective instructions for use.
2. Switch off the scale.
3. Disconnect the plug-in power supply unit from the power supply socket.
4. Pull the power cable out of the scale.



NOTE

After the retrofit, the scale is supplied with power via the **seca 452** interface module.

5. Only for models **seca 684** and **seca 685**: Pull the display cable out of the scale.



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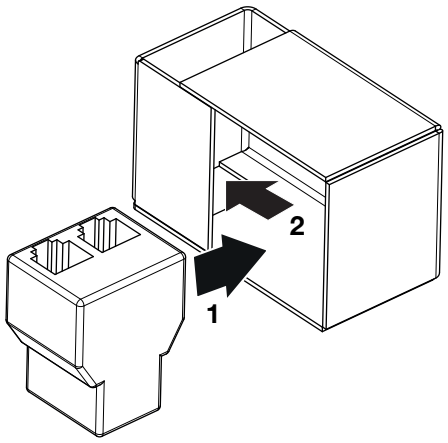
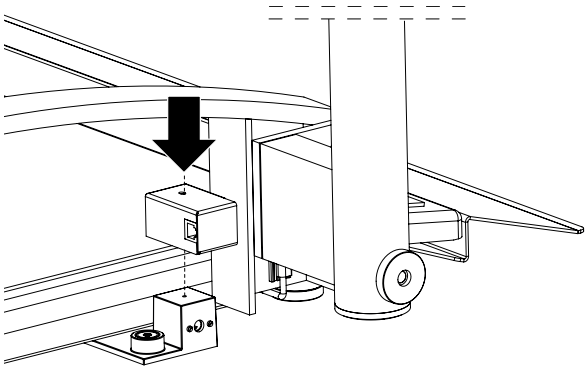
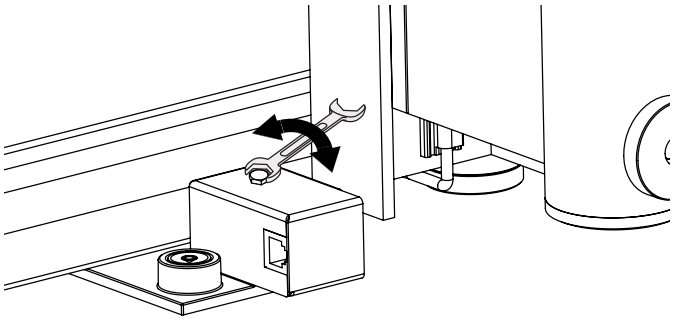
6. Assemble the Y adapter:
   a) Insert Y adapter into the adapter housing (1) and position according to the following figure (2)



   b) Turn adapter housing over and set it on the connection block of the scale



   c) Put hexagon bolt into the adapter housing and tighten with the wrench



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CAUTION!
Personal injury, damage to device
In the raised position, the scale is not steady.

- ► Use a second person to lift and hold the scale.
- ► If the scale needs to be held in a raised position for an extended period, secure it with suitable means to prevent it from falling over.

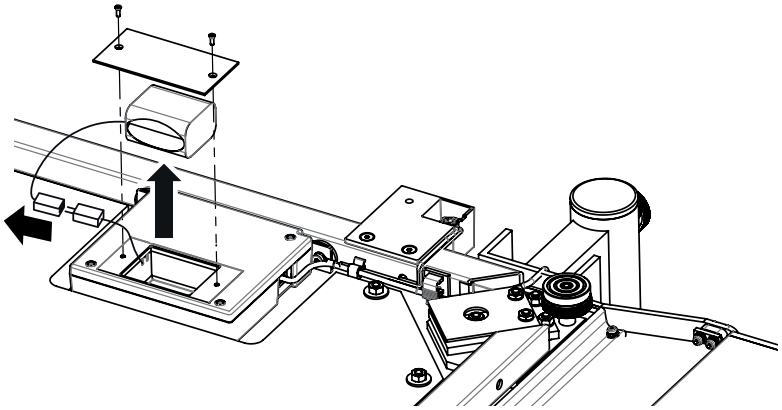
CAUTION!
Personal injury, damage to device
For some models of the scale, a folding seat is installed. Fingers can get trapped or the scale can be damaged if the folding seat is not folded up and secured.

- ► Fold the folding seat up and fold the legs of the seat in completely.
- ► Secure the folding seat with the locking bar.
- ► Follow the information in the instructions for use for the device.

7. Lift the scale carefully so that the underneath of the weighing platform is accessible.

NOTE
For **seca 676**, **seca 677**, **seca 684** and **seca 685**: Skip the following step and continue at step 9.

8. Remove the battery block:
   a) Loosen the screws of the battery compartment
   b) Remove the lid of the battery compartment
   c) Remove battery block from the battery compartment and pull out the connector cable
   d) Screw the lid onto the battery compartment



9. Store the plug-in power supply unit and the battery block (if present) or dispose of them properly (➔ Disposal).

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Connecting a seca 452 interface module

NOTICE!

Malfunction due to error in installation

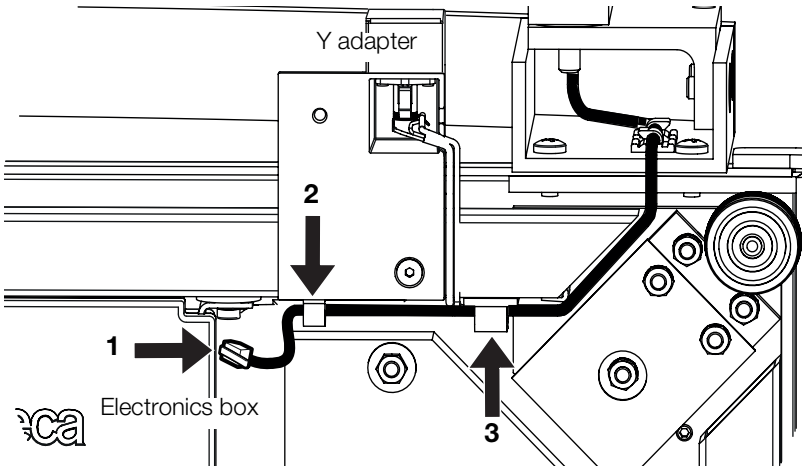
If cables are strained during installation, e. g. with sharp bends or kinked connectors, this may result in faulty displays and failure of the display.

- ► Route all cables to prevent sharp bends and kinked connectors.
- ► Provide strain relief by routing all cables in the relevant holders.

NOTE

The following illustration of the underneath of the scale is an example. The cable routing may differ slightly depending on the model. The principle for the connection is the same for all models. Orient yourself by the cable connected to the electronics box.

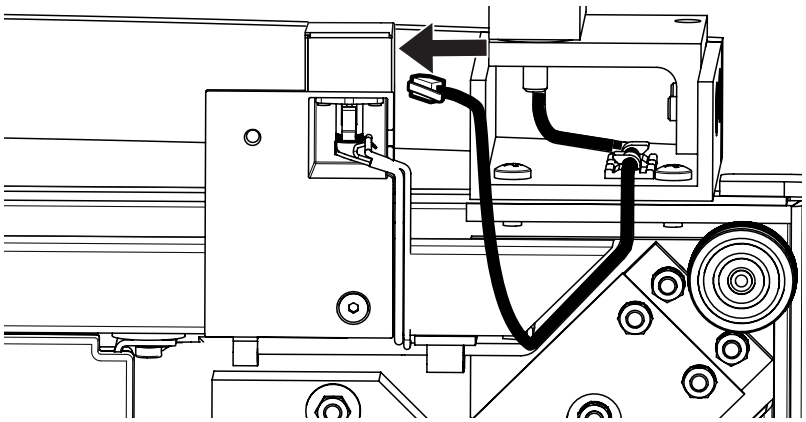
1. Connect the scale to the Y adapter:
   a) Remove the display cable from the electronics box (1) and from the cable clips (2, 3)



NOTE

For the **seca 684** and **seca 685** models: The display cable in the next step is the cable from the display column that you have already removed from the scale in section ➔ Preparing the scale. The cable that you have removed from the electronics box (step 1a) is not connected again.

b) Connect the display cable to the upper connection of the Y adapter



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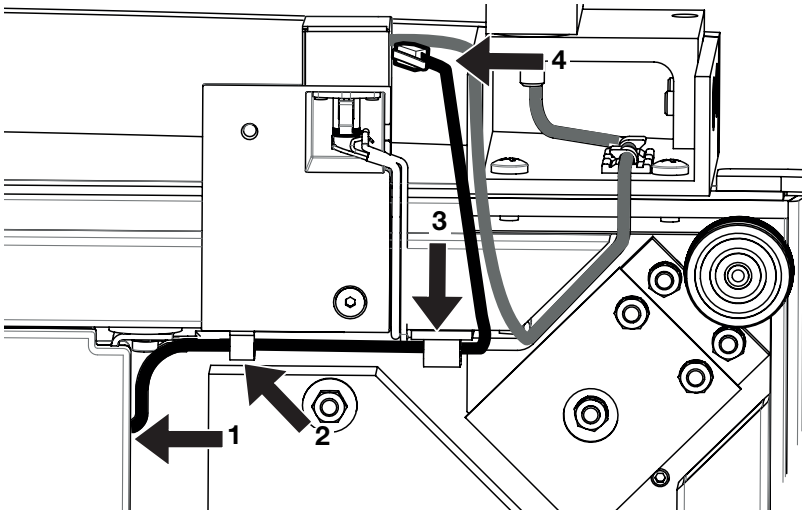
c) Connect the short connecting cable to the electronics box (1)

d) Secure the cable in the cable clips (2, 3)

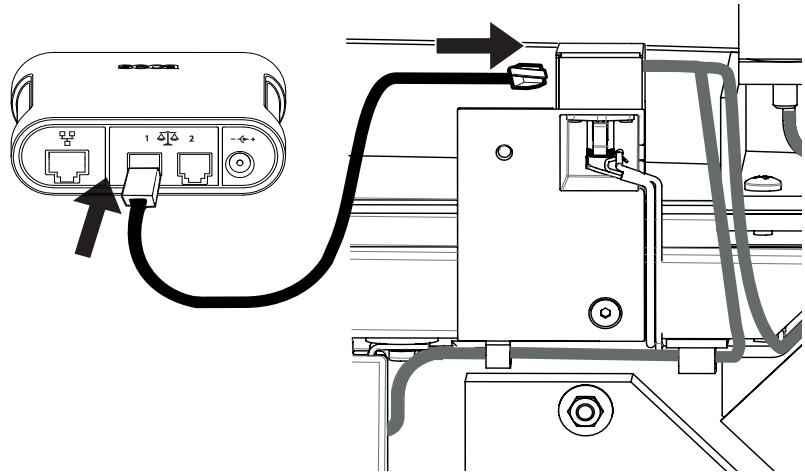
e) Connect the short connecting cable to the lower connection of the Y adapter (4)



2. Place the scale on the ground horizontally.
3. Connect the scale to the **seca 452** interface module:

   a) Connect the long connecting cable to the connection of the Y adapter

   b) Connect the long connecting cable to interface 1 of the **seca 452** interface module



You have the following options for continuing:

- For communication via LAN, continue at step 4.
- For communication via WiFi, continue at step 5.

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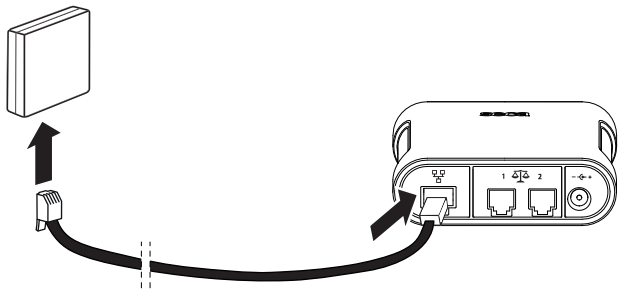
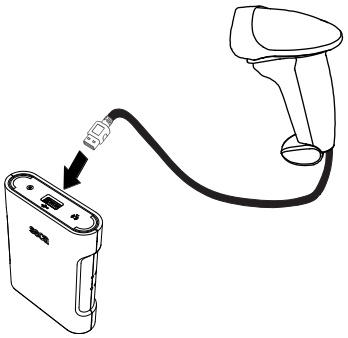
4. Connect a LAN cable to the **seca 452** interface module:
   a) Connect the LAN cable to the LAN interface of the **seca 452** interface module
   b) Connect the LAN cable to the network socket



NOTICE!
Malfunction caused by an incompatible scanner
Incompatible scanners can lead to faulty data transmission or system malfunction.

- Only use scanners that are listed in the section ➔ Optional accessories and spare parts.

5. Connect a scanner to the **seca 452** interface module:
   a) Connect the scanner cable to the USB interface of the **seca 452** interface module
   b) Attach the scanner to the scanner bracket (if present)



6. Apply the label with the Confirm barcode to a place you can reach easily with the scanner.

NOTICE!
Damage to device due to incorrect power supply unit
The plug-in power supply unit of the scale is not suitable for operation with the **seca 452** interface module.

- Only use the plug-in power supply unit included in the scope of delivery of **seca 452** (product no. 452 0050 009).

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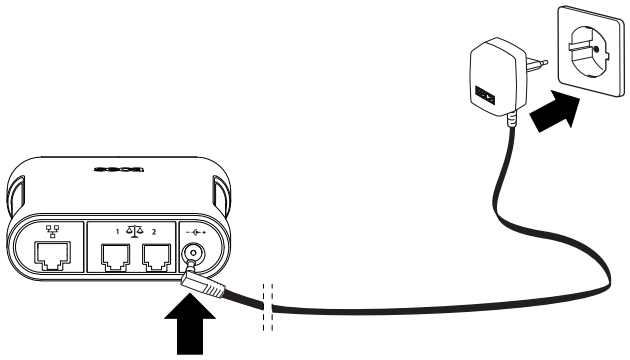
7. Connect the plug-in power supply unit to the **seca 452** interface module:
   a) Connect the power cable to the power supply connection of the **seca 452** interface module
   b) Insert the plug-in power supply unit into a power supply socket



You have the following options for continuing:

- **seca 452** interface module positioned next to the scale: continue at ➔ Performing final work
- Mounting the **seca 452** interface module on the wall: continue at ➔ Mounting the seca 452 interface module on the wall

NOTICE!
Incorrect measurement as a result of force shunt
If the accessories are fitted directly to the scale, faulty measurements can result.

- Do not attach the **seca 452** interface module to the scale.

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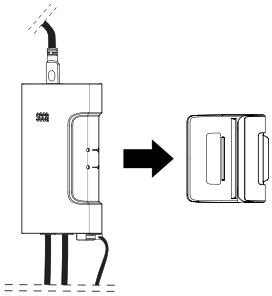
7.7 Mounting the seca 452 interface module on the wall

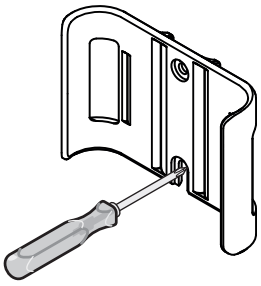
Proceed as follows to mount the **seca 452** interface module on the wall:

1. Press the wired **seca 452** interface module into the bracket.



2. Determine the optimal position on the wall according to the specifications in the section ➔ Selecting a location.
3. Mark the drill holes on the wall:
   a) Tilt the **seca 452** interface module forward and mark the position of the upper hole of the bracket with a screwdriver or marker

   b) Remove the **seca 452** interface module from the bracket
   c) Place the bracket on the wall so that the marking is located in the middle of the upper hole
   d) Mark the position in the lower hole of the bracket



4. Drill the holes with a drill bit suitable for the wall material.
5. Use wall plugs suitable for the wall material.

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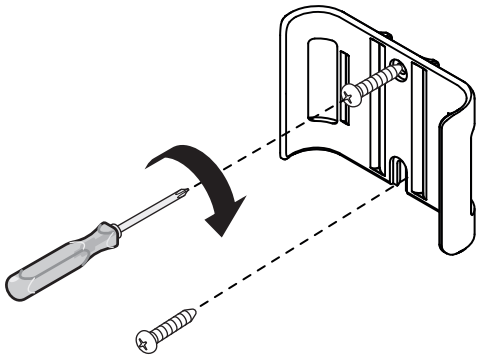
6. Screw the brackets securely to the wall with two cross-head screws.



7. Press the wired **seca 452** interface module into the bracket.
8. Perform the necessary final work, ➔ Performing final work.

7.8 Retrofitting 704 column scales

➔ Preparing the scale

➔ Fitting the seca 452 interface module

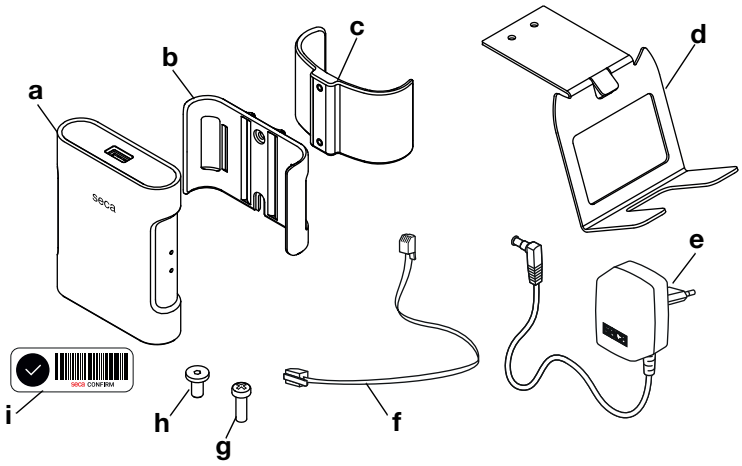
➔ Fitting the scanner bracket

➔ Connecting a seca 452 interface module

➔ Performing final work

NOTE
The **seca 703** column scale cannot be retrofitted by the customer. Please contact seca Service to retrofit the **seca 703**.

You need the following parts of **seca 452**, product no. 452 0050 009:



Item	Component	Pcs.
a	**seca 452** interface module	1
b	Bracket	1
c	Column bracket	1
d	Scanner bracket	1
e	Plug-in power supply unit	1
f	Connecting cable, short	1
g	Cross-head screw	2
h	Hex head socket screw	2
i	Label with Confirm barcode	1

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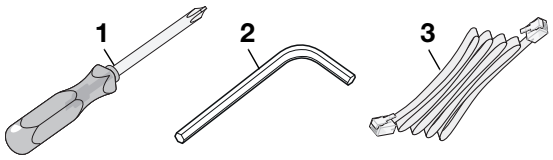
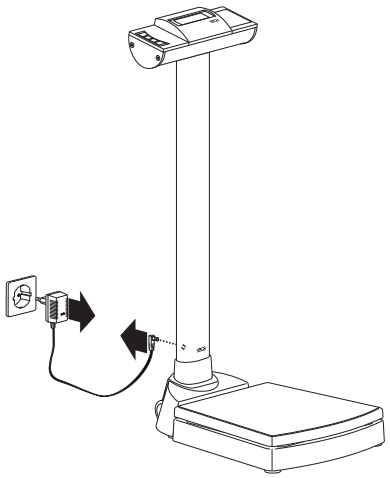
Depending on the installation and connection version, you may need the following tools (not included in the scope of delivery):



Item	Component	Size
1	Cross-head screwdriver	PH 1
2	Hex socket wrench	Size 2.0
3	LAN cable	n/a

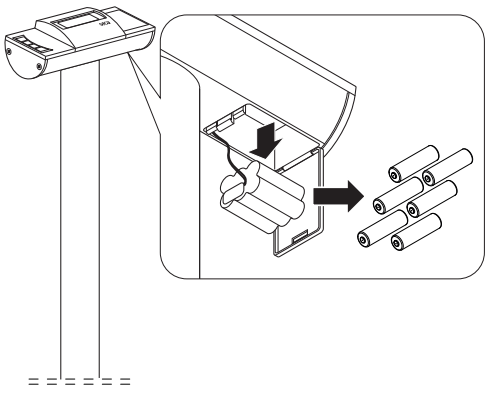
Preparing the scale

1. Clean and disinfect the scale as described in the respective instructions for use.
2. Switch off the scale.
3. Disconnect the plug-in power supply unit from the power supply socket.
4. Pull the power cable out of the scale.



NOTE
After the retrofit, the scale is supplied with power via the **seca 452** interface module.

5. Remove the batteries:
   a) Press the latch of the battery compartment
   b) Open the lid of the battery compartment
   c) Remove batteries from the battery holder
   d) Put battery holder back and close lid again



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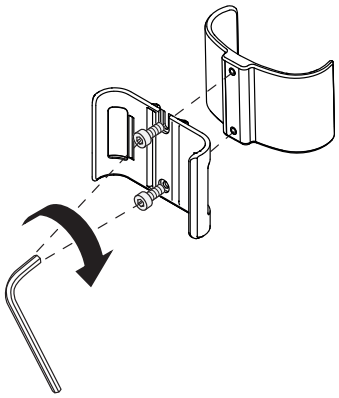
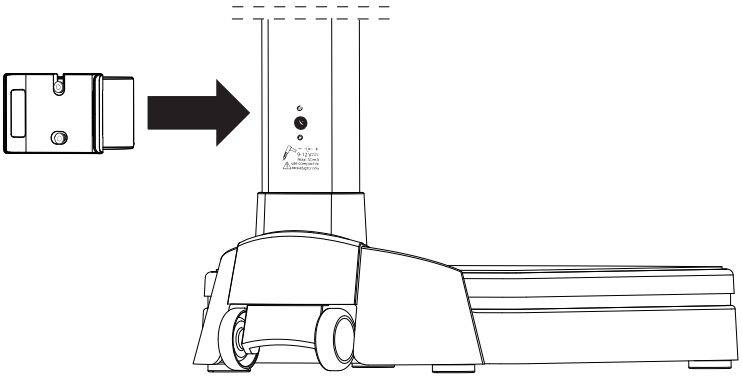
6. Store the plug-in power supply unit and the batteries or dispose of them properly (➔ Disposal).

Fitting the seca 452 interface module

1. Screw the bracket to the column bracket with two hex head socket screws.

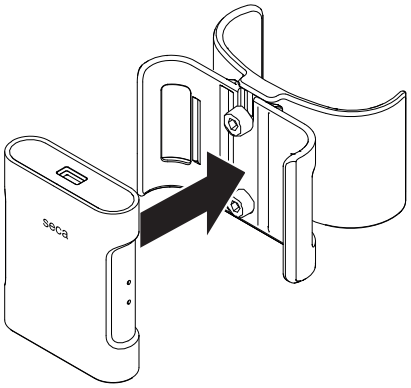


2. Press the column bracket onto the column at the height of the power supply connection.



NOTE
The power supply connection is no longer needed, the column bracket can completely cover the power supply connection.

3. Press the **seca 452** interface module into the bracket.



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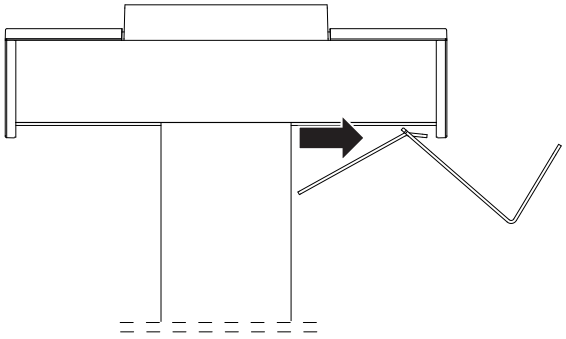
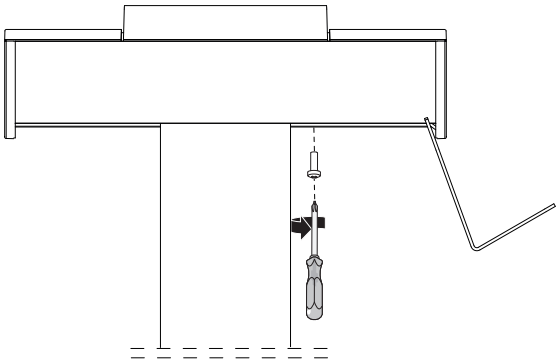
Fitting the scanner bracket

1. Hook the scanner bracket to the desired side part of the display housing.



2. Screw the scanner bracket to the bottom of the display housing with two cross-head screws.



Connecting a seca 452 interface module

1. Carefully tilt the scale so that you can easily access the connections on the underneath of the scale.

NOTICE!

Malfunction due to error in installation

If cables are strained during installation, e. g. with sharp bends or kinked connectors, this may result in faulty displays and failure of the display.

- ► Route all cables to prevent sharp bends and kinked connectors.
- ► Provide strain relief by routing all cables in the relevant holders.

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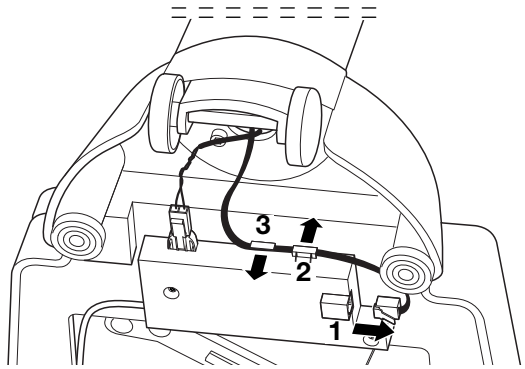
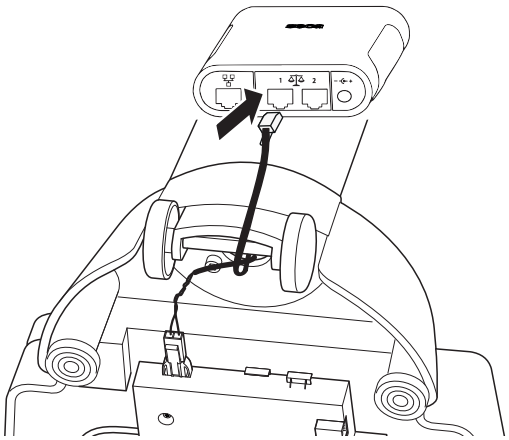
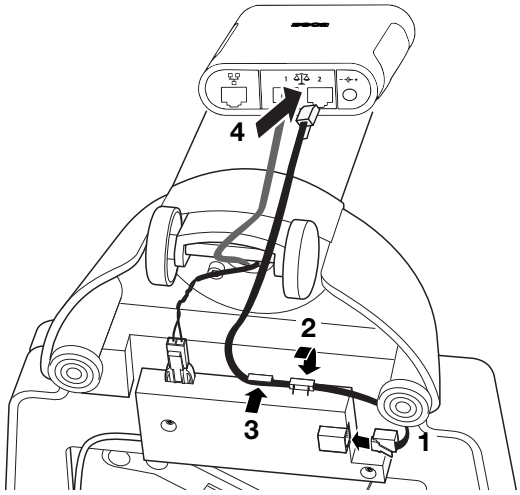
2. Connect the scale to the **seca 452** interface module:
   a) Remove cable of the display electronics from the interface of the electronics box (1) and from the cable clips (2, 3)



   b) Connect cable of the display electronics to interface 1 of the **seca 452** interface module



   c) Connect the short connecting cable to the interface of the electronics box (1) and secure in the cable clips (2, 3)
   d) Connect the short connecting cable to interface 2 of the **seca 452** interface module (4)



   e) Position the scale upright

You have the following options for continuing:

- For communication via LAN, continue at step 3.
- For communication via WiFi, continue at step 4.

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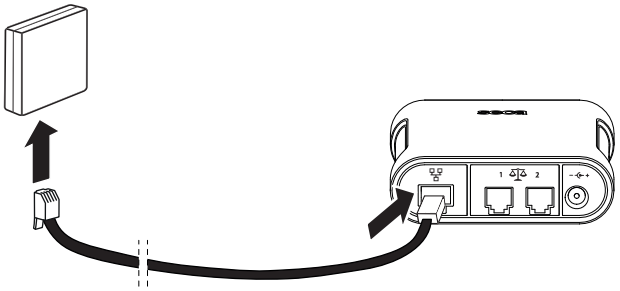
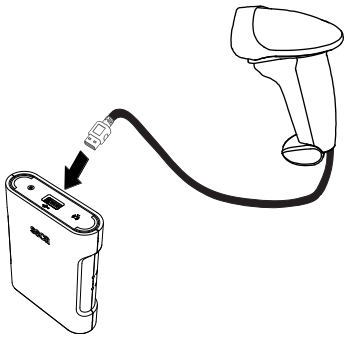
3. Connect a LAN cable to the **seca 452** interface module:
   a) Connect the LAN cable to the LAN interface of the **seca 452** interface module
   b) Connect the LAN cable to the network socket



NOTICE!
Malfunction caused by an incompatible scanner
Incompatible scanners can lead to faulty data transmission or system malfunction.

- Only use scanners that are listed in the section ➔ Optional accessories and spare parts.

4. Connect a scanner to the **seca 452** interface module:
   a) Connect the scanner cable to the USB interface of the **seca 452** interface module
   b) Attach the scanner to the scanner bracket



5. Apply the label with the Confirm barcode to a place you can reach easily with the scanner.

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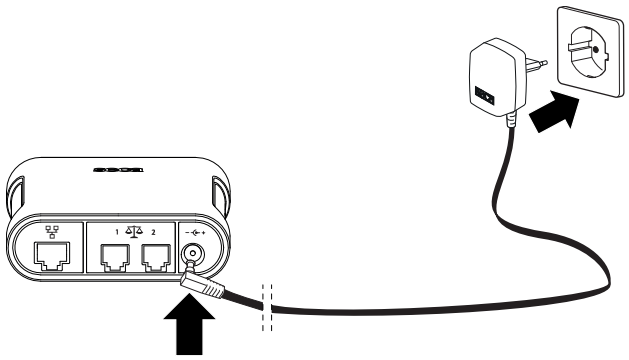
NOTICE!

Damage to device due to incorrect power supply unit

The plug-in power supply unit of the scale is not suitable for operation with the **seca 452** interface module.

- ► Only use the plug-in power supply unit included in the scope of delivery of **seca 452** (product no. 452 0050 009).

6. Connect the plug-in power supply unit to the **seca 452** interface module:
   a) Connect the power cable to the power supply connection of the **seca 452** interface module
   b) Insert the plug-in power supply unit into a power supply socket



7. Perform the necessary final work ➔ Performing final work.

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7.9 Retrofitting 285/284, 287/286 measuring stations

➔ Preparing the measuring station

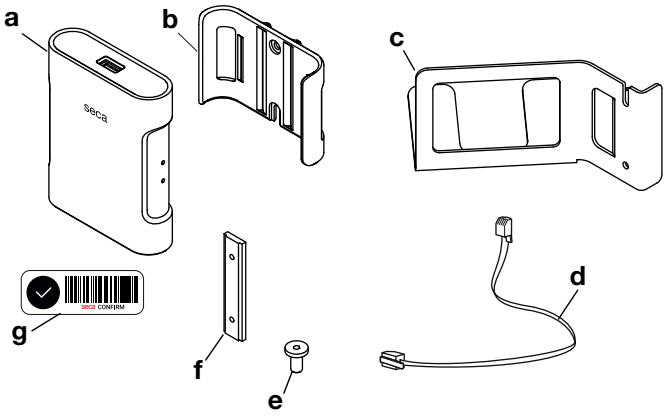
➔ Fitting the seca 452 interface module

➔ Fitting the scanner bracket

➔ Connecting a seca 452 interface module

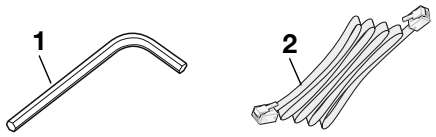
➔ Performing final work

You need the following parts of **seca 452**, product no. 452 0000 009:



Item	Component	Pcs.
a	**seca 452** interface module	1
b	Bracket	1
c	Scanner bracket	1
d	Connecting cable	1
e	Hex head socket screw	4
f	Sliding block	2
g	Label with Confirm barcode	1

Depending on the desired installation and connection version, you may need the following tools (not included in the scope of delivery):



Item	Component	Size
1	Hex socket wrench	Size 2.0
2	LAN cable	n/a

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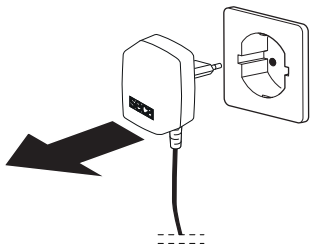
Preparing the measuring station

1. Clean and disinfect the measuring station as described in the respective instructions for use.
2. Switch off the measuring station.
3. Disconnect the plug-in power supply unit from the power supply socket.



CAUTION!
Risk of injury and damage to device
The device must be tilted. The great height of the device can result in injuries and damage to the device.

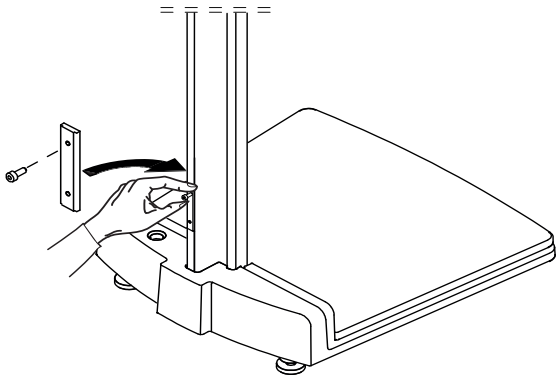
- ► Make sure that there are no other persons in the immediate vicinity.
- ► Make sure that there are no objects in the immediate vicinity.

4. Slightly lift the measuring station at the rear and pull out the power cable.

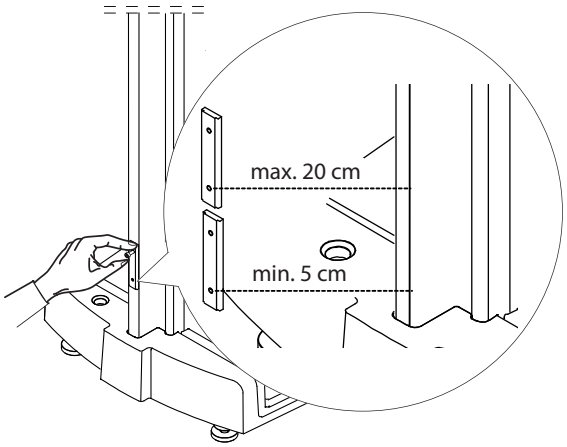
NOTE
After the retrofit, the measuring station is supplied with power via the **seca 452** interface module.

Fitting the seca 452 interface module

1. Put a hex head socket screw into a sliding block and guide the sliding block into the groove of the column.



2. Hold the sliding block in position as shown in the following figure.



3. Position the bracket on the sliding block.

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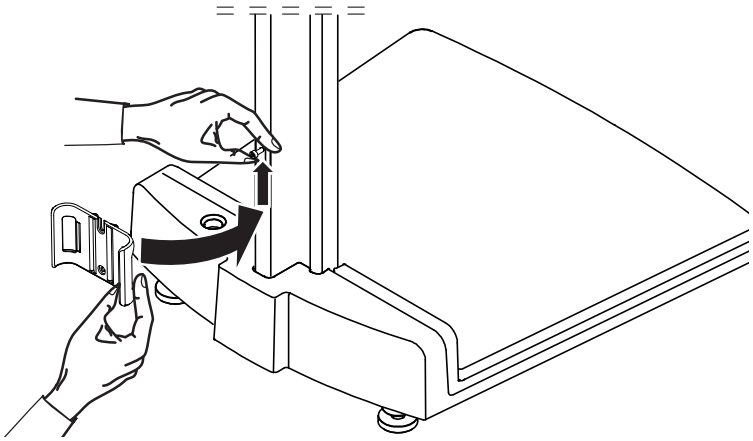
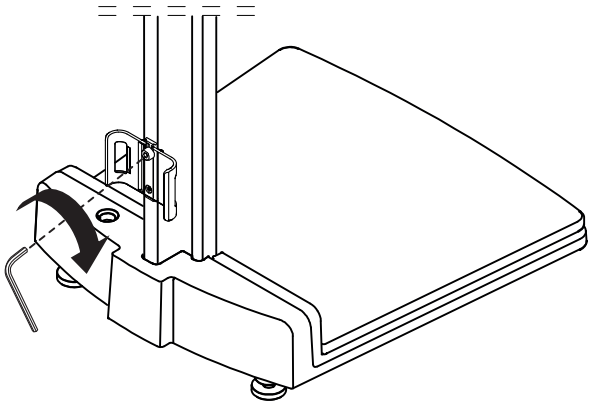
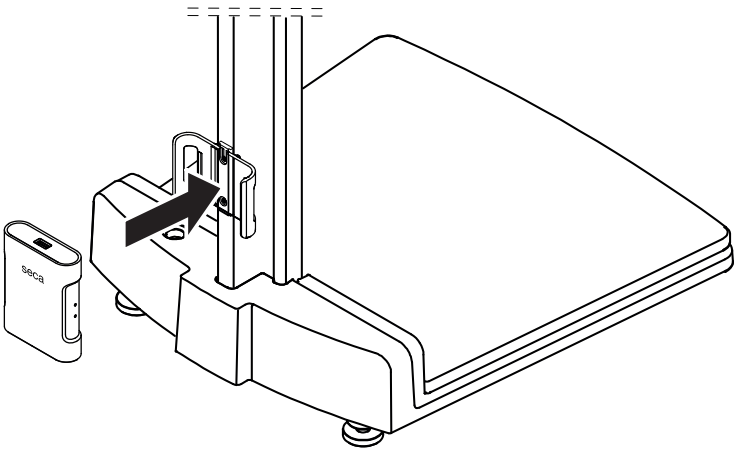
4. Push the bracket with the recess upward under the head of the hex head socket screw.



5. Screw the hex head socket screw tight.



6. Screw the bracket tight with a second hex head socket screw.
7. Press the **seca 452** interface module into the bracket.



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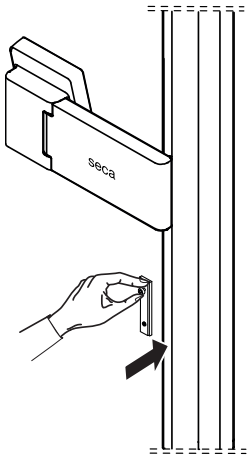
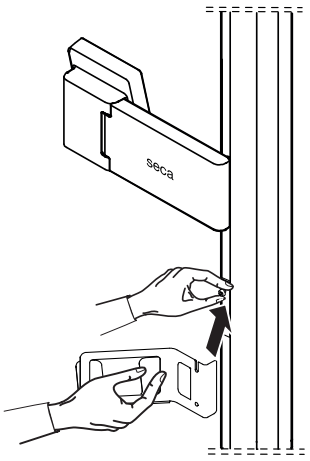
Fitting the scanner bracket

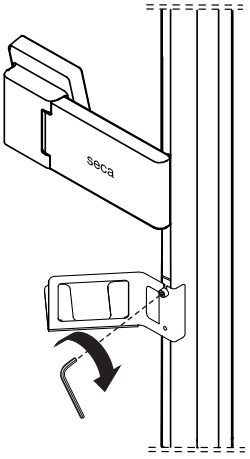
1. Put a hex head socket screw into the sliding block.
2. Thread the sliding block below the multifunctional display into the groove of the column.



3. Hold the sliding block securely.
4. Position the scanner bracket on the sliding block.
5. With the recess upward, push the scanner bracket under the head of the hex head socket screw.



6. Screw the hex head socket screw tight.



7. Screw the scanner bracket tight with a second hex head socket screw.

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Connecting a seca 452 interface module

NOTICE!

Malfunction as a result of faulty multifunctional display

When the device is laid down, the multifunctional display is directly on the floor and may be damaged.

- ► Lay the device down slowly and carefully on a soft surface, a blanket, for example.

1. Lift the measuring station at the rear and carefully tilt it forward.

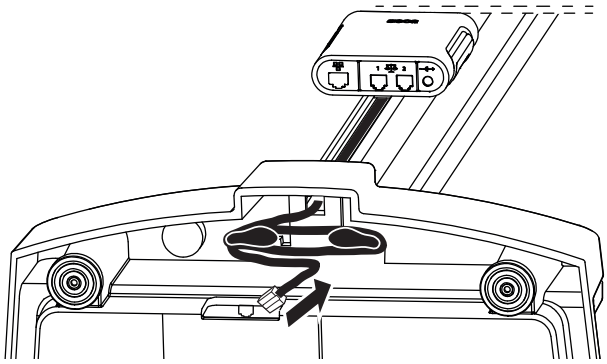
NOTICE!

Malfunction due to error in installation

If cables are strained during installation, e. g. with sharp bends or kinked connectors, this may result in faulty displays and failure of the display.

- ► Route all cables to prevent sharp bends and kinked connectors.
- ► Provide strain relief by routing all cables in the relevant holders.

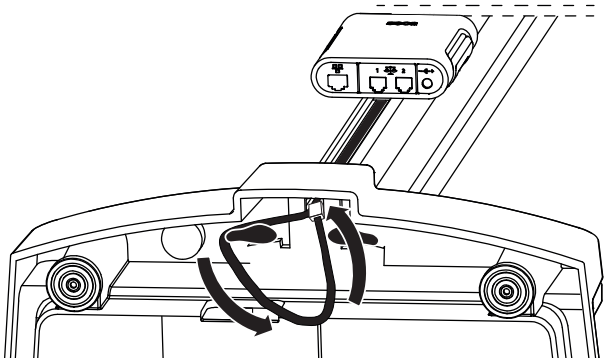
2. Connect the multifunctional display to the **seca 452** interface module:
   a) Remove cable of the multifunctional display from the electronics box



   b) With the cable, make a loop and push the end of the cable upward through the hole

NOTE

Depending on the cable length, you can guide the cable past one or both cable storage posts.



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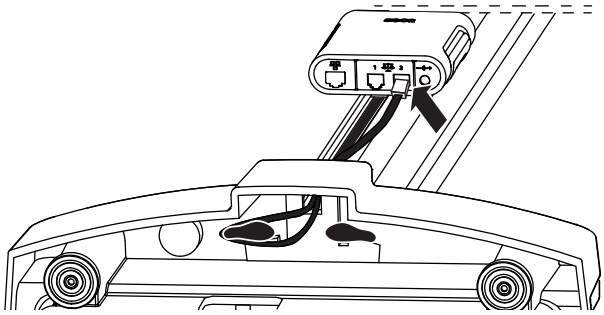
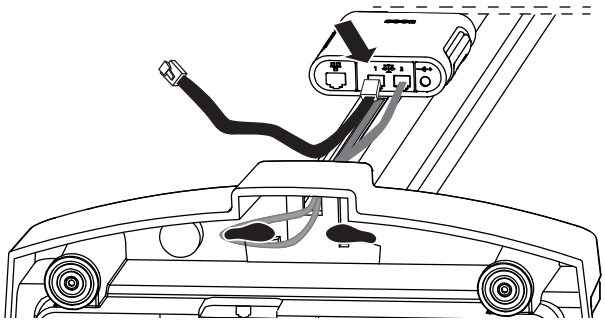
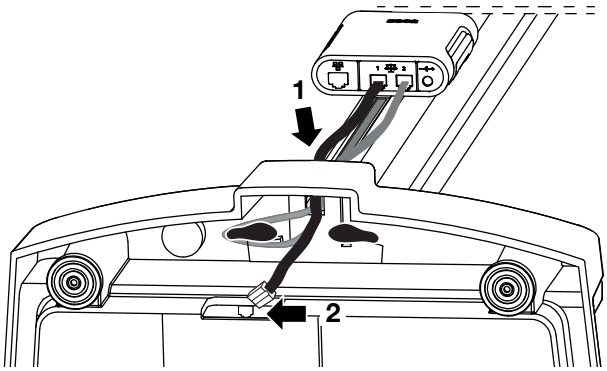
c) Connect cable to interface 2 of the **seca 452** interface module



3. Connect the measuring station to the **seca 452** interface module:
   a) Connect the connecting cable to interface 1 of the **seca 452** interface module



   b) Push the connecting cable down through the hole and connect to the electronics box



4. Carefully place the measuring station onto the ground horizontally.
   You have the following options for continuing:
   - For communication via LAN, continue at step 5.
   - For communication via WiFi, continue at step 6.

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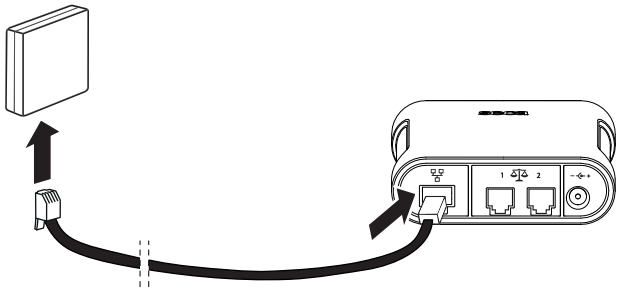
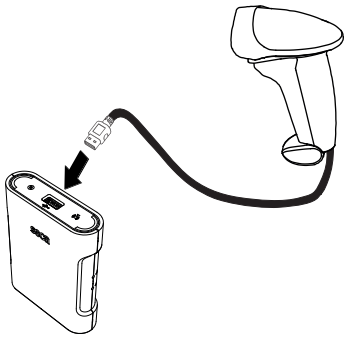
5. Connect a LAN cable to the **seca 452** interface module:
   a) Connect the LAN cable to the LAN interface of the **seca 452** interface module
   b) Connect the LAN cable to the network socket

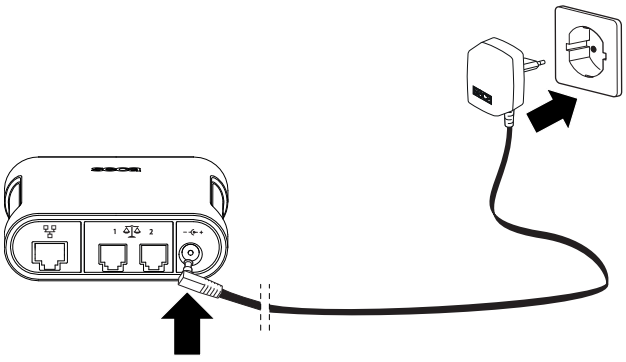


NOTICE!
Malfunction caused by an incompatible scanner
Incompatible scanners can lead to faulty data transmission or system malfunction.
- Only use scanners that are listed in the section ➔ Optional accessories and spare parts.

6. Connect a scanner to the **seca 452** interface module:
   a) Connect the scanner cable to the USB interface of the **seca 452** interface module
   b) Attach the scanner to the scanner bracket



7. Apply the label with the Confirm barcode to a place you can reach easily with the scanner.
8. Connect the plug-in power supply unit to the **seca 452** interface module:
   a) Connect the power cable to the power supply connection of the **seca 452** interface module
   b) Insert the plug-in power supply unit into a power supply socket



9. Perform the necessary final work, ➔ Performing final work.

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7.10 Retrofitting 787 measuring stations

➜ Preparing the measuring station

➜ Fitting the seca 452 interface module

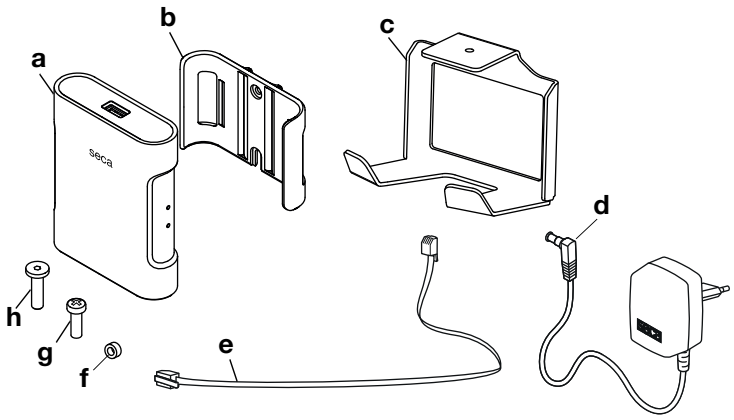
➜ Fitting the scanner bracket

➜ Connecting the connecting cable to the display unit

➜ Connecting the seca 452 interface module

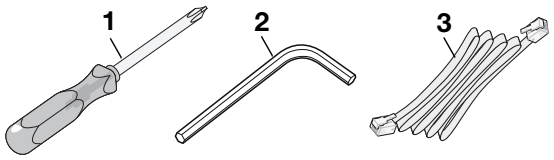
➜ Performing final work

You need the following parts of **seca 452**, product no. 452 0060 009:



Item	Component	Pcs.
a	**seca 452** interface module	1
b	Bracket	1
c	Scanner bracket	1
d	Plug-in power supply unit	1
e	Connecting cable	1
f	Spacer sleeve	2
g	Cross-head screw	1
h	Hex head socket screw	2

Depending on the installation and connection version, you may need the following tools (not included in the scope of delivery):



Item	Component	Size
1	Cross-head screwdriver	PH 2
2	Hex socket wrench	Size 2.0
3	LAN cable	n/a

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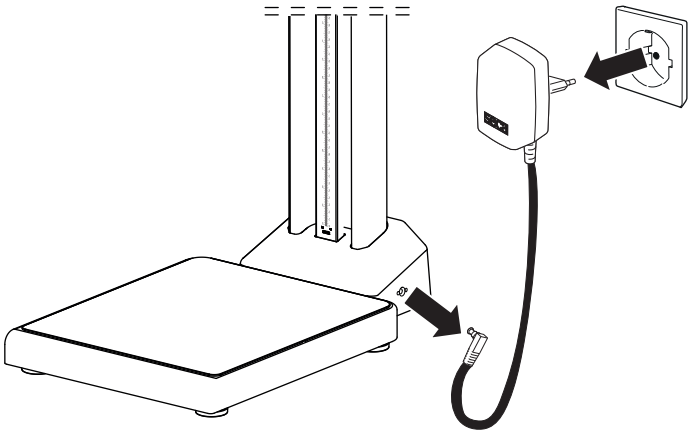
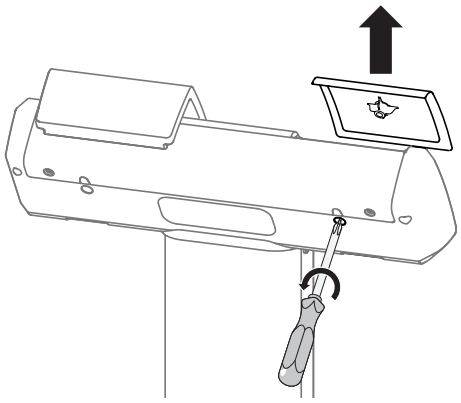
Preparing the measuring station

1. Clean and disinfect the measuring station as described in the respective instructions for use.
2. Switch off the measuring station.
3. Disconnect the plug-in power supply unit from the power supply socket.
4. Pull the power cable out of the scale, if one is present.

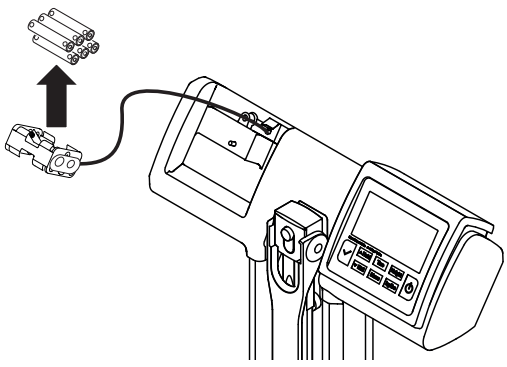


NOTE
After the retrofit, the measuring station is supplied with power via the **seca 452** interface module.

5. Open the battery compartment:
   a) Hold the battery compartment lid steady
   b) Remove the cross-head screw behind the battery compartment lid
   c) Remove the battery compartment lid



6. Take the batteries out of the battery holder.



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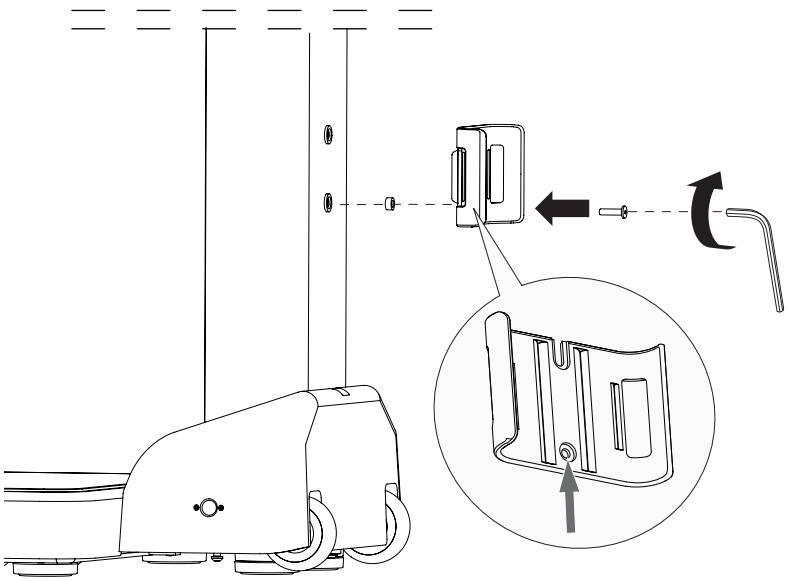
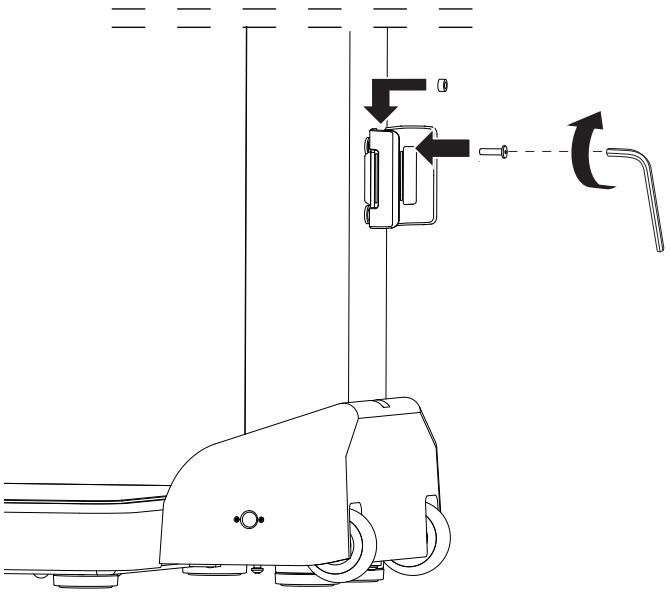
7. Close the battery compartment:
   a) Insert the battery compartment lid
   b) Tighten the cross-head screw behind the battery compartment lid
8. Store the plug-in power supply unit (if present) and the batteries or dispose of them properly (➔ Disposal).

Fitting the seca 452 interface module

1. Fit the bracket on the column:
   a) Insert hex head socket screw into hole of bracket
   b) Place spacer sleeve onto hex head socket screw
   c) Screw bracket onto column



   d) Place spacer sleeve between hole of column and recess of bracket
   e) Insert hex head socket screw into recess of bracket and into the spacer sleeve
   f) Tighten the hex head socket screw



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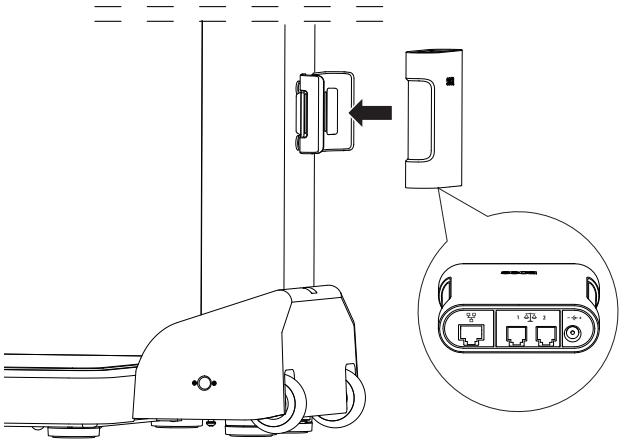
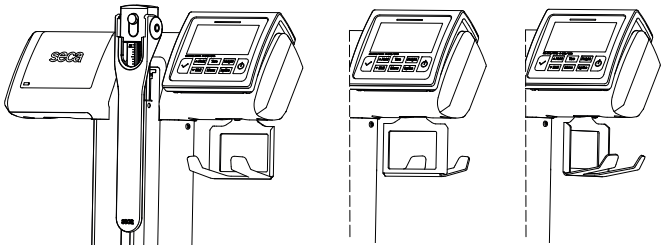
2. Press the **seca 452** interface module into the bracket.

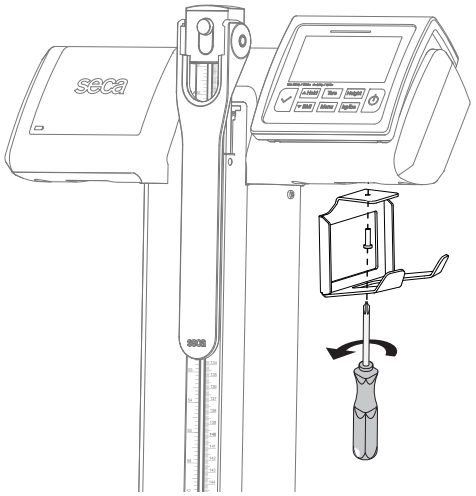


Fitting the scanner bracket

The scanner bracket can be fitted to either side of the display head. It can be fitted offset by 90° to point forwards, sideways or backwards.



► Fit the scanner bracket to the display head using a cross-head screw.



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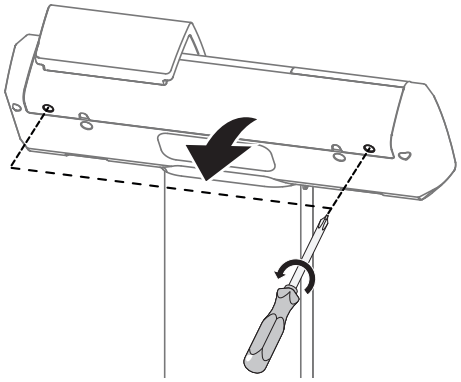
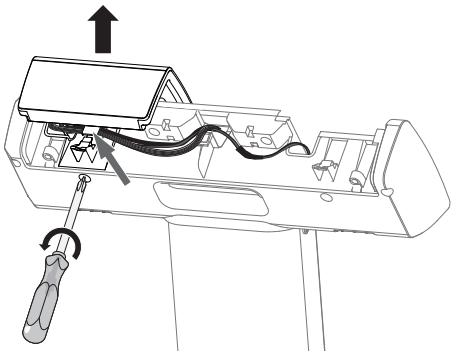
Connecting the connecting cable to the display unit

1. Remove the cover panel:
   a) Unscrew two cross-head screws
   b) Remove the cover panel



2. Remove the display unit:
   a) Undo the cross-head screw behind the display unit
   b) Remove both cable tie on cable hook and the strain relief, if present
   c) Draw cables out of the cable hook
   d) Lift off display unit



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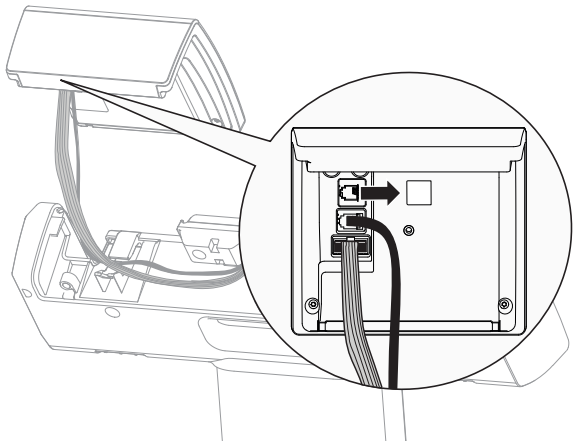
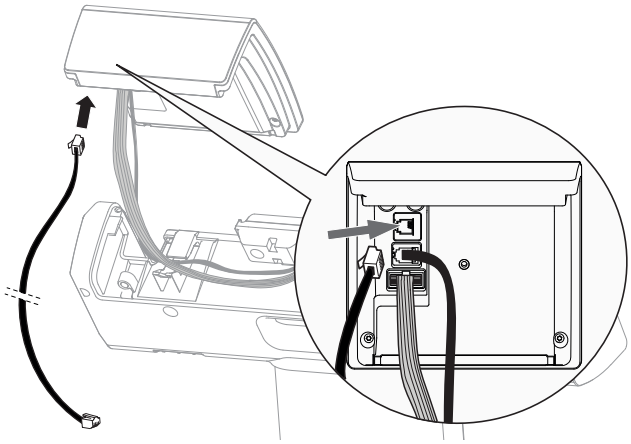
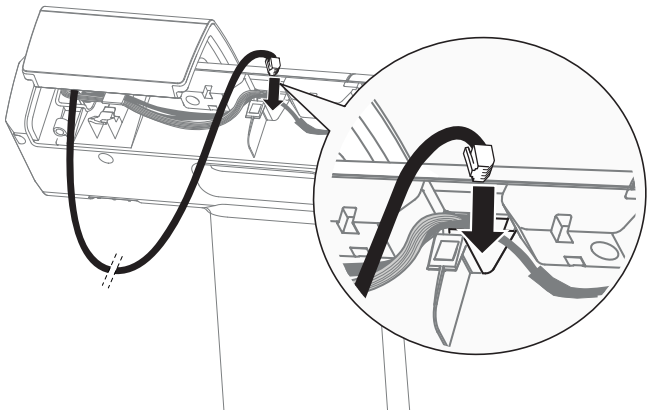
3. Connect the connecting cable to the display unit:
   a) Remove the cap from the socket for the connecting cable



   b) Connect the connecting cable to the socket



   c) Insert display unit into display head
   d) Thread connecting cable into the column



   e) Guide connecting cable through the column up to the lower part of the device

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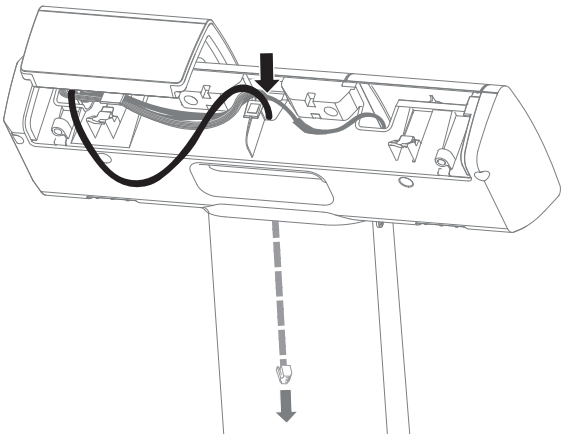
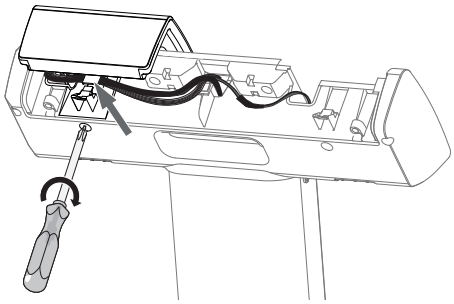
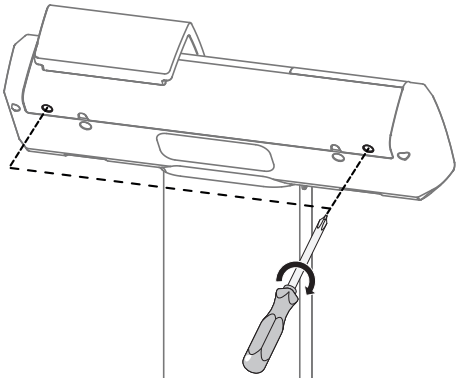


NOTE
The lower end of the connecting cable is connected to the **seca 452** interface module in a subsequent assembly step (➔ Connecting the seca 452 interface module).

4. Fit the display unit:
   a) Gather all the cables into the cable hook and secure them with a cable tie if necessary
   b) Hold the display unit steady
   c) Tighten the cross-head screw behind the display unit



5. Fit the cover panel:
   a) Insert cover panel
   b) Place and tighten two cross-head screws



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Connecting the seca 452 interface module

NOTICE!

Damage to device

If you place the device on the floor with the measuring rod extended, the rod may get damaged.

► Ensure that the measuring flap is folded down and the upper telescopic element of the measuring rod is in its lowest position.

1. Carefully place the measuring station on the floor with the display unit facing downward.

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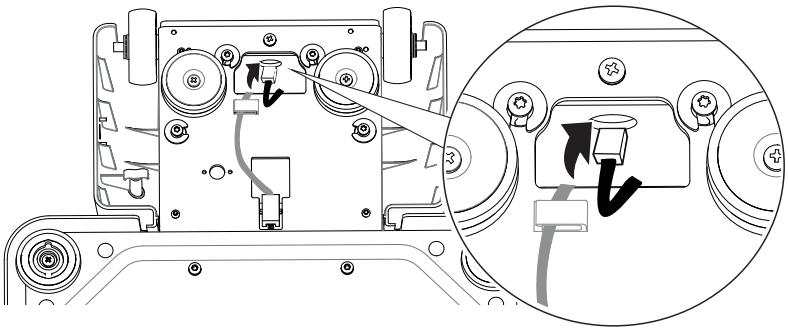
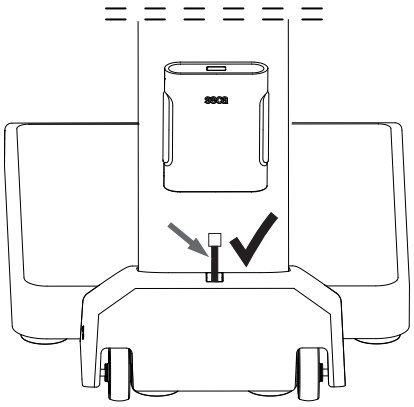
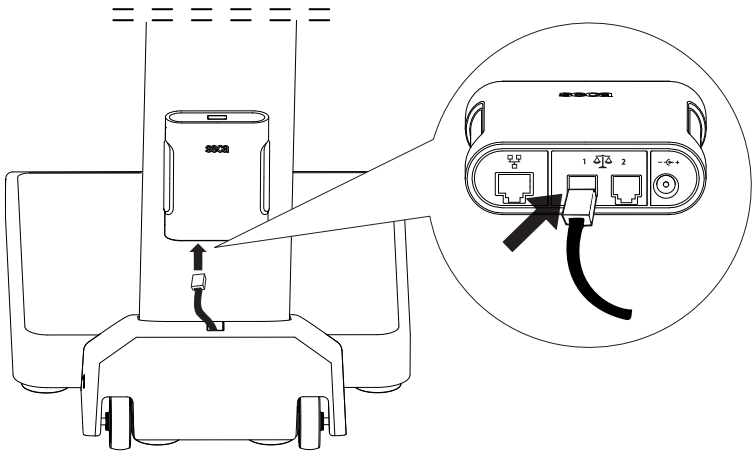
2. Connect the measuring station to the **seca 452** interface module:
   a) Thread the lower end of the connecting cable into the circular opening in the column



   b) Guide the connecting cable until it comes out at the opening in the column holder



   c) Set the measuring station in an upright position
   d) Connect the connecting cable to interface 1 of the **seca 452** interface module



You have the following options for continuing:

- For communication via LAN, continue at step 3.
- For communication via WiFi, continue at step 4.

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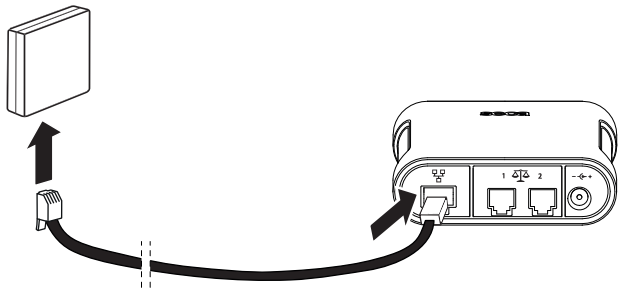
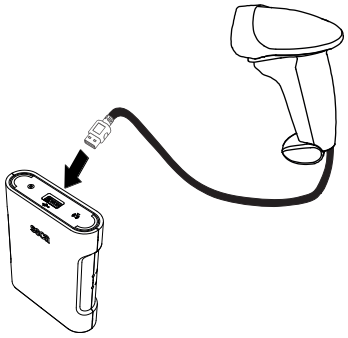
3. Connect a LAN cable to the **seca 452** interface module:
   a) Connect the LAN cable to the LAN interface of the **seca 452** interface module
   b) Connect the LAN cable to the network socket

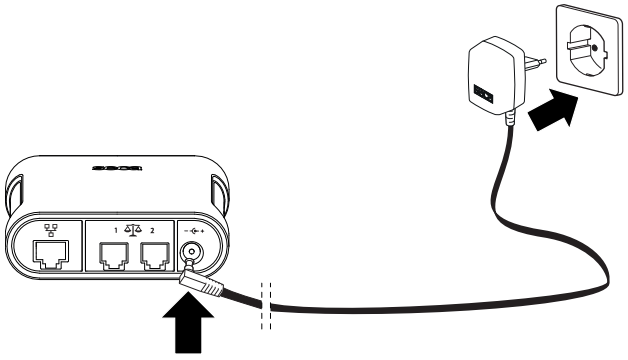


NOTICE!
Malfunction caused by an incompatible scanner
Incompatible scanners can lead to faulty data transmission or system malfunction.
- Only use scanners that are listed in the section ➔ Optional accessories and spare parts.

4. Connect a scanner to the **seca 452** interface module:
   a) Connect the scanner cable to the USB interface of the **seca 452** interface module
   b) Attach the scanner to the scanner bracket



5. Connect the plug-in power supply unit to the **seca 452** interface module:
   a) Connect the power cable to the power supply connection of the **seca 452** interface module
   b) Insert the plug-in power supply unit into a power supply socket



6. Perform the necessary final work ➔ Performing final work.

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7.11 Performing final work

Once you have completed retrofitting of the measuring devices, perform the following steps:

- Ensure that the device is positioned on the ground flat and stable.
- Ensure that no cables or other parts are in contact with the weighing platform.
- Perform a function check of the device as described in the respective instructions for use.
- Remove all tools and materials.
- Clean the floor and other installation areas.
- Clean and disinfect the measuring devices as described in the respective instructions for use.
- Clean and disinfect your hands.
- You have the following options for continuing:
  - Add a seca measuring device in the **seca connect 103** software: ➔ Adding a seca measuring device
  - Change the configuration of a seca measuring device in the **seca connect 103** software: ➔ Changing the setting for a seca measuring device

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8. USING THE WEB SERVER OF THE seca 452 INTERFACE MODULE

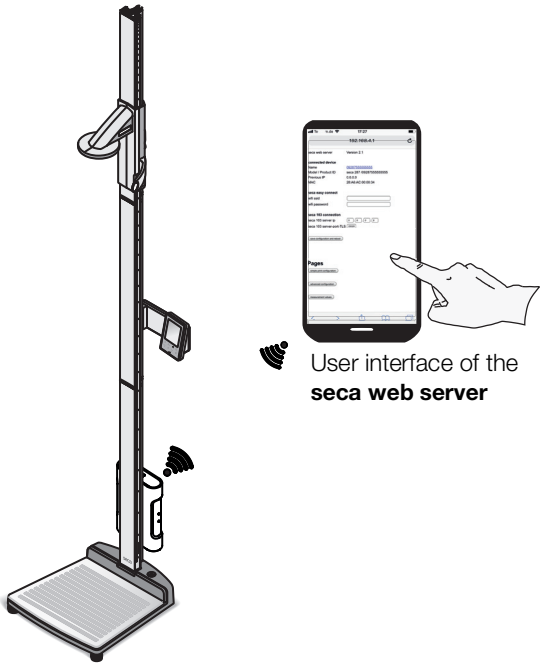
➔ Making a connection between the seca web server and a mobile terminal

➔ Connecting the seca measuring device to the seca connect 103 software

The **seca 452** Interface module is equipped with a web interface (**seca web server**). The **seca web server** provides the option of configuring network functions of the **seca 452** Interface module with your mobile terminal (smartphone or tablet).

You can use the **seca web server** to connect seca measuring devices to the **seca connect 103** software, for example if no compatible barcode scanner is available.

For seca measuring devices which are not connected to an EMR system via **seca connect 103**, the **seca web server** provides further configuration options such as connection to a network-capable POS printer, for example. For more information, contact seca Service.



User interface of the **seca web server**

Example: **seca 285** measuring station with **seca 452** Interface module

NOTE
seca measuring devices with an Internal Interface module can likewise be configured via the **seca web server**. For these devices, you also proceed as described in this section. Information about which seca measuring devices are equipped with an internal Interface module can be found here: ➔ Compatible seca products.

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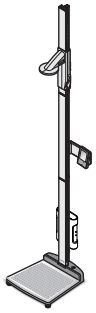
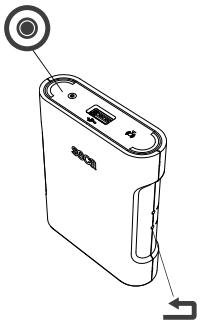
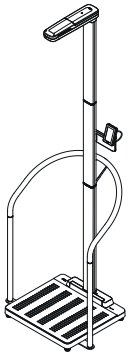
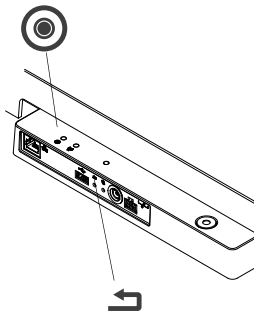
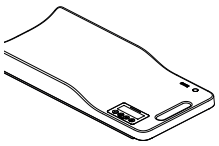
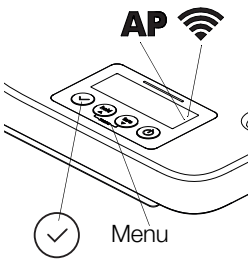
8.1 Making a connection between the seca web server and a mobile terminal

➔ Activating the seca web server
➔ Calling up the user interface of the seca web server

Activating the seca web server

► Activate the **seca web server** as shown in the table below:

Example device	Controls	Operating steps
seca 452 Interface module		
 seca 285		1. Press and hold button ⮌ until Power LED ◎ goes out 2. Wait until Power LED ◎ comes on permanently 3. Press button ⮌ briefly until Power LED ◎ flashes 4. ➔ Calling up the user interface of the seca web server
Internal Interface module: Devices with a touchscreen display		
 seca 655		1. Press and hold button ⮌ until Power LED ◎ goes out 2. Wait until Power LED ◎ comes on permanently 3. Press button ⮌ briefly until Power LED ◎ flashes 4. ➔ Calling up the user interface of the seca web server
Internal Interface module: Devices with an LC display		
 seca 336 i		1. Call up the menu of the seca measuring device 2. Select the menu item "rESEt" 3. Press and hold key ✓ until the ((•)) symbol in the display flashes 4. Call up the menu of the seca measuring device 5. In submenu “rF”, select the menu item “AP” 6. Switch on the AP function 7. Wait until the symbol **AP** appears in the display 8. ➔ Calling up the user interface of the seca web server

NOTE
For details on controls and menu structures, please see the instructions for use for the seca measuring device in question.

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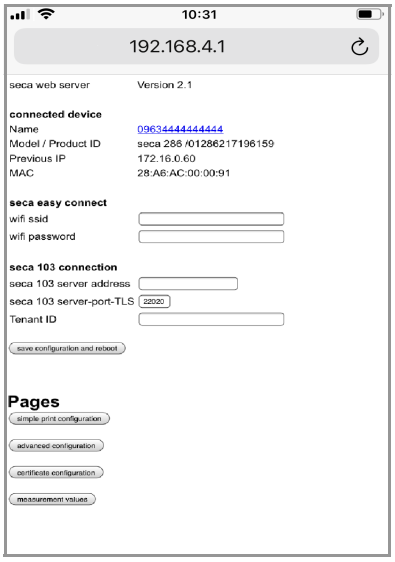
Calling up the user interface of the seca web server

1. Open the WiFi settings of your mobile terminal.

   The **seca Product ID** of the seca measuring device appears under “Networks”.
2. Select the **[seca Product ID]** network.
3. Enter the following password: **seca1234**.
4. Open a browser on your mobile terminal.
5. Enter the following URL: **192.168.4.1**.
   The user interface for the **seca web server** opens.



6. Connect the seca measuring device to the **seca connect 103** software:
   ➔ Connecting the seca measuring device to the seca connect 103 software

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8.2 Connecting the seca measuring device to the seca connect 103 software

If you are not using a barcode scanner, you can connect your seca measuring device to the **seca connect 103** software via the **seca web server**.

NOTE
If you are using a barcode scanner, proceed as described in this section: ➔ Administering seca measuring devices

1. Make a connection between your seca measuring device and the **seca web server**: ➔ Making a connection between the seca web server and a mobile terminal.
2. Open the user interface of the **seca web server** (URL: **192.168.4.1**).

3. Enter the SSID for your WiFi network (optional).

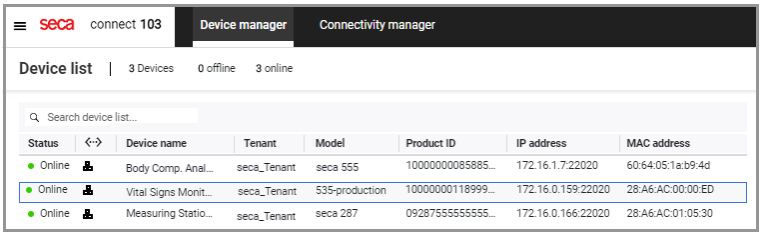
NOTE
When you connect the measuring device to the network via LAN, leave the **wifi ssid** and **wifi password** fields empty.

4. Enter the password for your WiFi network (optional).
5. Enter the IP address for the **seca connect 103** server.
6. Enter the tenant ID of the desired tenant.

NOTE
The tenant ID matches the **Identity** value of the tenant.

7. Press the **save configuration and reboot** key.

After the reboot, the symbol of the seca measuring device will flash until the WiFi connection is established.
Once the connection has been established successfully, the seca measuring device appears in the device list of the **seca connect 103** software.



8. Configure the seca measuring device ➔ Changing the setting for a seca measuring device.

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9. OPERATING CONNECTED SECA MEASURING DEVICES

➔ Functional limitations

➔ Workflow for measuring mode

9.1 Functional limitations

If the following seca measuring devices are connected to the **seca connect 103** software, individual functions of the measuring devices cannot be used or only with limitations:

- seca measuring devices with **seca 360° wireless** transmission
  - Baby scales
  - Column scales
  - Measuring stations
  - Multifunctional scales
  - Chair scales
- **seca 333 i**, **seca 336 i** baby scales
- **seca 787**, **seca 797** measuring stations

An overview of all compatible seca measuring devices can be found here: ➔ Compatible seca products.

If functional limitations are not observed, the following malfunctions may occur:

- Malfunction of individual devices
- Transmission of invalid measured values
- Incorrect assignment of measured values to patient files

► Observe the functional limitations in the following table:

Function	Device type	Restriction
hold[a]	All	Do not use
bmi	Column scales Measuring stations Multifunctional scales Chair scales	Do not use
send/print[b]	**seca 360° wireless** devices	Do not use
clear[c]	Measuring stations	Press key **before** each measurement to delete old height value from device memory
tare	Baby scales Multifunctional scales Chair scales	Press the key after every measurement to delete tare value from device memory
BMIF	Baby scales	Deactivate before measurement is confirmed on seca measuring device

a. Can be used for **seca 333 i**, **seca 336 i**, **seca 797** and **seca 360° wireless** devices with NEC II firmware from Build 320c/298n/290m.

b. The send/print key on the head slide of the **seca 285**/**seca 284** can be used as usual. For **seca 360° wireless** devices with NEC II firmware from Build 320c/298n/290m or higher, the send/print key can be used as a confirm key to send measured results to an EMR system.

c. Can be used after measurement for **seca 360° wireless** devices with NEC II firmware from Build 320c/298n/290m to delete the current height value and not to send.

► Observe the instructions for use of the seca measuring devices.

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- Inform your users about these functional limitations. To do so, use the quick reference “Measurement procedure” ➔ Annex: Quick reference for measurement procedure.

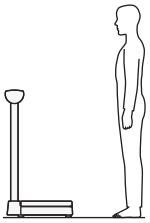
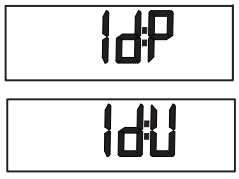
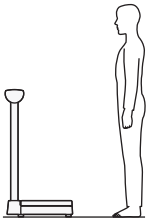
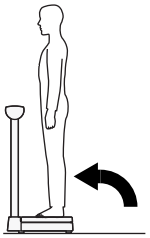
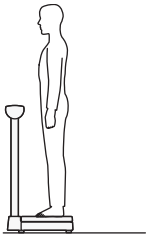
9.2 Workflow for measuring mode

To record measured values with seca measuring devices and to send to an EMR system, the procedure described in this section must be adhered to. Otherwise, the following faults may occur:

- Malfunction of individual devices
- Transmission of invalid measured values
- Incorrect assignment of measured values to patient files

- Observe the instructions for use of the seca measuring devices.
- Inform your users about this procedure. To do so, use the quick reference “Measurement procedure” ➔ Annex: Quick reference for measurement procedure.

NOTE
If desired in your institution, you can perform steps 2. and 3. in the opposite order.

No.	Workflow LED		Display	Patient	User
	seca 452	seca device[a]	seca device		
1.					• Ensure that the device is switched on • Ensure that Power and Network LEDs are green
2.					Scan patient/user IDs (according to **Device settings**[b])
3.					Ask patient to step onto the scale
4.					Wait until measured value is shown continuously

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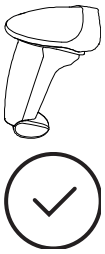
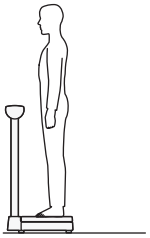
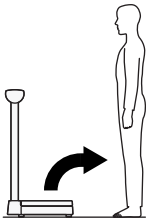
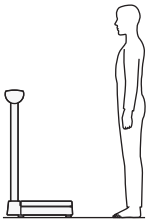
No.	Workflow LED		Display	Patient	User
	seca 452	seca device[a]	seca device		
5.					Scan Confirm barcode or press Confirm key on seca measuring device (if one of these settings was selected in **Device settings**)[c]
6.					• Wait until Workflow LED is green • Ask patient to step off the seca measuring device
7.					• Wait until Workflow LED goes out • Measured value remains shown in display • Device is ready for another measurement

a.When using devices with an internal interface module

b.IdU and IdP display only on devices with an internal interface module, for example **seca 336 i** or **seca 797** and on **seca 360° wireless** devices with NEC II firmware from Build 320c/298n/290m or higher

c.Confirm key only on devices with an internal interface module, for example **seca 336 i**. For **seca 360° wireless** devices with NEC II firmware from Build 320c/298n/290m or higher, use **send/print** key.

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10. HYGIENIC TREATMENT OF THE seca 452 INTERFACE MODULE

➔ Cleaning

➔ Disinfecting

➔ Sterilizing

WARNING!
Electric shock
The device is not de-energized when the on/off key is pressed and the display goes out. Use of fluids on the device may cause electric shock.

- Ensure that the device is switched off before performing any hygiene treatment.
- Disconnect the power supply connector before performing any hygiene treatment.
- Before each hygiene treatment, take the rechargeable battery out of the device (if present and removable).
- Ensure that no fluids penetrate the device.

NOTICE!
Damage to device
Inappropriate detergents and disinfectants may damage the sensitive surfaces of the device.

- Use only disinfectants free of chlorine and alcohol which are explicitly suitable for acrylic sheet and other sensitive surfaces (active ingredient: quaternary ammonium compounds, for example).
- Do not use caustic or abrasive detergents.
- Do not use organic solvents (e.g. white spirit or petroleum spirit).

10.1 Cleaning

- Use a soft cloth dampened with mild soapsuds to clean the surfaces of the device.

10.2 Disinfecting

1. Check that your disinfectant is suitable for sensitive surfaces and acrylic sheet.
2. Follow the instructions for use for the disinfectant.
3. Disinfect the device by moistening a soft cloth in disinfectant and wiping down the device.

10.3 Sterilizing

This device may not be sterilised.

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11. FUNCTION CHECK

► Perform a function check prior to each use.

A complete function check includes:

- visual inspection for mechanical damage
- checking the alignment of the device
- visual and function check of the display elements
- function check of all the controls shown in the section entitled “Overview”
- function check of optional accessories

If you notice any faults or deviations during the function check, first try to resolve the error with the aid of the section entitled “Troubleshooting” in this document.

CAUTION!
Personal injury
If you notice any faults or deviations during the function check which cannot be resolved with the aid of the section entitled “Troubleshooting” in this document, you may not use the device.

► Have the device repaired by seca Service or by an authorized service partner.

► Follow the section entitled “Servicing” in this document.

► Follow the section entitled “Servicing/verification” in this document.

12. SERVICING

The measuring technology of this device must be checked every two years. We recommend servicing the whole device as part of this check.

NOTICE!
Incorrect measurements as a result of poor servicing

► Have servicing and repairs carried out exclusively by seca Service or by an authorized service partner.

► You can find service partners in your area at www.seca.com or by sending an e-mail to service@seca.com.

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13. TROUBLESHOOTING

➔ Faults in the system
➔ Faults in measuring mode
➔ Faults when updating the firmware (Interface module)

13.1 Faults in the system

Fault	Cause	Remedy
seca connect 103 cannot be started (local installation only)	Server does not meet system requirements	Comply with system requirements ➔ System requirements
	Operating system does not meet the system requirements	
	SSL certificate unavailable	Provide the SSL certificate and activate use: 1. Provide SSL certificate as specified in your institution 2. Start the Setup Wizard and reinstall **seca 103 Admin Interface Service settings** ➔ Performing setup 3. Follow the on-screen instructions and activate the **Use SSL** checkbox.
		• Ensure that communication between the server and browser is secured by some other means
seca connect 103 cannot be opened	Port in firewall not enabled (local installation only)	➔ Configuring the firewall Check settings for all firewalls in the system
	Browser does not meet the system requirements	Comply with system requirements ➔ System requirements
Workflow settings do not appear in Add a device view	Firmware of the Interface module not up to date	Update the firmware of the Interface module
seca measuring device does not appear in "Device list" after the QR code is scanned	seca measuring device switched off	Switch on seca measuring device
	Scanner not correctly configured: Incompatible character set active	• Test scanner setting using test QR code ➔ QR code for scanner test (character set) • Correct scanner setting as described in the instructions for use for the scanner
	Scanner not compatible	Use compatible scanner: ➔ Optional accessories and spare parts
	Scanner defective	Replace scanner ➔ Optional accessories and spare parts
	MessageTimeout implausible	Modify settings: ➔ Changing the setting for a seca measuring device
	Port in firewall not enabled (local installation only)	• ➔ Configuring the firewall • Check settings for all firewalls in the system
	Settings in security program implausible (local installation only)	• ➔ Configuring the security program • Check settings for all security programs in the system

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Fault	Cause	Remedy
seca measuring device appears in the Device list as Offline or is not displayed in Device list	seca measuring device switched off	Switch on seca measuring device
	LAN cable not connected	Connect LAN cable
	Network socket not patched	Patch network socket
	WiFi connection disconnected	• Check availability of WiFi network • Reconnect seca measuring device - Switch off the device - ➔ Deleting a device - ➔ Adding a seca measuring device
	Port in firewall not (no longer) enabled (local installation only)	• ➔ Configuring the firewall • Check settings for all firewalls in the system
	seca measuring device defective	• Use replacement device • Have device repaired
	MessageTimeout parameter is set to a low value	• Check whether the setting for **Message-Timeout** is plausible and set the value higher if necessary
	"seca 103" service is defective (local installation only)	• Restart the "seca 103" service (in Windows® under "Task Manager\Services")
seca measuring device appears in the Device list as Offline and as Online	seca measuring device has been given a new IP address	Delete entry of device shown as **Offline** from the **Device list**
Data are not transmitted to EMR system or are transmitted with errors	Activate **seca 360° wireless** function on seca measuring device	• Deactivate **seca 360° wireless** • Follow instructions for use for the seca measuring device
	Ultrasound height measurement (device-dependent) on seca measuring device activated	• Deactivate ultrasound height measurement • Follow instructions for use for the seca measuring device
	Autohold deactivated on seca measuring device	• Activate **Autohold** • Follow instructions for use for the seca measuring device
	EMR system: Interface settings implausible	• Modify interface settings • Request support from the manufacturer of the EMR system
	seca connect 103: Settings in integration module implausible	• Modify integration module settings • Request support from the manufacturer of the EMR system
	seca connect 103: Incorrect integration module selected or none at all	• Select compatible integration module ➔ Administering integration modules
	Port in firewall not enabled (local installation only)	• ➔ Configuring the firewall • Check settings for all firewalls in the system
	Settings in security program implausible (local installation only)	• ➔ Configuring the security program • Check settings for all security programs in the system
	After change to integration module: connected seca measuring devices have not restarted	Restart server

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Fault	Cause	Remedy
No acoustic Workflow signals on the device	**seca 360° wireless** device (NEC II electronics) with older firmware status in use	Function only available on **seca 360° wireless** devices (NEC II electronics) with firmware Build 320c/ 298n/290m or higher, existing devices cannot be updated
	Firmware of the **seca 452** external Interface module out of date	Update the firmware of the **seca 452** external Interface module ➔ Interface module: Updating the firmware
	Acoustic signals (**SoundEnabled**) deactivated for this device in the **seca connect 103** software	Acoustic signals (activate) ➔ Changing the setting for a seca measuring device

13.2 Faults in measuring mode

On seca measuring devices with an Internal Interface module, you can find further information on visual error messages and display messages in the instructions for use for the seca measuring device.

The messages in the display of the seca measuring device are independent of whether the **seca 452** Interface module or an internal Interface module is used.

Visual error message		Display	Cause	Remedy
seca 452	**seca device**[a]	**seca device**		
		**Measured result**	Measured results ready for data transmission, but cannot be transmitted.	• Ask patient to step off the seca measuring device • Wait until Workflow LED goes out • Repeat measurement procedure
		**Er:8:91**	No connection to **seca connect 103** software	➔ seca measuring device appears in the Device list as Offline or is not displayed in Device list
		**Er:8:92**	Barcode not detected • Barcode mechanically damaged • ID not present in EMR system • Transmission error	• Create new barcode • Check ID • Check network connection • Check scanner settings ➔ QR code for scanner test (character set) • Check configuration of the integration module
		**Er:8:93**	No connection to EMR system	➔ Data are not transmitted to EMR system or are transmitted with errors
-	-	**Er:8:94**	An error occurred during the measurement procedure: IDs were scanned at the wrong time	• Cancel current action • Restart measurement procedure and observe proper sequence • If necessary, configure settings for intended procedure
		**Er:8:95**	Hardware error (for example, write error in the memory, hardware defect)	• Cancel current action • Restart measurement procedure • If the problem persists, contact seca Service
		**Er:8:96**	Error in the measurement procedure (for example, barcodes were scanned, although this is not provided by the settings)	• End current action • Restart measurement procedure and observe proper sequence • If necessary, configure settings for intended procedure

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Visual error message		Display	Cause	Remedy
seca 452	**seca device**[a]	**seca device**		
		-	No connection to the network (LAN/WiFi)	➔ seca measuring device appears in the Device list as Offline or is not displayed in Device list

a. Devices with an internal Interface module, exception: **seca mVSA 535** shows plaintext error messages, no Workflow LED

13.3 Faults when updating the firmware (Interface module)

Fault	Cause	Remedy
In Device list: Update status column not present	**Device updater** dialog field not active	In **Device manager**, select **Device updater** from the dropdown menu
No information about the imminent firmware update is displayed in the Update dialog field	Update package in incorrect folder (local installation only)	File update package here: C:\ProgramData\seca\seca 103\UpdatePackage
	Key file in incorrect folder (local installation only)	Store key file here: C:\Program Files (x86)\seca\seca 103
Update status: 	Error during update process	• Check device network settings • Check device status at setup location

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14. TECHNICAL DATA

➔ seca connect 103 software
➔ seca 452 Interface module
➔ Technical modifications

14.1 seca connect 103 software

seca connect 103 software	
Medical device in accordance with Regulation (EU) 2017/745	Class I
Medical software (EN 62304)	Class B

14.2 seca 452 Interface module

seca 452 Interface module	
Dimensions • Depth • Width • Height	 91 mm 115 mm 28 mm
Net weight	approx. 150 g
Ambient conditions, operation • Temperature • Air pressure • Humidity	 +10 °C to +40 °C (50 °F to 104 °F) 700 hPa – 1060 hPa 30 % – 80 %, no condensation
Ambient conditions, storage • Temperature • Air pressure • Humidity	 -10 °C to +65 °C (14 °F to 149 °F) 700 hPa – 1060 hPa 15 % – 95 %, no condensation
Ambient conditions, transport • Temperature • Air pressure • Humidity	 -10 °C to +65 °C (14 °F to 149 °F) 700 hPa – 1060 hPa 15 % – 95 %, no condensation
Setup location, maximum altitude above MSL	3000 m
Power supply • Type • Supply voltage • Maximum current consumption • Power supply voltage • Power supply frequency	 External power pack 12 V ⎓ 500 mA 100 V ~ – 240 V ~ 50 Hz – 60 Hz
Power consumption	< 6 W
Medical device in accordance with Regulation (EU) 2017/745	Class I
EN 60601-1: protection class:	II
EN 60601-1: Medical electrical device, Type B	
Type of protection	IP20
Duty cycle	Continuous duty
Storage capacity (number of data records)	at least 10,000
URL **seca web server**	**192.168.4.1**
Interfaces	1 x USB 2.0 (max. 500 mA) LAN (10/100 Base-T) WiFi (2.4 GHz)

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14.3 Technical modifications

➔ Software/firmware (Release 1.1)

➔ Software/firmware (Release 1.2)

➔ Software/firmware (Release 2.0)

➔ Software/firmware (Release 2.1)

➔ Software/firmware (Release 2.2)

➔ Software/firmware (Release 3.0)

➔ Software/firmware (Release 3.1)

➔ Software/firmware (Release 3.2)

Software/firmware (Release 1.1)

The package for Release 1.1 contains the following components which come in two separate packages:

Product	Software component
Software: **seca connect 103**	"Build 1951": Software version 1.1.3.1951
Interface module: • External: **seca 452** • Internal: e.g. **seca 336 i**	Release date: March 2019 • Module firmware: 08-06-15-337-A Build 143 (Mar 1 2019) • WiFi firmware: 08-06-15-352_ESP8266 - AT version: 1.7.0.0 - SDK version: 3.0.0 - WPA2 Enterpr.: V1.1: PSK, PEAP Radius

Information on how to install the components can be found here:

- ➔ Interface module: Updating the firmware

Features of Release 1.1	
Topic	**Feature**
Data security	• https: SSL protocol is supported • WiFi: Security protocol WPA2-PEAP-RADIUS is supported
Firmware update for Interface module	• Query firmware status of the Interface module • Display firmware status in the **Device list** • Update individual Interface modules or all those connected • Update Interface module immediately or specify schedule • Mouseover for update status
Device/workflow settings	• Assign **OrgID** for **Cerner VitalsLink** • **PatientRequired** • **UserRequired** • **ConfirmRequired** • **ID mandatory** • **WeightRequired** • **HeightRequired** • Activate/deactivate acoustic signals of the measuring device (measurement procedure successful/ unsuccessful) • Display device error code in **seca connect 103** as well (previously only on the device) • Check scanner configuration automatically
Cerner VitalsLink module	Set up several **OrgID**s

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Software/firmware (Release 1.2)

The package for Release 1.2 contains the following components which come in two separate packages:

Product	Software component
Software: **seca connect 103**	"Build 2356": Software version 1.2.21.2356
Interface module: • External: **seca 452** • Internal: e.g. **seca 336 i**	Release date: April 2019 • Module firmware: 08-06-15-337-B Build 20 (Apr 10 2019) • WiFi firmware: - AT version: 1.7.0.0 - SDK version: 3.0.0 - WPA2 Enterpr.: V1.2: PSK, PEAP Radius, TLS

Information on how to install the components can be found here:

- ➔ Interface module: Updating the firmware

Features of Release 1.2	
Topic	**Feature**
Data security	• WiFi: Security protocol WPA2-PEAP-TLS is supported
Health Level 7**HL7Module** integration module	Connection to the Health Level 7 integration module is supported (supported versions: 2.5, 2.6)

Software/firmware (Release 2.0)

The package for Release 2.0 contains the following components:

Product	Software component
Software: **seca connect 103**	Software version 2.0 Release date: November 2019
Interface module: • External: **seca 452** • Internal: e.g. **seca 655**	Release date: November 2019 • Module firmware: 08-06-15-337-C Build 565 • WiFi firmware: - AT version: 1.7.0.0 - SDK version: 3.0.0 - WPA2 Enterpr.: V1.2: PSK, PEAP Radius, TLS

Information on how to install the components can be found here:

- ➔ Interface module: Updating the firmware

Features of Release 2.0	
Topic	**Feature**
Installation	Installer revised, sequential installation of following services: • seca_GPX_Device_Communicator • seca_Message_Gateway • seca_Integration_Service • seca_Scloud_Bridge_Service • seca_103_Admin_Interface_Service
Connectivity	New column in the **Device list**: Network Connection LAN/WiFi connection types are displayed
Firmware updates, Interface modules	**Schedule** function no longer applicable
Compatible devices	The following devices are now supported: • seca medical Body Composition Analyzer: **seca mBCA 555**, **seca mBCA 554**, **seca mBCA 552** • seca medical Vital Signs Analyzer: **seca mVSA 535** with firmware Build No.1043 and higher ➔ Compatible seca products
Compatible software	**seca analytics 125** is supported ➔ Compatible seca products

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Software/firmware (Release 2.1)

The package for Release 2.1 contains the following components:

Product	Software component
Software: **seca connect 103**	Software version 2.1 Release date: June 2020
Interface module: • External: **seca 452** • Internal: e.g. **seca 655**	Release date: November 2019 • Module firmware: 08-06-15-337-C Build 565 • WiFi firmware: - AT version: 1.7.0.0 - SDK version: 3.0.0 - WPA2 Enterpr.: V1.2: PSK, PEAP Radius, TLS

Information on how to install the components can be found here:

- ➔ Interface module: Updating the firmware

Features of Release 2.1	
Topic	**Feature**
Installation	WiFi connection: SSIDs containing spaces are supported
Connectivity	HL7 connection: mSQL database available for interrogating patient master data
Firmware updates, Interface modules	No changes
Compatible devices	No changes
Compatible software	No changes

Software/firmware (Release 2.2)

The package for Release 2.2 contains the following components:

Product	Software component
Software: **seca connect 103**	Software version 2.2 Release date: September 2020
Interface module: • External: **seca 452** • Internal: e.g. **seca 655**	Release date: September 2020 • Module firmware: 08-06-15-337-D Build 615 • WiFi firmware: - AT version: 1.7.0.0 - SDK version: 3.0.0 - WPA2 Enterpr.: V1.2: PSK, PEAP Radius, TLS

Information on how to install the components can be found here:

- ➔ Interface module: Updating the firmware

Features of Release 2.2	
Topic	**Feature**
Installation	Installer revised • **Setup Type** can be selected: **Basic**, **Expert** • **seca SCloud bridge Service Settings**: **Browse** function available for .pem file • “Restart computer now or later?” query once installation complete
Connectivity	User and patient data: • LDAP is supported • Extract user and patient IDs from complex QR/RFID structures • Capsule technologies: - Supported: seca scales, seca measuring rods - Not supported: seca mVSAs, seca mBCAs
Firmware updates, Interface modules	Print measured results via P2P (WiFi/LAN) connection
Compatible devices	No changes
Compatible software	No changes

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Software/firmware (Release 3.0)

Release 3.0 contains the following components:

Product	Software component
Software: **seca connect 103**	Software version 3.0 Release date: May 2021
Interface module: • External: **seca 452** • Internal: e.g. **seca 655**	Release date: February 2021 • Module firmware: 08-06-337-E Build 10 • WiFi firmware: - AT version: 1.7.0.0 - SDK version: 3.0.0 - WPA2 Enterpr.: V1.2: PSK, PEAP Radius, TLS

Information on how to install the components can be found here:

- **seca connect 103** software: no manual installation required
- ➔ Interface module: Updating the firmware

NOTE
In order to be able to use the features of Version 3.0 of the software, you need to update the firmware of the Interface module.

Features of Release 3.0	
Topic	**Feature**
Operating form of the software	• Software available as cloud application • Version 3.0 not available as a local installation
Connectivity	Connection to **seca analytics 125** integration module for cloud application
Administration	Tenant management: • Tenants can be created in every instance of the software • Possible to assign the connected measuring devices to a tenant

Software/firmware (Release 3.1)

Release 3.1 contains the following components:

Product	Software component
Software: **seca connect 103**	Software version 3.1 Release date: January 2022
Interface module: • External: **seca 452** • Internal: e.g. **seca 655**	Release date: January 2022 • Module firmware: 08-06-15-337-F(Build 15) Dec 8 2021 • WiFi firmware: - AT version: 1.7.0.0 - SDK version: 3.0.0 - WPA2 Enterpr.: V1.2: PSK, PEAP Radius, TLS

Information on how to install the components can be found here:

- ➔ Interface module: Updating the firmware

NOTE
In order to be able to use the features of Version 3.1 of the software, you need to update the firmware or software of the devices.

Features of Release 3.1	
Topic	**Feature**
Administration	• Administration of user accounts • Assignment of user roles
Configuration for measuring device	• Upload of configurations to **seca mVSA 535** measuring device • Administration of configurations
Installation	Simplified installation process

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Software/firmware (Release 3.2)

Release 3.2 contains the following components:

Product	Software component
Software: **seca connect 103**	Software version 3.2 Release date: July 2022
Software: **seca mVSA 535**	Software Version 2.1, from Build 1522 Release date: July 2022

Information on how to install the components can be found here:

- Instructions for use for **seca mVSA 535**

NOTE

In order to be able to use the features of Version 3.2 of the software, you need to update the software for **seca mVSA 535**.

Features of Release 3.2	
Topic	**Feature**
Connectivity	Connection to **PointClickCare** integration module
Configuration for measuring device	Configuration for **seca mVSA 535** measuring device: Activate/deactivate the **SearchPatientByName** function

Measuring devices (NEC II firmware with Build 320c/298n/290m and higher)

Firmware for devices with NEC II electronics/with **seca 360° wireless** module has been updated. Device characteristics have been adapted to suit products with an internal Interface module (e.g. **seca 336 i**).

NOTE

- Updated device firmware is only available on new devices. Existing devices **cannot** be updated.
- Requirement for using the new features: **seca connect 103** software and **seca 452** external Interface module with release package 1.1 and higher

NEC II firmware features with Build 320c/298n/290m and higher	
Topic	**Feature**
Firmware for devices with NEC II electronics (**seca 360° wireless** devices)	• Use the send/print key as a confirm key to send measured results to the EMR system • Automatic activation of the hold function at the start of a measurement procedure • Clear key deletes height value • Device display shows “IdU” or “IdP” following successful scan of user ID or patient ID • Acoustic workflow signals (measurement procedure successful/unsuccessful) can be activated

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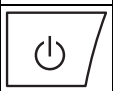
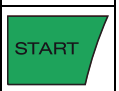
15. COMPATIBLE SECA PRODUCTS

The **seca connect 103**/**seca 452** interface module system currently supports the seca products mentioned in the table. Support of additional seca products is in preparation. Current information can be found at www.seca.com.

The system has limited downward compatibility with older device generations. For a quick check whether your seca measuring device is compatible, compare the keyboard design (for example, the Start key) of your device with the images in the table.

Device	From serial number	Connection to the seca connect 103 software	Quick check ☑	Quick check ☒
Baby scales				
seca 336 i **seca 333 i**	No restriction	Internal interface module		-
seca 757 **seca 727**	10000000034256 10000000034243	**seca 452** interface module		
Measuring stations				
seca 285/**seca 284** **seca 287**/**seca 286**	No restriction	**seca 452** interface module		-
seca 787 **seca 797**	No restriction	**seca 452** interface module Internal interface module		
Vital Signs Analyzer				
seca mVSA 535	From software Version 2.1, Build no. 1522	Internal interface module		-
Multifunctional scales				
seca 604	No restriction	**seca 496** interface box integration	-	-
seca 651 **seca 650**	No restriction	Internal interface module	-	-
seca 655 **seca 654**	No restriction	Internal interface module	-	-
seca 635 **seca 634**	10000000026211 10000000027487	**seca 452** interface module		
seca 645 **seca 644**	10000000027015 10000000027016			
seca 657 **seca 656**	10000000021683 10000000026289			
seca 665 **seca 664**	10000000022821 10000000027014			
seca 677 **seca 676**	10000000020483 10000000024369			
seca 675 **seca 674**	10000000026776 10000000023806			
seca 685 **seca 684**	10000000017288 10000000017495			
Column scales				
seca 704 **seca 703**[a]	5704209100721 5703209102764	**seca 452** interface module		

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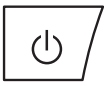
Device	From serial number	Connection to the seca connect 103 software	Quick check	
			☑	☒
Chair scales[a.]				
seca 954 (1309007) **seca 954** (1309377)	10000000005919 10000000011074	**seca 452** interface module		
seca 959 (7021002) **seca 959** (7021092)	10000000014301 10000000014426			
seca 963	10000000045451			

a.**seca 452** interface module can only be retrofitted by authorized service technicians

16. OPTIONAL ACCESSORIES AND SPARE PARTS

Optional accessories and spare parts	Article number
Scanner (medical device): • Honeywell Xenon 1900H (2D) • Datalogic Gryphon I (GD4430 HC (2D)	Cannot be ordered through seca
Carts: • **seca 402** Baby Scale Cart • **seca 403** Baby Scale Cart	402 0000 009 403 0000 009
Mobile power supply: • **seca 454** for compatible scales • **seca 454** for compatible baby scales on seca Baby Scale Cart	454 0000 009 454 0010 009

17. DISPOSAL

➔ Devices

➔ Batteries/rechargeable batteries

17.1 Devices

Do not dispose of the device with household waste. The device must be disposed of properly as electronic waste. Comply with the national provisions applicable in your country. For further information contact our service department at:

service@seca.com

17.2 Batteries/rechargeable batteries

Spent (rechargeable) batteries should not be discarded with household waste, regardless of whether they contain harmful substances or not. As a consumer you are obliged by law to dispose of (rechargeable) batteries via the collection points set up by the municipal authorities or the retail sector. Only discard (rechargeable) batteries when fully discharged.

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18. WARRANTY

➔ Software
➔ Device

18.1 Software

Please note that this software is subject to warranty restrictions which may arise in conjunction with the license, for example. The warranty restrictions can be called up at www.seca.com.

18.2 Device

We offer a two-year warranty from the date of delivery for defects attributable to faulty material or poor workmanship. This excludes all moveable parts such as (rechargeable) batteries, cables, power supply units, etc. Defects which are covered by the warranty shall be rectified free of charge for customers on production of the sales receipt. No further claims can be accepted. The costs of shipment in both directions shall be borne by the customer where the device is not located at the customer's premises. In the event of any damage during shipment warranty claims can only be asserted where the complete original packaging was used for shipment and the device was secured inside in the same manner as in the original packaging. You should therefore keep all packaging.

The warranty shall become null and void where the device is opened by persons not expressly authorised to do so by seca.

In the event of a warranty issue, please contact your local seca office or the dealer from whom you ordered the product.

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19. DECLARATIONS OF CONFORMITY

➔ For Europe
➔ For USA and Canada

19.1 For Europe

CE

seca gmbh & co. kg hereby declares that the product meets the terms of the applicable European directives. The unabridged declaration of conformity can be found at: www.seca.com.

19.2 For USA and Canada

seca 452

WiFi Module:
FCC ID: 2AC7Z-ESPWROOM02
IC ID: 21098-ESPWROOM02

FC

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. 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 device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions:
- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

NOTE
Changes or modifications made to this equipment not expressly approved by seca may void the FCC authorization to operate this equipment.

NOTE
Radiofrequency radiation exposure information:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 1 m between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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20. ANNEX: QUICK REFERENCE FOR MEASUREMENT PROCEDURE

20.1 Quick reference for seca devices with external seca 452 interface module

Quick reference: Measurement procedure for network integrated seca devices
Devices using external interface module seca 452

seca Precision for health

Device identification	
Device name:	
Device type:	
Device location:	
Server address (seca connect 103):	
Port:	

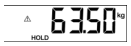
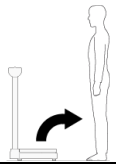
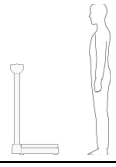
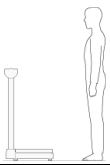
Device settings	
☐	Scan patient ID
☐	Scan User ID
☐	Confirm measurement at device
☐	ID mandatory
☐	Weight required
☐	Height required
☐	Beep signals

Use these features as indicated only:
Notice: Failure to use these features as indicated below will result in invalid values being transferred to the EMR.

Applicable to this device?	Feature		Use this feature?
☐	**hold** key *		Do not use!
☐	**bmi** key		Do not use!
☐	**send/print** **		Do not use!
☐	**tare**		Deactivate feature after each measurement to clear **tare** value from memory
☐	**clear** key ***		Press key **before** each measurement to clear obsolete length value from memory
☐	**BMIF**		Deactivate feature before confirming measurement

* **hold** key can be used for seca 333 i, seca 336 i, seca 797 and seca 360° devices with NEC II firmware from Build 320c/298n/290m.
** Use **send** key on head slide of seca 285/284 as usual. For seca 360° devices with NEC II firmware Build 320c/298n/290m or higher, the **send/print** button can be used as confirm key to send measurement results to an EMR system.
*** **clear** key an be used after the measurement for seca 360° devices with NEC II firmware from Build 320c/298n/290m, to delete the current height value and not to send.

What to do if….

Interface module seca 452	seca Device	Patient	User
 Workflow LEDs solid red			Data transmission error • Ask patient to step off device. • Wait till workflow LEDs go out. • Go through COMPLETE measurement procedure.
 Network LED flashing green			Establishing network connection. • Wait till network LED ist solid green. • Then start measurement procedure.
 Network or Power LED flashing or solid red			Malfunction, contact administrator.

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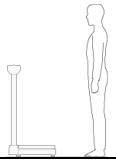
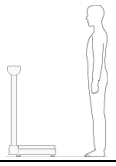
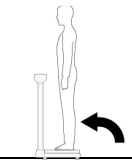
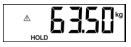
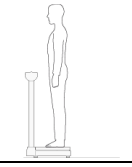
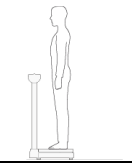
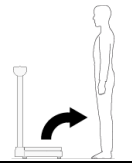
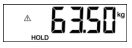
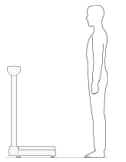
Measurement procedure

Integration module seca 452	seca Device	Patient	User
 Network or Power LED solid green			• Make sure device is switched on. • Make sure power and network LEDs are solid green.
 Workflow LEDs solid green			Enter ID(s) as stated in "Device settings".
 Network or Power LED solid green			Ask patient to step on device.
 Workflow LEDs solid green			Wait till display shows result permanently.
 Workflow LEDs flashing green			Scan Confirm bar code if device is set accordingly (see "Device settings").
 Workflow LEDs solid green for approx. 5 seconds			• Wait till workflow LED is solid green. • Ask patient to step off device.
 Network or Power LED solid green			• Wait till workflow LED goes out. • Measuring result remains in display. • Device is ready for new measurement procedure.
NOTE If result seems implausible go through COMPLETE measurement procedure again.			

20.2 Quick reference for seca devices with internal interface module

Quick reference: Measurement procedure for network integrated seca devices
Devices with internal interface module

Device identification	
Device name:	
Device type:	
Device location:	
Server address (seca connect 103):	
Port:	

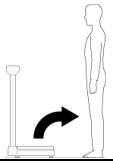
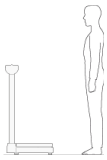
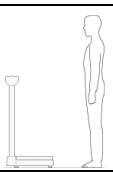
Device settings	
☐	Scan patient ID
☐	Scan User ID
☐	Confirm measurement at device
☐	ID mandatory
☐	Weight required
☐	Height required
☐	Bioimpedance data required
☐	Waist circumference required
☐	Beep signals

Use these features as indicated only:
Notice: Failure to use these features as indicated below will result in invalid values being transferred to the EMR.

Applicable to this device?	Feature		Use this feature?
☐	**hold** key *		Do not use!
☐	**bmi** key		Do not use!
☐	**send/print** **		Do not use!
☐	**tare**		Deactivate feature after each measurement to clear **tare** value from memory
☐	**clear** key ***		Press key **before** each measurement to clear obsolete length value from memory
☐	**BMIF**		Deactivate feature before confirming measurement

* **hold** key can be used for seca 333 i, seca 336 i, seca 797 and seca 360° devices with NEC II firmware from Build 320c/298n/290m.
** Use **send** key on head slide of seca 285/284 as usual. For seca 360° devices with NEC II firmware Build 320c/298n/290m or higher, the **send/print** button can be used as confirm key to send measurement results to an EMR system.
*** **clear** key an be used after the measurement for seca 360° devices with NEC II firmware from Build 320c/298n/290m, to delete the current height value and not to send.

What to do if….

LED indicators	Display	Patient	User
Workflow LEDs solid red			Data transmission error • Ask patient to step off device. • Wait till workflow LEDs go out. • Go through COMPLETE measurement procedure.
 Network LED flashing green			Establishing network connection. • Wait till network LED ist solid green. • Then start measurement procedure.
 Network or Power LED flashing or solid red			Malfunction, contact administrator.

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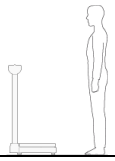
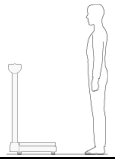
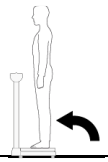
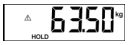
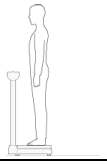
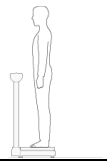
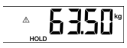
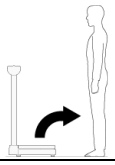
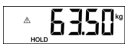
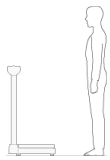
Measurement procedure

LED indicators	seca Device	Patient	User
1.  Network or Power LED solid green			• Make sure device is switched on. • Make sure power and network LEDs are solid green.
2.  Workflow LEDs solid green			Enter ID(s) as stated in "Device settings".
3.  Network or Power LED solid green			Ask patient to step on device.
4.  Workflow LEDs solid green			Wait till display shows result permanently.
5.  Workflow LEDs flashing green			Scan Confirm bar code if device is set accordingly (see "Device settings").
6.  Workflow LEDs solid green for approx. 5 seconds			• Wait till workflow LED is solid green. • Ask patient to step off device.
7.  Network or Power LED solid green			• Wait till workflow LED goes out. • Measuring result remains in display. • Device is ready for new measurement procedure.
NOTE : If result seems implausible go through COMPLETE measurement procedure again.			

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FOR SERVICE TECHNICIANS: SERVICING AND REPAIRING THE SYSTEM

➔ Retrofitting 703 column scales

➔ Retrofitting 959/954/963 chair scales

➔ For administrators: Setting up and operating the system

1. ABOUT THIS DOCUMENT

NOTE

- The topics described in this part of the user documentation are exclusively intended for seca trained service technicians.
- Observe the information for administrators ➔ For administrators: Setting up and operating the system.

2. RETROFITTING 703 COLUMN SCALES

➔ Preparing the scale

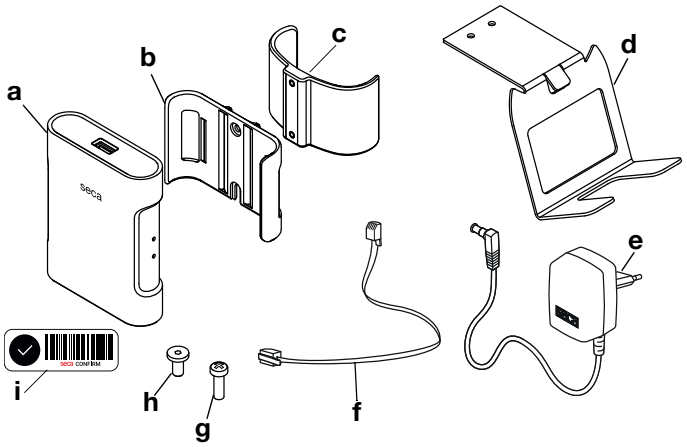
➔ Fitting the seca 452 interface module

➔ Fitting the scanner bracket

➔ Connecting a seca 452 interface module

➔ Performing final work

You need the following parts of **seca 452**, product no. 452 0050 009:



Item	Component	Pcs.
a	**seca 452** interface module	1
b	Bracket	1
c	Column bracket	1
d	Scanner bracket	1
e	Plug-in power supply unit	1
f	Connecting cable, long	1
g	Cross-head screw	2
h	Hex head socket screw	2
i	Label with Confirm barcode	1

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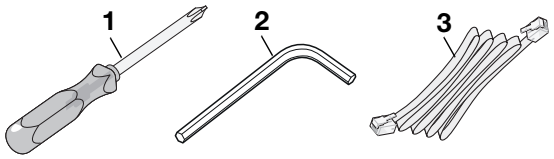
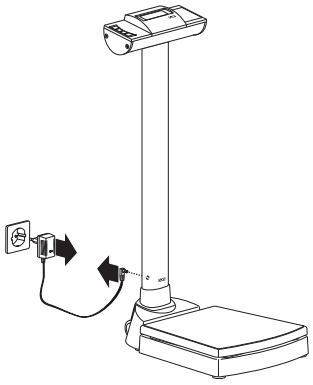
Depending on the installation and connection version, you may need the following tools (not included in the scope of delivery):



Item	Component	Size
1	Cross-head screwdriver	PH 1
2	Hex socket wrench	Size 4.0
3	LAN cable	n/a

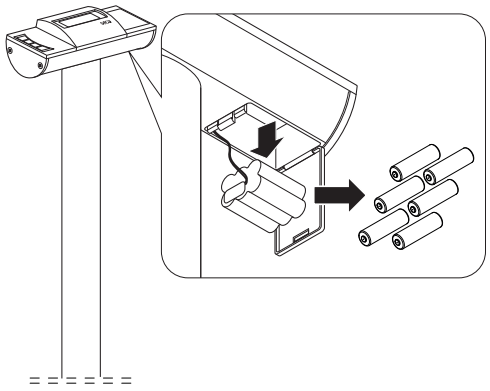
2.1 Preparing the scale

1. Clean and disinfect the scale as described in the respective instructions for use.
2. Switch off the scale.
3. Disconnect the plug-in power supply unit from the power supply socket.
4. Pull the power cable out of the scale.



NOTE
After the retrofit, the scale is supplied with power via the **seca 452** interface module.

5. Remove the batteries:
   a) Press the latch of the battery compartment
   b) Open the lid of the battery compartment
   c) Remove batteries from the battery holder
   d) Put battery holder back and close lid again



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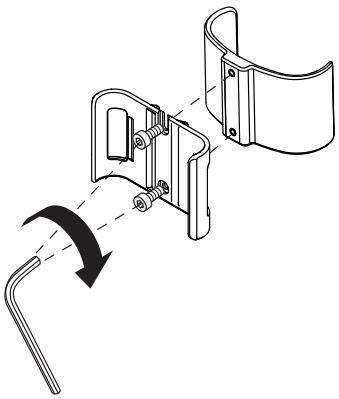
6. Store the plug-in power supply unit and the batteries or dispose of them properly (➔ Disposal).

2.2 Fitting the seca 452 interface module

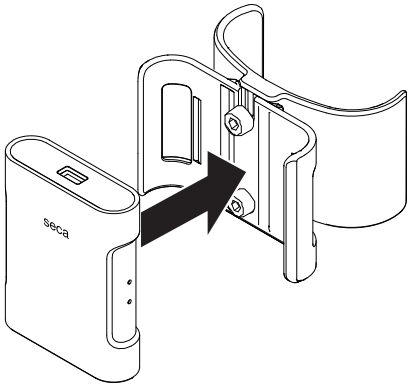
1. Screw the bracket to the column bracket with two hex head socket screws.



2. Press the column bracket onto the column at the height of the power supply connection.

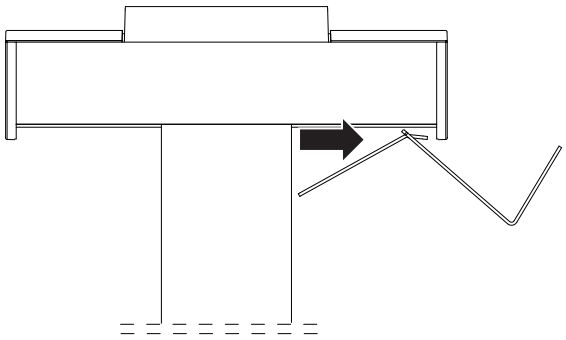
NOTE
The power supply connection is no longer needed, the column bracket can completely cover the power supply connection.

3. Press the **seca 452** interface module into the bracket.



2.3 Fitting the scanner bracket

1. Hook the scanner bracket to the desired side part of the display housing.



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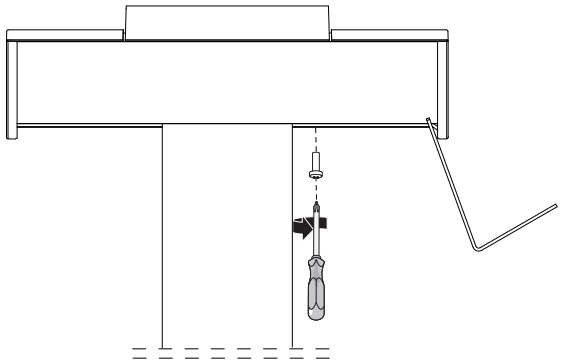
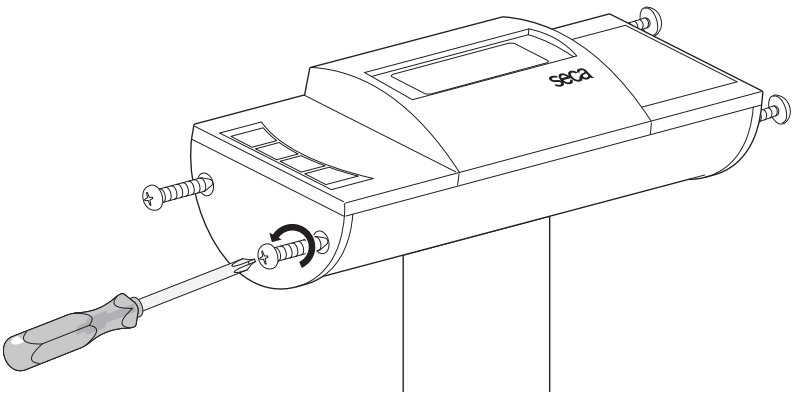
2. Screw the scanner bracket to the bottom of the display housing with two cross-head screws.



2.4 Connecting a seca 452 interface module

1. Remove the display housing of the scale:
   a) Remove seca quality seal on side cap

   b) Loosen screws on both side caps



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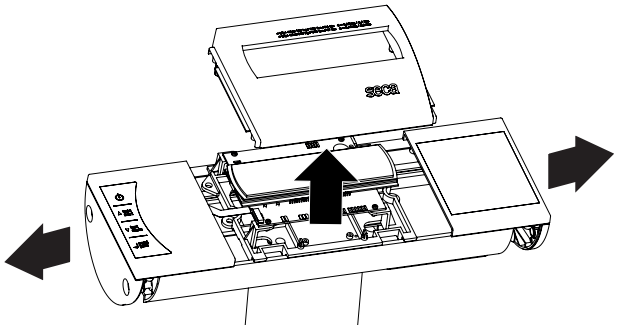
c) Push the right and left parts of the housing outward somewhat

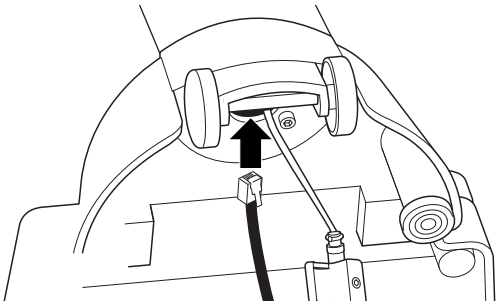
d) Remove display cover



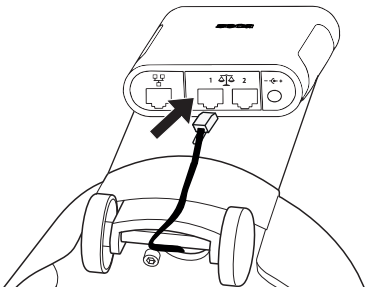
2. Connect the scale to the **seca 452** interface module:

a) Carefully tilt scale so that the underneath of the scale is accessible

b) Thread connecting cable into the column from below and push upward



c) Connect the lower end of the connecting cable to interface 1 of the **seca 452** interface module



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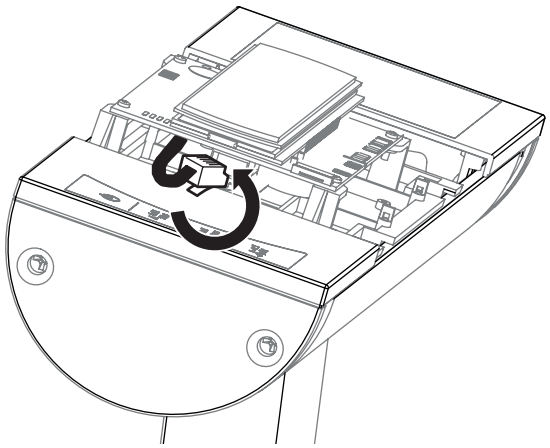
d) Position the scale upright

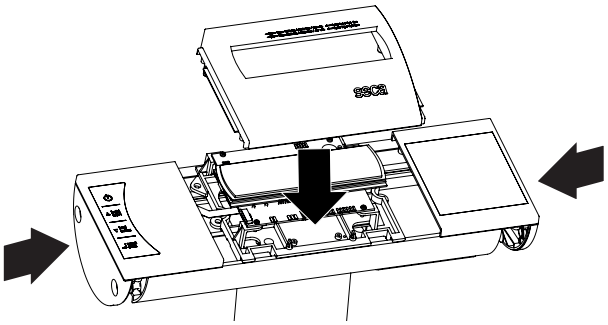
e) Pull the connecting cable out from under the display and connect it to the display electronics



3. Fit the display housing of the scale:

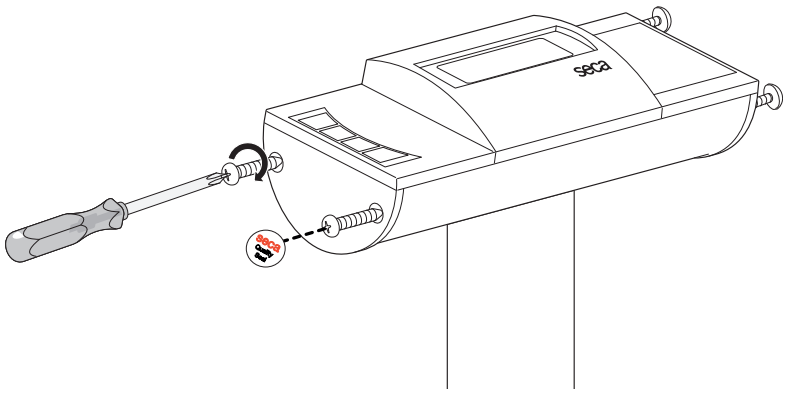
a) Put on display cover

b) Push the right and left parts of the housing inward



c) Tighten screws on side caps

d) Renew seca quality seal



You have the following options for continuing:

- For communication via LAN, continue at step 4.
- For communication via WiFi, continue at step 5.

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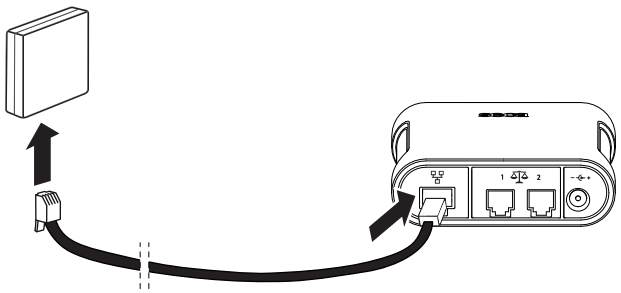
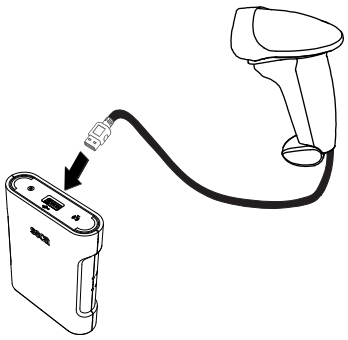
4. Connect a LAN cable to the **seca 452** interface module:
   a) Connect the LAN cable to the LAN interface of the **seca 452** interface module
   b) Connect the LAN cable to the network socket



NOTICE!
Malfunction caused by an incompatible scanner
Incompatible scanners can lead to faulty data transmission or system malfunction.

- Only use scanners that are listed in the section ➔ Optional accessories and spare parts.

5. Connect a scanner to the **seca 452** interface module:
   a) Connect the scanner cable to the USB interface of the **seca 452** interface module
   b) Attach the scanner to the scanner bracket



6. Apply the label with the Confirm barcode to a place you can reach easily with the scanner.

NOTICE!
Damage to device due to incorrect power supply unit
The plug-in power supply unit of the scale is not suitable for operation with the **seca 452** interface module.

- Only use the plug-in power supply unit included in the scope of delivery of **seca 452** (product no. 452 0050 009).

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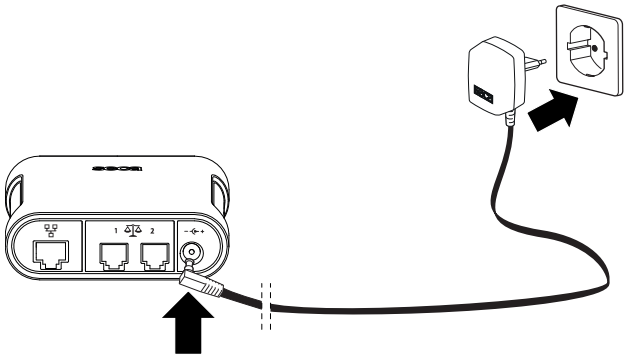
7. Connect the plug-in power supply unit to the **seca 452** interface module:
   a) Connect the power cable to the power supply connection of the **seca 452** interface module
   b) Insert the plug-in power supply unit into a power supply socket



8. Perform the necessary final work ➔ Performing final work.

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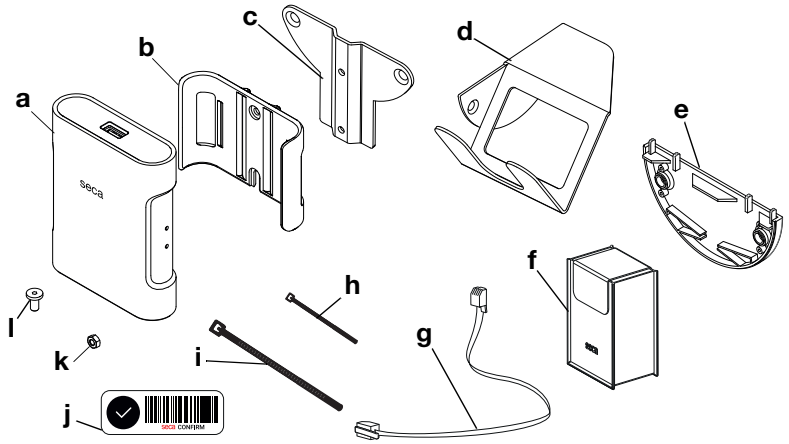
3. RETROFITTING 959/954/963 CHAIR SCALES

NOTE
This fitting variant is for use with the **seca 454** mobile power supply: Instructions for fitting the parts for **seca 454** (product no. 454 0000 009) can be found in the Product Description included with the product.

You need the following parts of **seca 452**, product no. 452 0030 009:



Item	Component	Pcs.
a	**seca 452** interface module	1
b	Bracket	1
c	Adapter plate	1
d	Scanner bracket	1
e	Side cap	1
f	**seca 471** bag	2
g	Connecting cable	1
h	Cable tie, small	1
i	Cable tie, large	5
j	Label with Confirm barcode	1
k	Nut	2
l	Hex head socket screw	2

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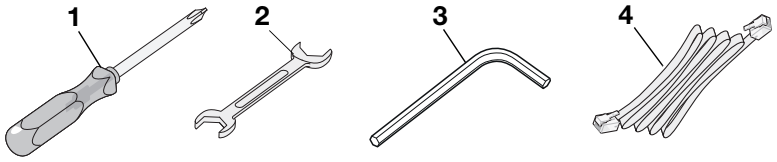
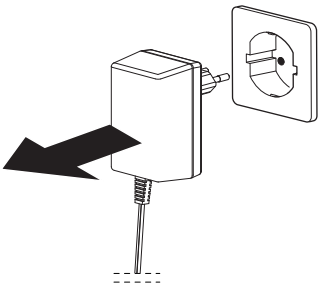
Depending on the installation and connection version, you may need the following tools (not included in the scope of delivery):



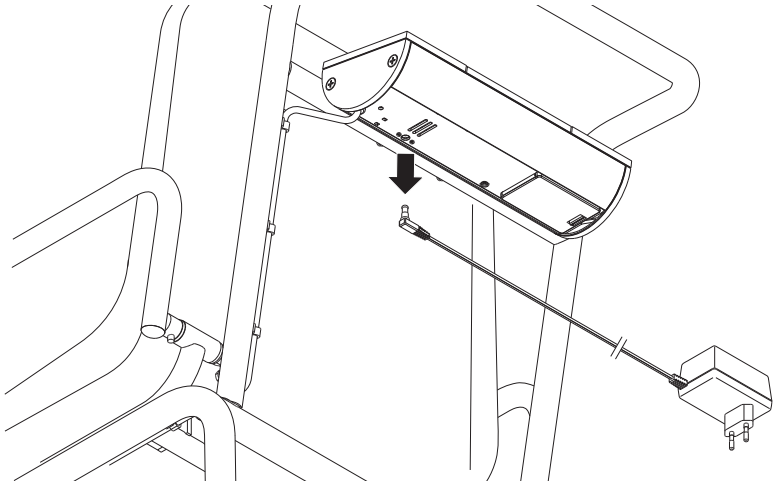
Item	Component	Size
1	Cross-head screwdriver	PH 1
2	Wrench	Size 7
3	Hex socket wrench	Size 2.5
4	LAN cable	n/a

3.1 Preparing the scale

1. Clean and disinfect the scale as described in the respective instructions for use.
2. Switch off the scale.
3. Disconnect the plug-in power supply unit from the power supply socket.



4. Pull the power cable out of the scale.



NOTE
After the retrofit, the scale is supplied with power via the **seca 452** interface module.

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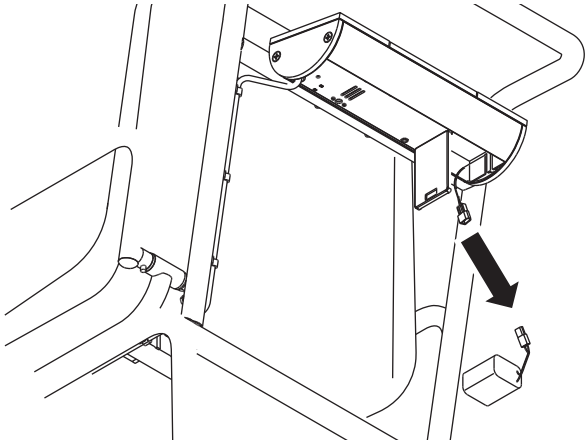
5. Remove the battery block:
   a) Press the latch of the battery compartment
   b) Open the lid of the battery compartment
   c) Disconnect the battery block from the connector cable
   d) Close the lid



6. Store the battery pack or dispose of it properly (➔ Disposal).

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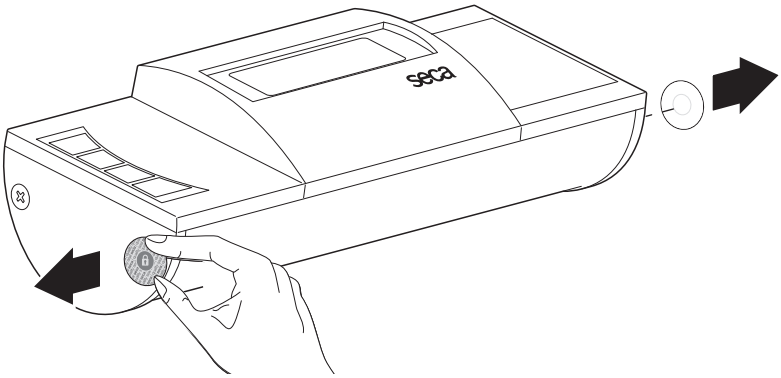
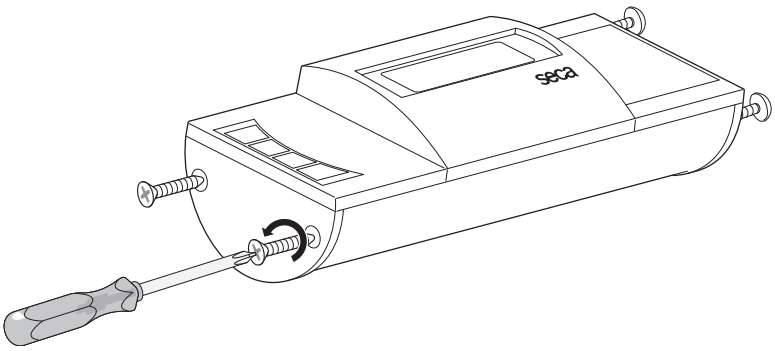
3.2 Connecting the connecting cable to the display unit

1. Open the display housing of the scale:
   a) Remove seca quality seal on both side caps

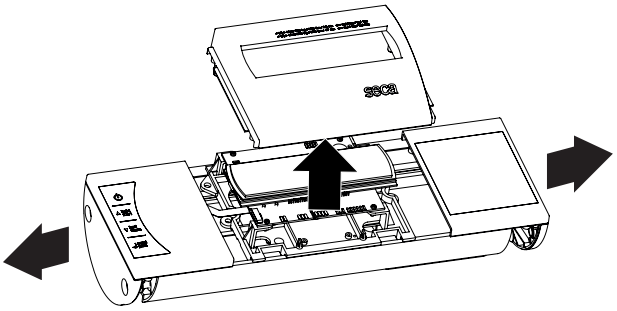
NOTE
If you remove a seca quality seal from verified models, observe the national regulations on verification.



   b) Loosen screws on both side caps



   c) Push the right and left parts of the housing outward somewhat
   d) Remove display cover



NOTICE!
Malfunction due to error in installation
If you remove the left-hand part of the housing with a jerk, you may damage the ribbon cable for the film keypad and thus lead to a functional failure.

- ► Remove the left-hand part of the housing carefully.
- ► Ensure that the ribbon cable is not kinked when you put down the operating housing.

2. Carefully remove the left-hand part of the housing.

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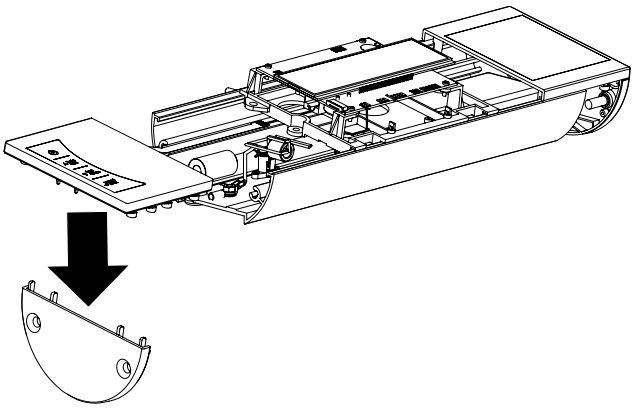
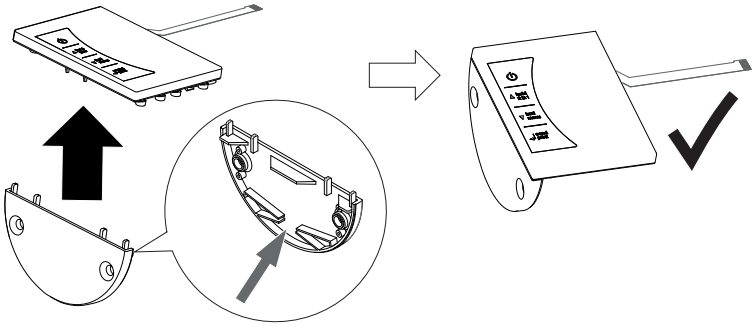
3. Replace the side cap on the left-hand part of the housing:
   a) Remove side cap from the cover

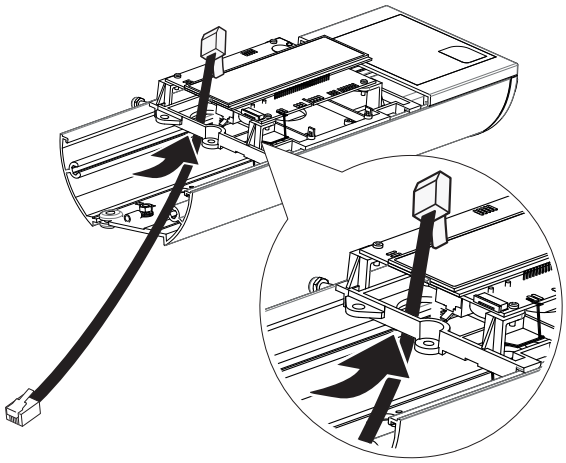
   NOTE
   This side cap is no longer needed.



   b) Insert the side cap included in the scope of delivery onto the cover



4. Thread in the connecting cable as shown in the figure.



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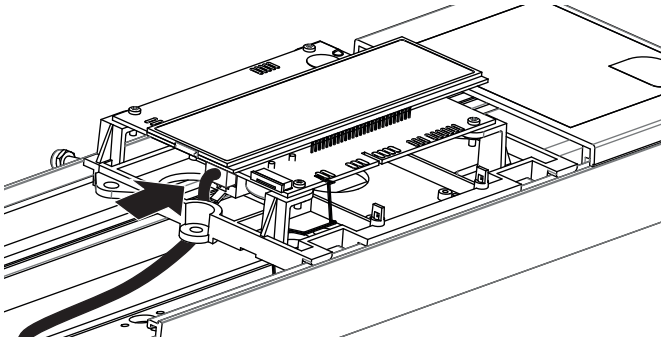
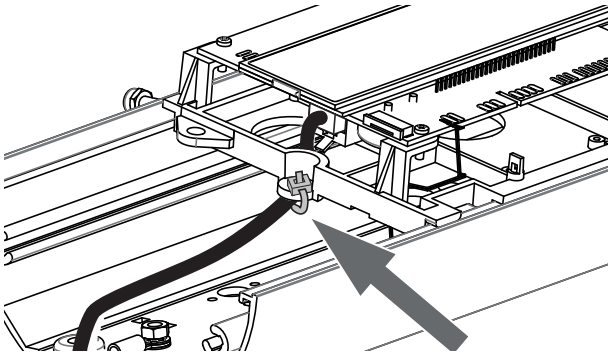
5. Connect the connecting cable to the display electronics.



6. Secure the connecting cable to the eye of the frame using the small cable tie.



NOTICE!

Malfunction due to error in installation

When you insert the left-hand part of the housing, you may damage the ribbon cable for the film keypad and thus lead to a functional failure.

- ► Insert the left-hand part of the housing carefully.
- ► Ensure that the ribbon cable is not twisted or trapped when you insert the housing.

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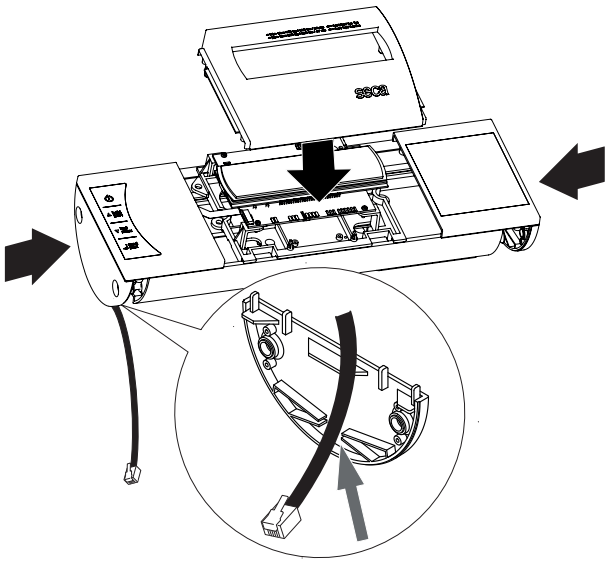
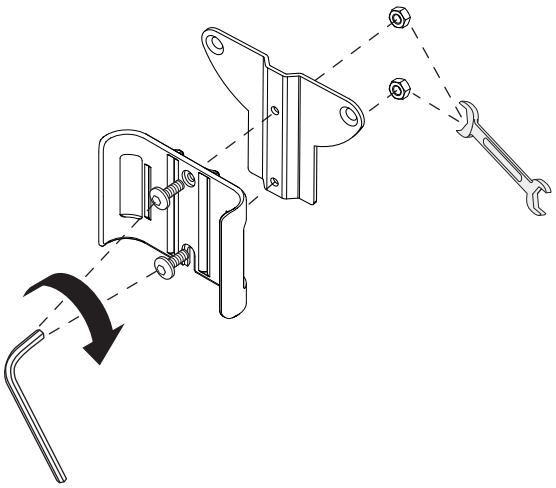
7. Close the display housing of the scale:
   a) Insert the left-hand part of the housing
   b) Put on display cover
   c) Slide the right-hand part of the housing onto the lower part of housing as far as it will go
   d) Position the connecting cable in the left side cap as shown in the figure
   e) Slide the left-hand part of the housing onto the lower part of housing as far as it will go



NOTE
The right-hand and left-hand parts of the housing are screwed down in subsequent assembly steps.

3.3 Fitting the seca 452 interface module

1. Screw the bracket to the adapter plate using two hex head socket screws and two nuts.



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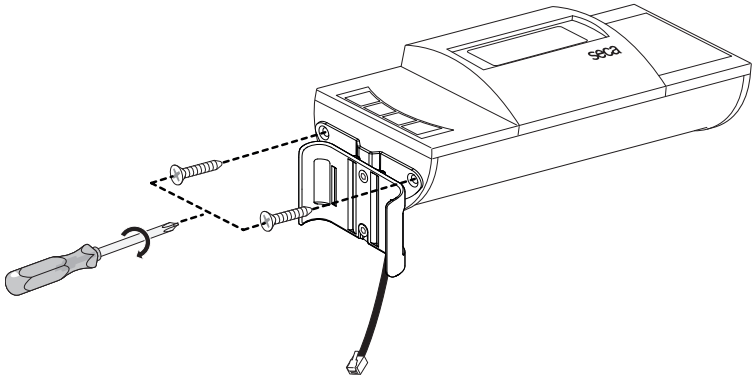
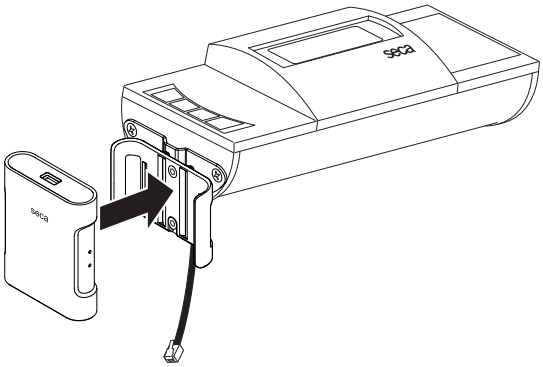
2. Screw the adapter plate to the left side cap with two cross-head screws.

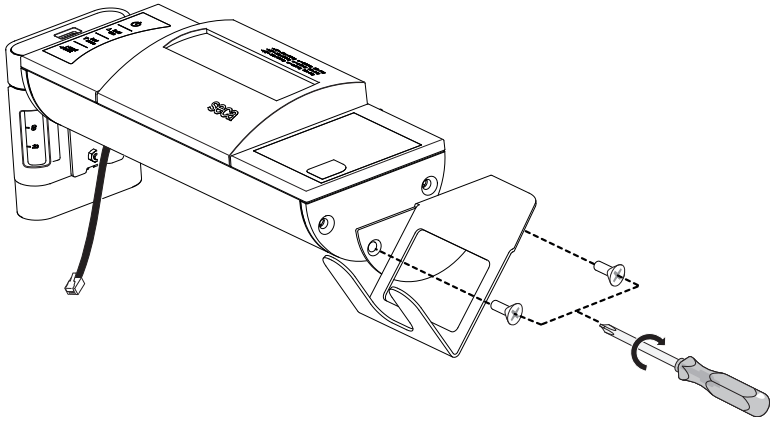


3. Press the **seca 452** interface module into the bracket.



3.4 Fitting the scanner bracket

► Screw the scanner bracket to the right side cap using two cross-head screws.



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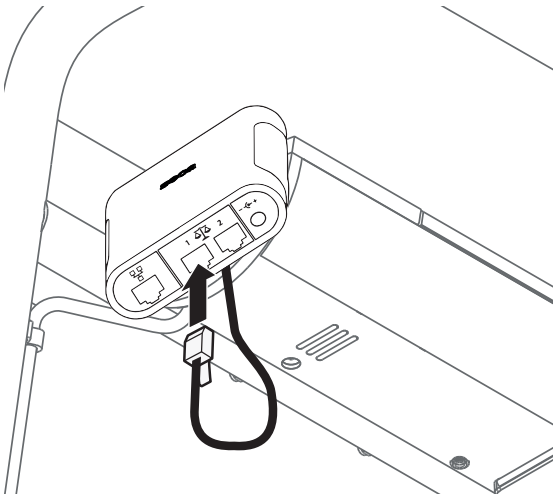
3.5 Connecting a seca 452 interface module

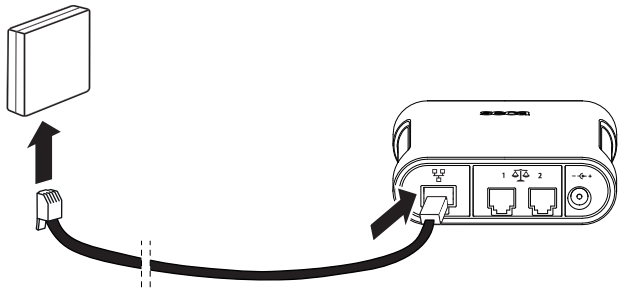
1. Connect the connecting cable to interface 1 of the **seca 452** interface module.



You have the following options for continuing:

- Communication via LAN (stationary use only): continue at step 2.
- For communication via WiFi, continue at step 3.

2. Connect a LAN cable to the **seca 452** interface module:
   a) Connect the LAN cable to the LAN interface of the **seca 452** interface module
   b) Connect the LAN cable to the network socket



NOTICE!
Malfunction caused by an incompatible scanner
Incompatible scanners can lead to faulty data transmission or system malfunction.

- Only use scanners that are listed in the section ➔ Optional accessories and spare parts.

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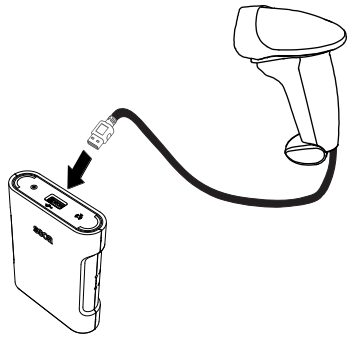
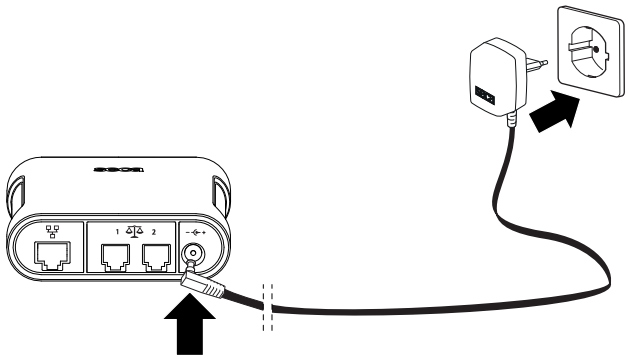
3. Connect a scanner to the **seca 452** interface module:
    a) Connect the scanner cable to the USB interface of the **seca 452** interface module
    b) Attach the scanner to the scanner bracket
    c) If required, attach the scanner cable to a connecting strut of the chair scale using cable ties



4. Apply the label with the Confirm barcode to a place you can reach easily with the scanner.
   You have the following options for continuing:
    - Scale powered by a plug-in power supply unit (stationary use only): continue at step 5.
    - Scale powered by a mobile power supply: continue at ➔ Connecting the seca 454 mobile power supply
5. Connect the plug-in power supply unit of the chair scale to the **seca 452** interface module:
    a) Connect the power cable to the power supply connection of the **seca 452** interface module
    b) Insert the plug-in power supply unit into a power supply socket



6. Perform the necessary final work, ➔ Performing final work.

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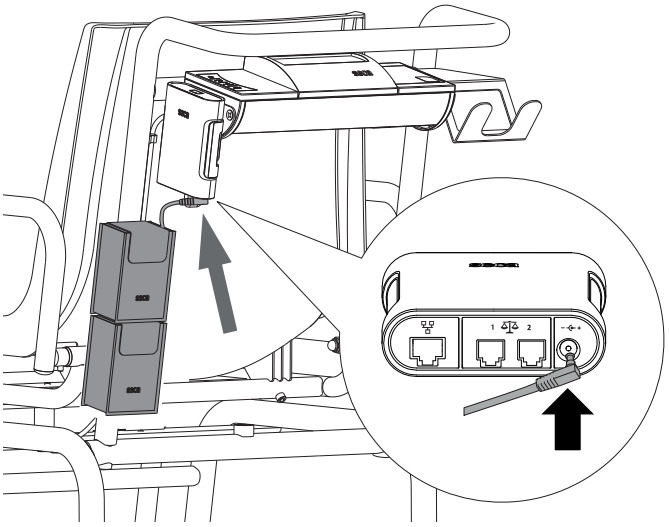
3.6 Connecting the seca 454 mobile power supply

NOTE
Instructions for fitting the parts for **seca 454** (product no. 454 0000 009) can be found in the Product Description included with the product.

1. Fit and charge the **seca 454** mobile power supply as described in the **seca 454** Product Description.
2. Attach the **seca 471** bags one above the other on the chair scale.
3. Store the charger in the lower bag.
4. Store the **seca 454** mobile power supply in the top bag and route the power supply cable outwards.
5. Connect the power cable to the power supply connection of the **seca 452** interface module.



6. Perform the necessary final work, ➔ Performing final work.

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