



Operating instructions
Ultrasonic camera for locating leaks
SDL100

GB

Contents

1	Preliminary note	3
1.1	Symbols used	3
1.2	Warnings.	3
2	Safety instructions.	4
3	Intended use	5
4	Items supplied.	6
4.1	LeakReporter software	6
5	Getting started	8
6	Function	10
7	Electrical connection	11
8	Operating and display elements	12
9	Menu.	13
10	Parameter setting	14
10.1	Laser.	14
10.2	Store	15
10.3	Sensitivity	16
10.4	Home	17
10.4.1	Configuration.	17
10.4.2	Export/Import	18
10.4.2.1	Export leakage data via USB stick	19
10.4.2.2	Export leakage data via wifi.	20
10.4.3	WLAN	20
10.4.3.1	Set up the wifi connection on the device	20
10.4.3.2	Set up web server on PC	22
10.4.4	View Bitmaps	23
10.4.5	Settings.	23
10.4.5.1	Set backlight	23
10.4.5.2	Cleaning	24
10.4.5.3	System Status.	24
10.4.5.4	About SDL100.	24
10.4.5.5	erase Database.	24
10.4.5.6	Password settings.	25
10.4.5.7	Device settings	25
11	Maintenance, repair and disposal	28
11.1	Rechargeable battery	28

1 Preliminary note

You will find instructions, technical data, approvals and further information using the QR code on the unit / packaging or at documentation.ifm.com.

1.1 Symbols used

- ✓ Requirement
- Instructions
- ▷ Reaction, result
- [...] Designation of keys, buttons or indications
- Cross-reference
-  Important note
Non-compliance may result in malfunction or interference.
-  Information
Supplementary note

1.2 Warnings

Warnings indicate the possibility of personal injury and damage to property. This enables safe product handling. Warnings are graded as follows:



WARNING

Warning of serious personal injury

▷ If the warning is not observed, fatal and serious injuries are possible.



CAUTION

Warning of minor to moderate personal injury

▷ If the warning is not observed, minor to moderate injuries are possible.

ATTENTION

Warning of damage to property

▷ If the warning is not observed, damage to property is possible.

2 Safety instructions

- Read this document before setting up the product and keep it during the entire service life.
- The product must be suitable for the corresponding applications and environmental conditions without any restrictions.
- Only use the product for its intended purpose (→ Intended use).
- If the operating instructions or the technical data are not adhered to, personal injury and/or damage to property may occur.
- The manufacturer assumes no liability or warranty for any consequences caused by tampering with the product or incorrect use by the operator.
- Installation, electrical connection, set-up, operation and maintenance of the product must be carried out by qualified personnel authorised by the machine operator.
- Store the product in its original packaging.



CAUTION

Visible laser light; LASER CLASS 2.

- ▷ Possible damage to the eyes when looking into the laser for a longer period of time.
- ▶ Never point the integrated laser directly at people.
- ▶ Never look directly at the beam or at the reflected beam.
- ▶ Avoid directly pointing the beam into humans' and animals' eyes at all costs.
- ▶ If a class 2 laser beam strikes your eye, close your eyes and immediately move your head out of the beam.

3 Intended use

The device is used to locate leaks in compressed air systems.

The data for each leak (photo, date, location, consumed quantity, costs, fault description) can be stored on the device and exported for further analysis.

The device is suitable for indoor use only.



Further technical data: documentation.ifm.com.

4 Items supplied

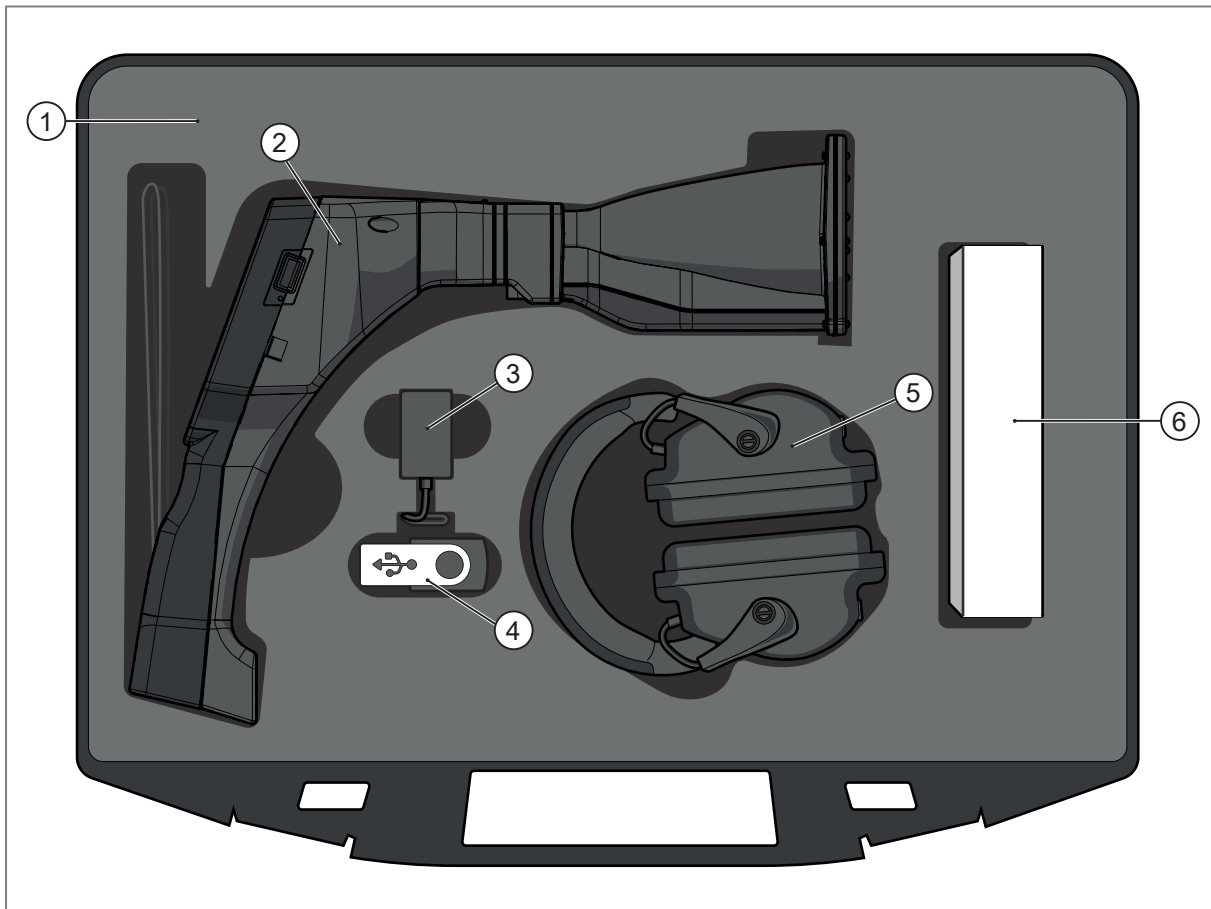


Fig. 1: Items supplied

1. Carrying case
2. SDL100 leak detector with pre-mounted acoustic horn and carry strap
3. Charger: Plug-in power supply with connection cable
4. USB stick
5. Soundproof headphones + coiled cable with jack plug
6. Leak report notepad
7. [LeakReporter software](#) (→ [6](#))

4.1 LeakReporter software



The ifm LeakReporter software is supplied with the device. Download at documentation.ifm.com.

The LeakReporter software offers the following functions:

- Storage and management of the leak data exported by the device (XML format).
- Simple creation of reports on energy efficiency measures in accordance with ISO 50001 and EMAS (PDF or XML format).

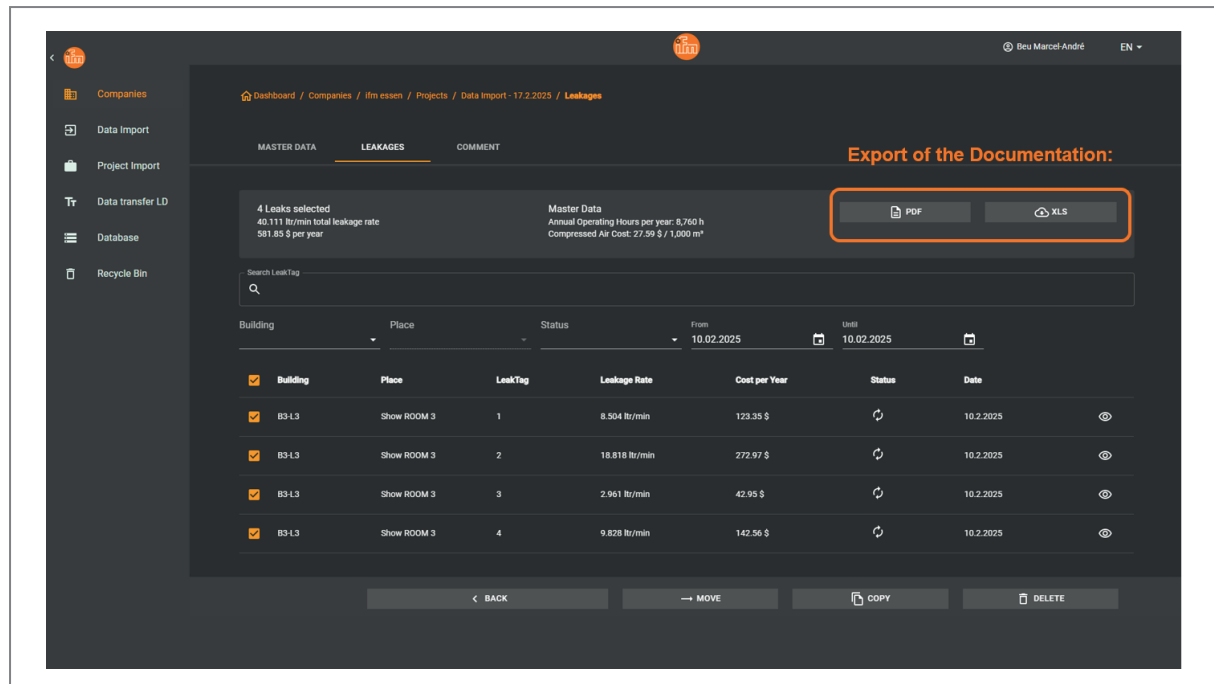


Fig. 2: LeakReporter user interface

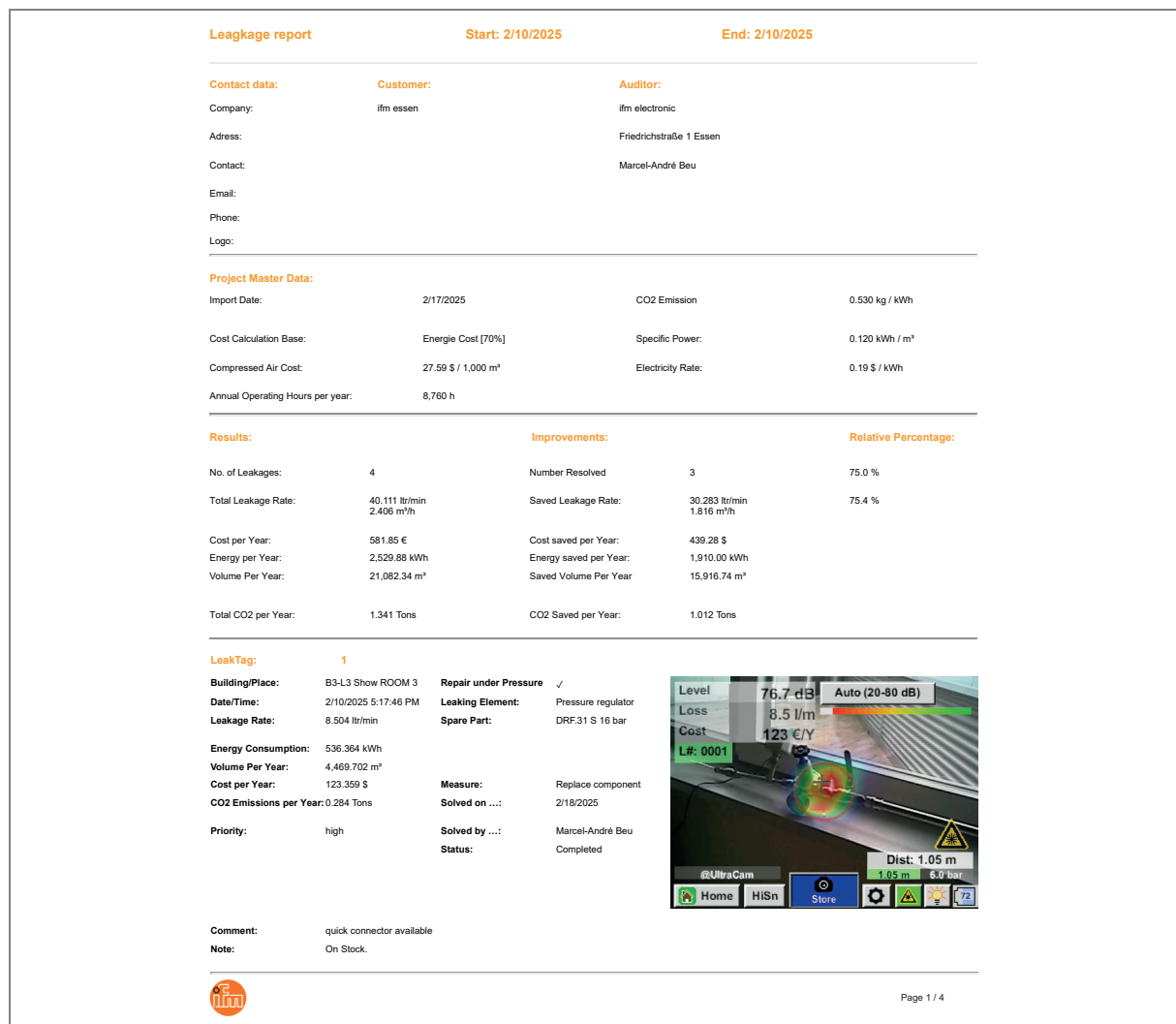


Fig. 3: Leak report (in PDF format)

5 Getting started

Preparation:

- ▶ Connect the device to the charger and charge (maximum charging time: 4 hours).
- ▶ Connect the headphones via the jack socket on the bottom of the device.
- ▶ Switch on the device by pressing the on/off button .
 - ▷ A start screen appears on the display, after which the display switches to Operating mode ([→ Operating and display elements](#)  12).
- ▶ Set the most important basic settings for the device:
 - [Home] > [Settings] > [Device settings] > [Set language](#) ([→](#)  25)
 - [Home] > [Settings] > [Device settings] > [Date & Time](#) ([→](#)  26)
 - [Home] > [Configuration](#) ([→](#)  17)



The data for the loss calculation is based on the settings in the [Configuration] menu. Some of these can still be corrected when saving (see below).
Recommendation: Set automatic distance measurement by the laser ([→ Laser](#)  14).

- ▶ In dark light conditions, use the [Lighting] button to switch on the 5 LEDs on the acoustic horn.
- ▶ Set the volume of the headphones to < 50% using the device keys ◀ and ▶ and put on the headphones.



CAUTION

Unexpectedly loud noise in the headphones

- ▷ May startle or cause hearing impairment
- ▶ Always first lower the headphone volume before putting on the headphones.

- ▶ Set the device's sensitivity ([→ Sensitivity](#)  16).
Recommendation: First, select the [Auto] setting. If the noise level in the headphones is very high, reduce the sensitivity of the device.

Locate leaks:

- ▶ Follow the sounds in the headphones: The noises get louder as the leak is approached.
- ▶ Point the device at the location where a leak is suspected based on the acoustic signals.
 - ▷ If a leak is detected, it is circled in red in the camera image and the leak data is shown on the display.

Save leak:

- ▶ Press the device key or the [Store] button.
 - ▷ The [store Data/Image on SdCard] menu window opens with the settings from the last save (company, building, location, distance, pressure). The leak tag number increases by one (x/1000).
- ▶ If necessary, change the default settings using the [Parameter] or [Meas. Point] buttons: [Configuration](#) ([→](#)  17).



Changing the settings for [Pressure] and [Distance] in the [Parameter] menu results in new values for the calculated leak costs.

- ▶ Use the [Fault Description] button to make the entries for the fault description.
- ▶ Use [Store] to save the leak data on the SD card.
- ▶ Fill out a leak report from the notepad provided and attach it to the measuring point.

LEAK TAG	
DO NOT REMOVE!	
Leak Tag number:	
Date / Datum:	
Inspektor/ Prüfer:	
Defective element / Defektes Element:	
Priority / Priorität:	high ☐ low ☐
Loss / Verlust:	
Costs per year / Kosten p.a.:	
Date repaired / Repariert am:	
Repaired by / Repariert durch:	



The leak point is then marked for everyone to see and the priority for rectifying the fault is easy to read.

- ▶ Continue the inspection, detect further leaks and save them on the device.
- ▶ Switch off the device.

More options:

- ▶ Reopen the images of the saved leaks on the display (→ [View Bitmaps](#) 23).
- ▶ Transfer the data of all or selected leaks to a PC via the enclosed USB stick or directly via wifi (→ [Export/Import](#) 18).
- ▶ Create a leak report on the PC using the LeakReporter software (→ [LeakReporter software](#) 6).

6 Function

The device recognises the ultrasonic waves generated by leaks in piping systems, converts them into an audible sound which it emits via soundproof headphones.

The sound enables the user to locate a leak from a distance of several metres by approaching the source of the noise as the volume increases.

Once the leak enters the camera's field of view, it is shown on the display. The pressure loss and the calculated costs of the leak are also displayed ([→ Operating and display elements](#) [□ 12](#)).

The leaks shown on the display can be saved and transferred to a PC via USB stick or wifi.

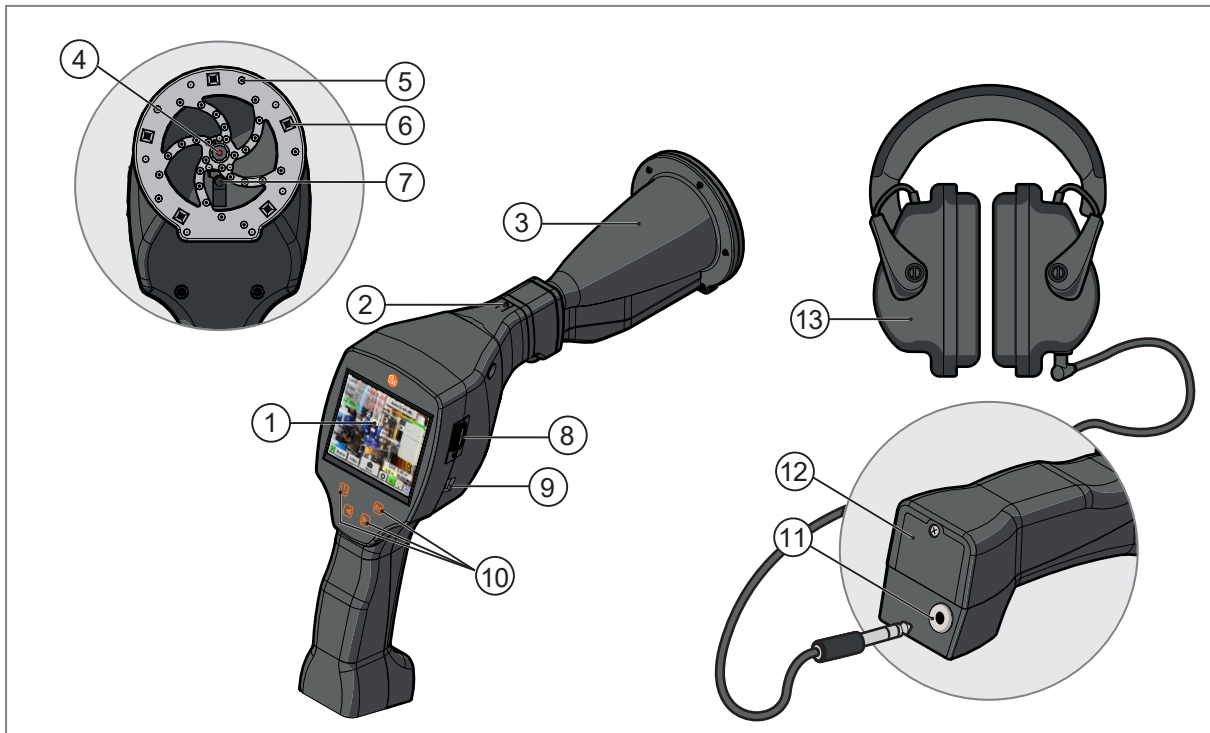


Fig. 4: Product description

- 1: 3.5" TFT display with touch screen
 - Camera image: Picture of the leak and the environment
 - [Operating and display elements in operating mode](#) ([→ □ 12](#))
 - Menu display after pressing the buttons and device keys ([→ Menu](#) [□ 13](#)).
- 2: Release button for removing the acoustic horn
- 3: Acoustic horn with integrated camera and laser (= UltraCam)
- 4: Camera (integrated into the acoustic horn)
- 5: Microphone (a total of 30 microphones in the acoustic horn)
- 6: LED lighting (a total of 5 LEDs in the acoustic horn)
- 7: Laser exit point (integrated in the acoustic horn)
- 8: USB connection
- 9: Connection for plug-in power supply
- 10: Device keys
- 11: 3.5 mm jack socket for headphones
- 12: Battery compartment, closed with hexagon socket screw
- 13: Soundproof headphones

7 Electrical connection

The device is operated in battery mode.

- To charge the battery, connect the device to the enclosed plug-in power supply. The maximum charging time is 4 hours.

The headphones are powered via the device.

- Connect the headphones via the jack socket on the bottom of the device.

8 Operating and display elements

ATTENTION

Operating the touch panel with sharp objects

- ▷ The film covering the touch panel (device keys and buttons) may be damaged.
- ▶ Operate the touch panel with your finger or with a soft round pen only.

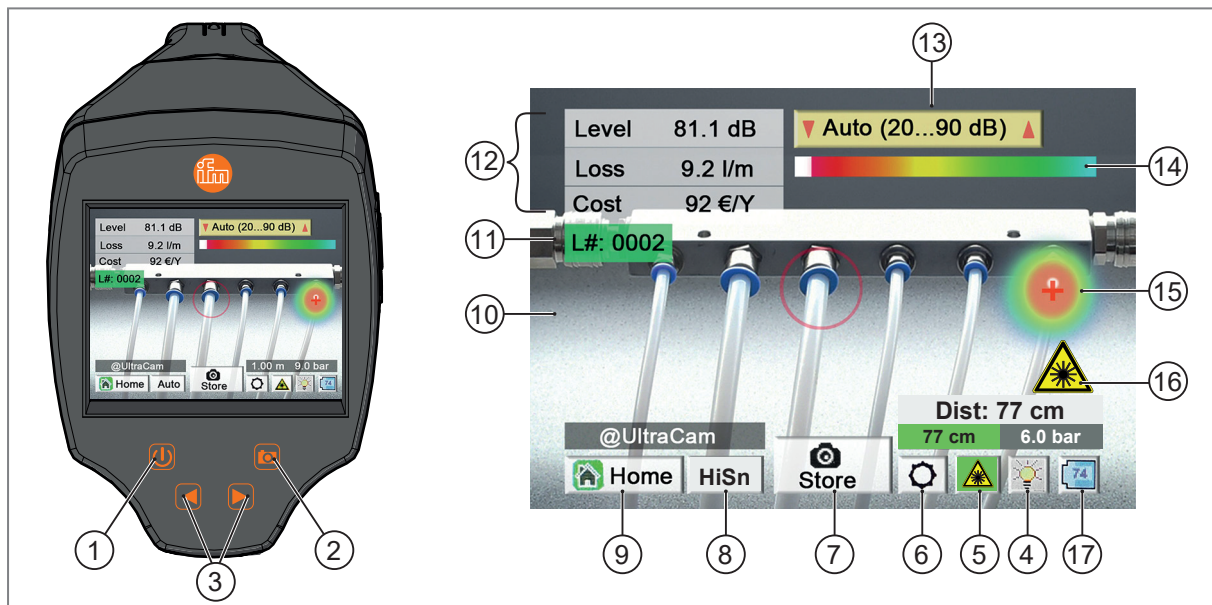


Fig. 5: Operating and display elements in operating mode

- 1: Use button to switch the device on and off. Press briefly to display the remaining battery life.
- 2: [Store] button
- 3: [Volume] button: [<] reduce volume; [>] increase volume
- 4: [Lighting] button. When activated, the button is green and the 5 LEDs on the acoustic horn are automatically switched on in dark lighting conditions.
- 5: [Laser] button: When activated, the button is green. If above it "Laser?" flashes red and yellow in alternation, the "Distance by Laser" function is activated, but the laser is deactivated.
- 6: [Settings] button
- 7: [Store] button
- 8: [HiSn / Auto] button. The display switches between [HiSn] and [Auto] when pressed; the [Sensitivity] button (13) changes in sync with this.
- 9: [Home] button
- 10: Camera image
- 11: Leak tag number
- 12: Loss data for the selected leak (basic settings for this: [Home] > [Configuration]):
 - [Level in dB]: sound waves emitted by the leak.
 - [Loss]: compressed air lost due to leak.
 - [Cost]: costs per year, as a result of the leak.
- 13: [Sensitivity] button. When [Auto] is set, the button (8) changes to [HiSn].
- 14: Bar display for colour visualisation of the signal level: green (= no leak) – yellow – orange – red (major leak)
- 15: Circle in the centre of the camera image. The colour changes from green (low signal level) to orange (medium signal level) to red (high signal level, in which case the loss data is also shown in red).
- 16: Laser symbol: indicates whether the laser has been switched on or off using the [Laser] button.
- 17: Battery symbol: battery charge level in percent. [CH] symbol = the device is currently connected to the power supply and is charging.

9 Menu

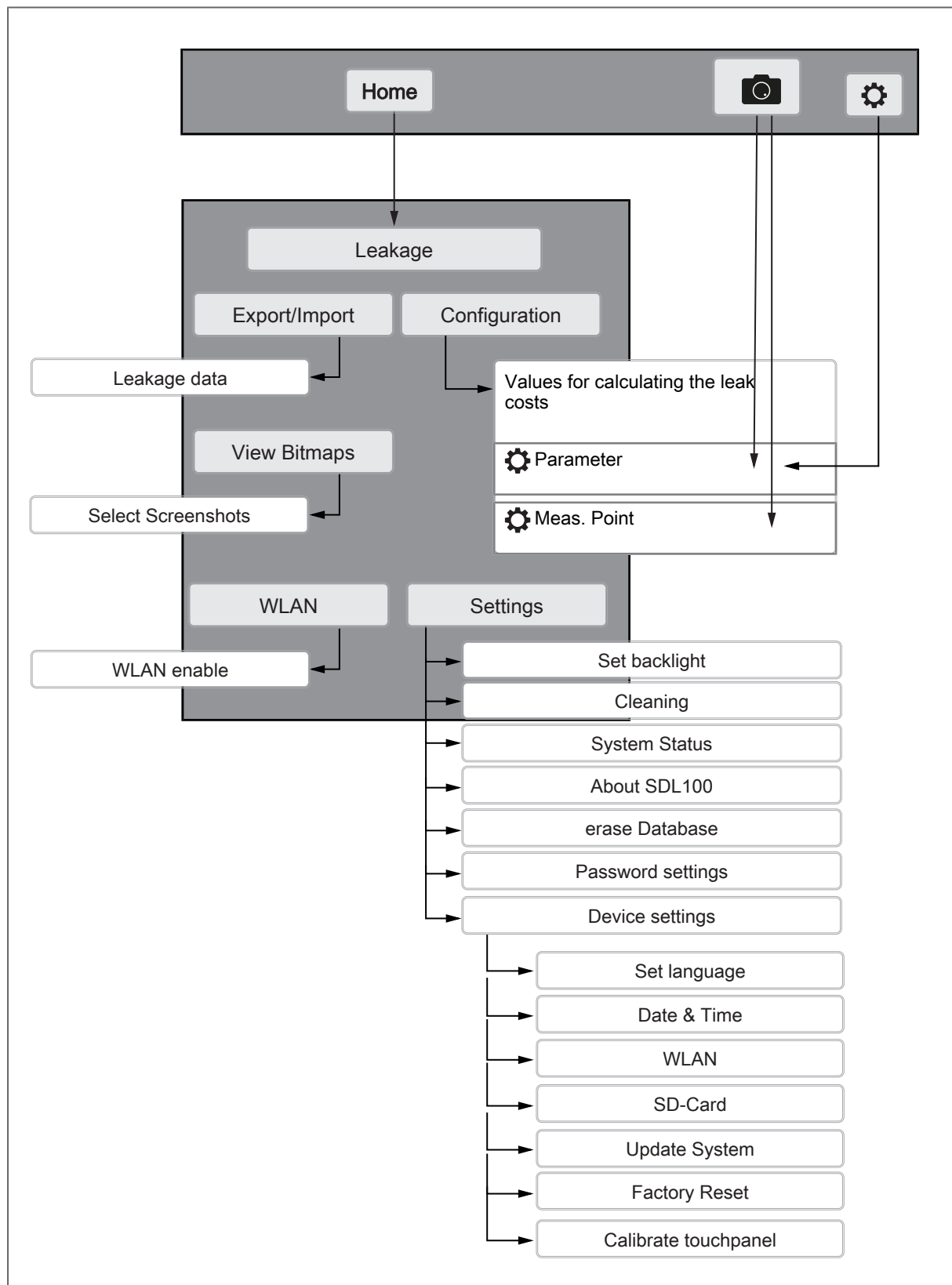


Fig. 6: Menu overview [Home](#) (→ [17](#)) menu with submenus, [Store](#) (→ [15](#)) menu

10 Parameter setting

The device's parameters are set on the display by tapping the buttons or pressing the device keys.

ATTENTION

Operating the touch panel with sharp objects

- ▷ The film covering the touch panel (device keys and buttons) may be damaged.
- ▶ Operate the touch panel with your finger or with a soft round pen only.

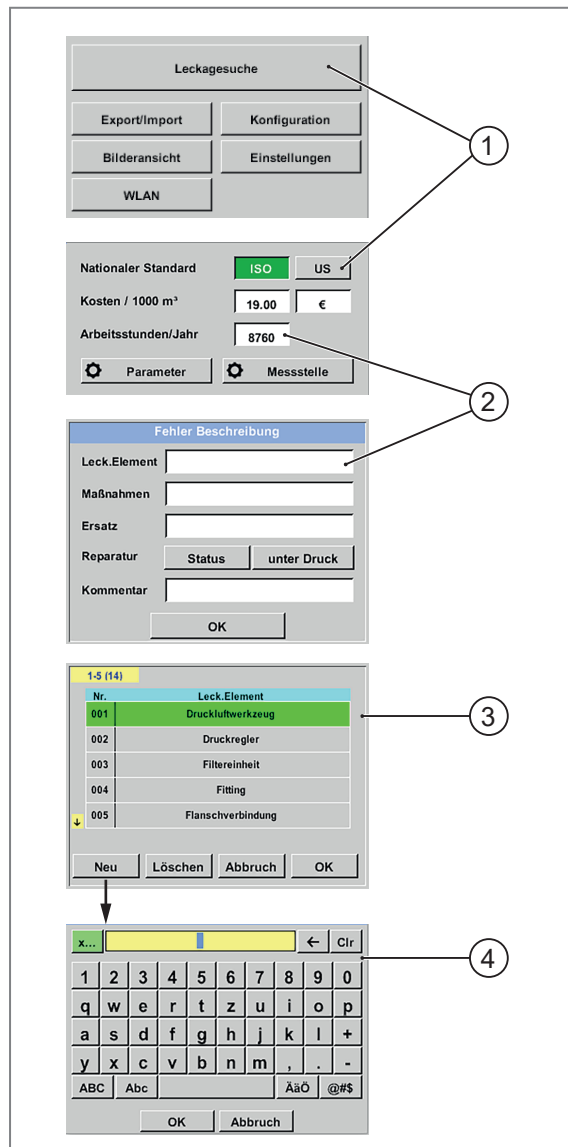


Fig. 7: Parameter setting

- 1: Button
- 2: Input box
- 3: Selection list
- 4: Input menu (max. 32 characters)

Tapping a button usually opens a menu with additional buttons (1) or input fields (2).

- ▶ Tap the button for the following actions:
 - Switch back to the camera view using the [Leakage] button in the [Home] menu.
 - Switch to another menu, for example via the [Configuration] button.
 - Select a preset value, for example [US].
 - Exit a menu using the [Store], [Cancel], [Back] and [OK] buttons.

Select or create new entries:

- ▶ Tap the input field.
 - ▷ A window with a selection list opens.
- ▶ Select the entry from the selection list and confirm with [OK].
- or -
- ▶ Tap the [new] button to create a new entry for the selection list via an input menu.
- or -
- ▶ Tap the [delete] button to delete an existing entry from the selection list.

10.1 Laser

The laser is used to automatically measure the distance between the leak detector and the leak.

The distance value is required for the device to calculate the pressure loss.

**CAUTION**

Visible laser light; LASER CLASS 2.

- ▷ Possible damage to the eyes when looking into the laser for a longer period of time.
- ▶ Never point the integrated laser directly at people.
- ▶ Never look directly at the beam or at the reflected beam.
- ▶ Avoid directly pointing the beam into humans' and animals' eyes at all costs.
- ▶ If a class 2 laser beam strikes your eye, close your eyes and immediately move your head out of the beam.

There are two requirements for automatic distance measurement:

1. The laser must be activated.
2. The [Distance by Laser] function must be activated.

How to proceed:

- ▶ Activate the laser by tapping the [Laser] button on the display.
- ▷ The laser symbol on the right-hand side of the display indicates that the laser is activated (→ [Operating and display elements](#) □ 12). The [Laser] button is green.
- ▶ Select the [Parameter] button and tick the [Distance by Laser] check box.
- Set during device configuration in the [Home] menu > [Configuration] > [Parameter]. See [Configuration](#) (→ □ 17).
- Set while saving a leak in the [Store] > [Parameter] menu.



If the laser is activated but the [Distance by Laser] check box is not, this is indicated in operating mode by a flashing [Laser?] display.



When the laser is activated, the laser dot is located at the bottom edge of the circle that marks the centre point in the camera image. The distance of the targeted object is displayed in a text field.

- ▶ If required, reactivate the laser by tapping the [Laser] button on the display.

10.2 Store

The leaks shown on the display can be saved to the device's internal SD card.

The data can then be exported to the USB stick supplied or to a PC via wifi (→ [Export/Import](#) □ 18).

The following leak data is saved as a journal on the device's internal SD card:

- Camera image of leak as a JPG file
- Time and date of the image
- Measured signal level
- Calculated pressure loss
- Calculated yearly costs
- Current leak number (leak tag number)
- Details of measuring location (company, building, location)
- Details of fault description

- ▶ Press the device key or the [Store] button.

- ▷ The [store Data/Image on SdCard] menu window opens with the settings from the last save (company, building, location, distance, pressure). The leak tag number increases by one (x/1000).
- ▶ If necessary, change the default settings using the [Parameter] or [Meas. Point] buttons:
[Configuration](#) (→ [17](#)).
- ▶ Tap the [Fault Description] field.
 - ▷ A window with the following input fields opens:
 - [Leak Element]
 - [Measures]
 - [Replacement]
 - [Repair]:
 - Status (Leakage already fixed? Yes / No)
 - Repair (Repair under pressure possible? Yes / No)
 - [Comment]
- ▶ Tap the desired input field, select a stored text or create a new text, answer questions about the repair.
- ▶ Confirm entry with [OK].
- ▶ Tap [Store] and confirm the security prompt with [Yes].
- ▷ The leak data is now saved on the device's internal SD card. When transferring to the USB stick or PC, the data is located in the "Journal" folder.

10.3 Sensitivity

The sensitivity of the device can be adjusted to suit the ambient acoustic conditions.

- Increasing the sensitivity:
 - Reduces the device's range.
 - Reduces the acceptance of background noise in the area.
 - Increases the detectability of minor leaks.
- Reducing the sensitivity:
 - Increases the device's range.
 - Increases the acceptance of background noise in the area.
 - Reduces the detectability of minor leaks.
- ▶ Tap the [Sensitivity] button and select one of the sensitivity ranges or "Auto".
 - ▷ With the "Auto" setting, the device checks the background noise and automatically sets the sensitivity.
- or -
- ▶ Tap the [HiSn /Auto] button.
 - ▷ The [Sensitivity] button toggles between the "Auto" setting and the last selected sensitivity range.

Sensitivity	Application	
	0...60 dB	High device sensitivity: • Locate minor leaks • No background noise in the area
	10...70 dB	With decreasing sensitivity: • Leaks are better detected in noisy environments • The field range is greater
	20...80 dB	
	30...90 dB	
	40...100 dB	Low device sensitivity: • Locate major leaks • Lots of background noise in the area (Heavy-Duty application)
	50...110 dB	
	60...120 dB	

Tab. 1: Adjustable sensitivity: decibel range = minimum volume recognised by the device

10.4 Home

The [Home] button takes you to the following menus:

- [Configuration:]: basic settings for calculating the leak costs ([→ Configuration](#) 17)
- [Export/Import]: export or import leak data ([→ Export/Import](#) 18)
- [WLAN]: connect device to PC via wifi ([→ WLAN](#) 20)
- [View Bitmaps]: display of saved display images ([→ View Bitmaps](#) 23)
- [Settings]: Device settings ([→ Settings](#) 23)

See also: [Menu](#) ([→](#) 13).

► In the [Home] menu, tap one of the above buttons to make settings in the respective menu.

- or -

► Tap the [Leakage] button in the [Home] menu to return to normal operating mode.

10.4.1 Configuration

The settings in the [Configuration] menu are used to determine the leak costs per year.

The costs for each leak detected are shown on the display ([→ Operating and display elements](#) 12) and in the leak journal ([→ Store](#) 15).

The device requires the following values to calculate the leak costs:

- Compressed air costs per kilocubic metre
- Plant system pressure
- Distance between the leak detector and the leak

► Open the [Home] > [Configuration] menu and enter the basic settings:

- [National Standard]: system of units for the loss indication on the display and for the setting options in the [Parameter] menu.
 - ISO: l/min; Euros
 - US: gpm; US dollars
- [Cost / 1000 m3]
 - Standard mode: flat-rate costs per kilocubic metre of compressed air with currency unit.

- Expert mode: user-defined costs per kilocubic metre of compressed air with currency unit, based on the specific output of the plant.
- [Operating hours/year]
- [Default Value]: Tapping this button resets the values for the [National Standard] and [Cost/1000 m³] to the factory setting.

► Open the [Parameter] menu  and enter the following settings:

- [Pressure:] plant system pressure.
 - 6 bar (87 psi)
 - 7 bar (101 psi)
 - 8 bar (116 psi)
 - User-defined input
- [Distance]: distance between the leak detector and the detected leak
 - 50 cm (2 feet)
 - 1 m (4 feet)
 - 2 m (8 feet)
 - User-defined input
- [Distance by Laser]: when activated, the set distance is ignored if the laser is switched on. The distance is then measured automatically.

► Go to the  [Meas. Point] menu and enter the details of the measuring point:

- [Company]
- [Building]
- [Place]
- [LeakTag]: automatic sequential numbering of the leaks saved.



The settings for  [Parameter] and  [Meas. Point] can be changed during each save process: [Store \(→ !\[\]\(ad3378b6baa943e4ec5dd6c7e34093eb_img.jpg\) 15\)](#).

10.4.2 Export/Import

The [Export/Import] menu can be used to transfer data from the device's internal SD card to a PC.

Conversely, data can also be imported onto the device's internal SD card.

Data can be transferred either via a USB stick or directly via wifi.

The data can be further processed on the PC using the LeakReporter software ([→ LeakReporter software !\[\]\(9ec2b8baded405b65357813802f7dff9_img.jpg\) 6](#)).

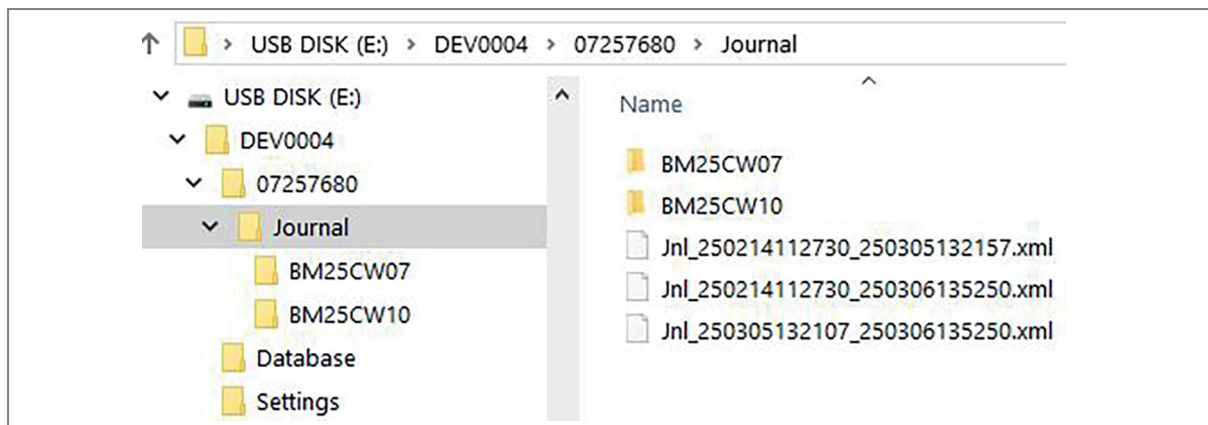


Fig. 8: Export/Import via USB stick: Journal; Database; Settings

Export:

The following data can be exported as an XML file:

- [Leakage data] = Journal:
Selected leaks or the entire journal of leak data (→ [Store](#)  15).
- [Database] = Database:
data concerning the measuring point (company, building, location) and the fault description (leak element, measures, replacement, repair, comment) (→ [Store](#)  15).
- [System settings] = Settings:
data for calculating the leak costs (→ [Configuration](#)  17).

Import:

The following data can be imported as an XML file:

- [Database] = Database:
data concerning the measuring point (company, building, location) and the fault description (leak element, measures, replacement, repair, comment) (→ [Store](#)  15).
- [System settings] = Settings:
Data for calculating the leak costs (→ [Configuration](#)  17).

The import / export functions [Database] and [System settings] can be useful, allowing the convenience of editing the selection lists in the XML files on the PC and then importing them back onto the device.

An imported XML file must have the same document structure as the XML export file to be read by the device:

- ▶ Export a file from the device first.
- ▶ Add to or edit the data in the file.
- ▶ Re-import the file to the device.



Only the export of [Leakage data] is described below, as this is the main use case. The import function [New tool] is not available.

10.4.2.1 Export leakage data via USB stick

- ▶ Connect the supplied USB stick to the device's USB port. A standard USB stick can also be used.
 - ▷ The device's display indicates that the USB stick is connected.
- ▶ Go to the [Home] > [Export/Import] menu.
- ▶ Tap the [Leakage data] button in the Export area.
- ▶ In the [Export Leakage data] window, use the [Select] buttons to select the leaks to be exported:

- [Company]: After tapping the [Select] button, a company can be selected from a list (only relevant if leaks are measured across several companies).
- [start/end]: Tap the [Select] button to open a calendar view. Days on which measurement data was recorded are indicated by raised buttons. If several measurements were recorded on one day, these appear in a list after the date selection and can be selected here according to time.
- ▶ Tap the [export] button.
- ▶ Confirm the following prompt with [Yes].
- ▷ The selected leak data will be transferred to the USB stick.
- ▶ If required, delete the device memory using the [ERASE Leakage data] button.



Tapping the [ERASE Leakage data] button opens a security prompt. If the user confirms the deletion, the entire journal on the device is irrevocably deleted.

10.4.2.2 Export leakage data via wifi

- ▶ Connect the device to the same wifi that the PC is connected to (→ [WLAN](#)  20).
- ▶ Go to the [Home] > [Export/Import] menu and carry out the export as described in chapter [Export leakage data via USB stick](#) (→  19).

10.4.3 WLAN

The leak detector and a PC can be connected from the [WLAN] menu.

This allows data to be transferred directly from the device's internal SD card to a PC. See [Export/Import](#) (→  18).

10.4.3.1 Set up the wifi connection on the device

Set up connection via network

- ▶ Go to [Home] > [WLAN].
- ▶ Select [WLAN enable].
- ▶ Tap [Connect to WLAN].
- ▶ Tap [Select Network].
 - ▷ The device lists all available networks sorted by signal strength.
- ▶ Select network and confirm with [OK].
- ▶ Tap [Connect].
- ▶ Enter password and confirm with [OK].

If connection to the network is successful, the [Connect] button changes to [Disconnect]. This is now coloured green. A wifi symbol appears at the top right of the display.

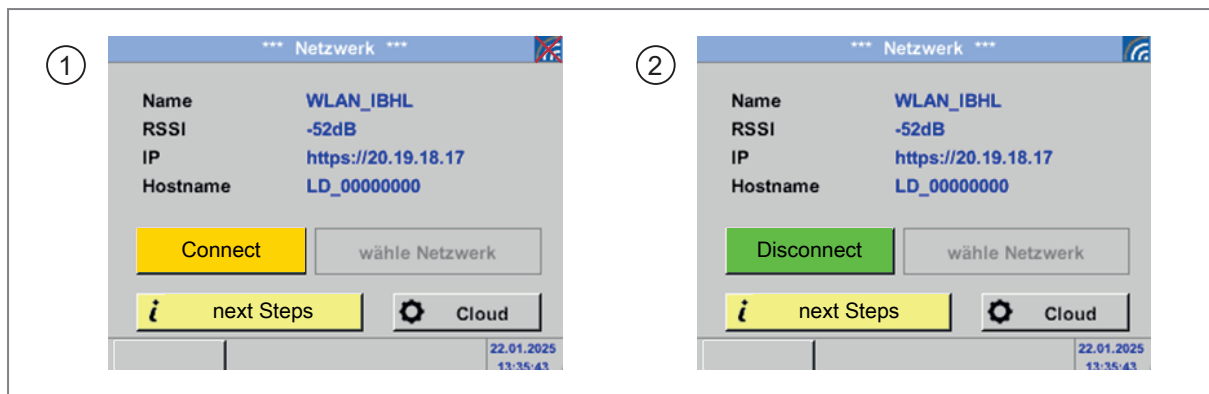


Fig. 9: Network connection: 1: Not connected; 2: Connected via wifi

► Tap [next Steps].

▷ A window displays the previous actions and a web address.

► Make a note of the web address provided.



The format depends on the encryption of the wifi connection:

For enabled encryption: https://

For disabled encryption: http://

Set up connection via hotspot

If the signal strength of the selected network is not sufficient, the leak detector's hotspot can be used.

► Go to [Home] > [WLAN].

► Select [WLAN enable].

► Tap [Start WLAN Hotspot].

► Tap [Setup Hotspot].

► Enter or check the data (Name, PWD = password, IP, channel, TX power) and confirm with [OK].

► Tap [Activate].

If the connection to the hotspot is successful, the [Activate] button changes to [Deactivate]. This is now coloured green. A hotspot symbol appears at the top right of the display.

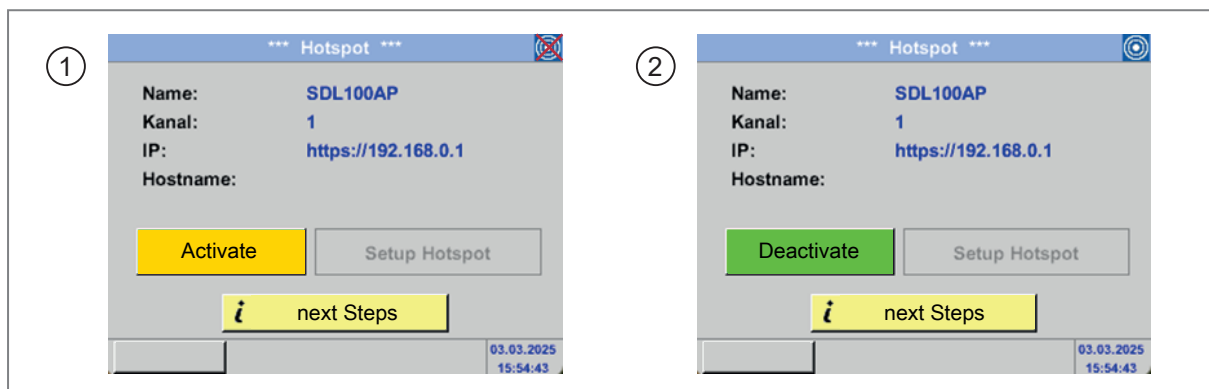


Fig. 10: Hotspot: 1: Not connected; 2: Connected to hotspot

► Tap [next Steps].

▷ A window displays the previous actions and a web address.

► Make a note of the web address provided.



The format depends on the encryption of the wifi connection:

For enabled encryption: https://

For disabled encryption: http://

10.4.3.2 Set up web server on PC

The leak detector uses its own web server, which enables access to the data from the device's internal SD card via any web browser.

The data can be transferred to the PC via wifi using the web server.

The data can be further processed on the PC using the LeakReporter software ([→ LeakReporter software](#)  6).

Web server properties:

The leak detector's web server uses IP addresses from the private address range 192.168.x.x in accordance with RFC 1918. This means that the device can be reached within a local network (LAN), but cannot be accessed directly from the internet.

Impact on external access:

- no direct internet access:
As the 192.168.x.x address range is not routed within the public internet, direct access to the leak detector externally is not possible.
- Security:
The use of a private address range makes unauthorised access from the internet more difficult, as direct addressing is not possible.

Encryption:

The leak detector supports the activation of HTTPS for encrypted communication in the local network.

Important notes concerning the use of HTTPS:

- Manual input of the address:
Some web browsers automatically add "https://" to the address bar. If HTTPS is not enabled, this can result in connection problems. Ensure that the correct encryption type is entered.
- Self-signed certificate:
For technical reasons, the self-generated certificate stored on the device cannot be permanently updated. This may result in a security warning in some browsers, but this can be avoided by manually accepting the certificate.
- Certificates and browser warnings:
If the browser displays a warning about an insecure certificate, you should check whether an exception rule needs to be added for the device or whether a separate SSL certificate can be stored.

If it is not possible to access the leak detector via the web server using the browser or the network, there may be various reasons for this, such as incorrect network settings, restrictions due to firewalls, an incorrect IP address or missing authorisations.

Contact your IT department or the network administrator for support with error analysis and network configuration.

Connect the web server to the device:

- ▶ Open a web browser on the PC.
- ▶ Enter the URL noted during the wifi setup in the address bar.
 - ▷ The web server opens.
- ▶ In the menu, click on [Log in].
 - ▷ A window will open asking you to enter your PIN.
- ▶ Enter the four-digit PIN shown on the device display.

Export leak data from device:

- ▶ Go to the [Export leaks] menu.
- ▶ In the [Select companies & data for PC export] window, select the leaks to be exported:

- [Company]: Select a company from the list (only relevant if leaks are measured across several companies).
- [From date / to date]: Select the measured data in the calendar view.
- ▶ Click [Update].
- ▶ Click [Download data].
 - ▷ The leak data is saved to the PC as a ZIP file under Downloads.
- ▶ Extract the ZIP file and note the directory of the extracted XML file.

Open device information:

- ▶ Go to the [Status] menu to view general information about the leak detector.
- ▶ Go to the [Info] menu to view further general information about the device.
The local IP addresses are also displayed here for accessing the software update:
- OwnIP: 192.168.XXX.XXX
- RemoteIP: 192.168.XXX.XXX

Software update via browser:

A software update on the leak detector is only possible when the PC and the leak detector are both connected to the same network.

- ▶ In the [≡] menu, select [SW-Upload] and download the update file.
- ▶ Follow the instructions on the device.

10.4.4 View Bitmaps

The [View Bitmaps] menu can be used to open saved display captures from the SD card or USB stick and show them on the display.

- ▶ In the [Home] > [View Bitmaps] menu, tap the [Select Screenshots] button.
 - ▷ The [Show Screenshots] window opens.
- ▶ Use the [SdCard] or [USB] button to select the storage location.
 - ▷ A list with folders is shown. These are named and sorted according to date saved: BMyyCWxx (BM = Bitmap; yy = year; CW = Calendar week; xx = calendar week).
- ▶ Tap on a folder and open it with the [goto] button and select the desired jpg file by date and time of saving.
- ▶ Open an image capture with [OK].
 - ▷ The selected image capture is shown on the display.
- ▶ Exit the display by tapping the display and the [Home] or [Back] button.

10.4.5 Settings

10.4.5.1 Set backlight

Various settings for the display brightness can be adjusted in the [Set backlight] menu.

- ▶ Go to the [Home] > [Settings] > [Set backlight] menu and set the following parameters:
 - Brightness: Set the brightness as a percentage.
 - Dim after x minutes:
Activate and set the time after which the display brightness is reduced to minimum.



When the display is touched, the dimmed display switches back to the set brightness value.

- Switch off after > 10 minutes:
Activate and set the time after which the device switches off.

10.4.5.2 Cleaning

The [Cleaning] function can be used to clean the touch screen during ongoing measurements.

- ▶ Tap the [Home] > [Settings] > [Cleaning] button.
- ▷ A 60-second timer appears in the window.
- ▷ The buttons on the display and the device keys are locked for 1 minute to prevent unintentional entries.

If one minute of cleaning is not enough,

- ▶ repeat the process.

If cleaning is completed faster,

- ▶ end the process by means of the [to abort press long] button.

10.4.5.3 System Status

Status messages can be viewed in the [System Status] menu.

- ▶ Tap the [Home] > [Settings] > [System Status] button.
- ▷ The following information is displayed in the window:
 - Device status:
 - Temperature
 - Supply Main
 - Supply USB
 - Runtime
 - Battery Status
 - Calibration Status
 - Channel Status

10.4.5.4 About SDL100

Device information can be viewed in the About SDL100 menu.

- ▶ Tap the [Home] > [Settings] > [About SDL100] button.

The following information is displayed in the window:

- Device Type
- Serial Number
- Hardware Version
- Software Version
- Power Board
- WLAN-Version

10.4.5.5 erase Database

The [erase Database] function is password-protected. The password can be changed if necessary ([→ Password settings](#)  25).

The following data can be deleted from the device's SD card in the [erase Database] menu:

- Companies (Meas. Point)
- Measures (fault description)
- Leak.Element (fault description)
- Replacement (fault description)

This refers to data entered when the leak was saved and exported via the [Database] button and saved in the Database folder, see [Export/Import \(→ □ 18\)](#).

- ▶ Go to the [Home] > [Settings] > [erase Database] menu.
- ▶ Tick the items to be deleted or select the [all] button.
- ▶ Tap [Yes] and confirm the security prompt with [Yes].

10.4.5.6 Password settings

For each change the password must be entered in the [Home] > [Settings] menu.

Password on delivery: 0000.

Change the password

- ▶ Go to the [Home] > [Settings] > [Password settings] menu.
- ▶ Enter a new 4-digit numeric password twice and confirm with [OK].



If the password is forgotten, a new password can be assigned by entering the master password. The master password can be requested from ifm electronic (serial number required).

10.4.5.7 Device settings

The [Home] > [Settings] > [Device settings] menu is password-protected. The password can be changed if necessary ([→ Password settings □ 25](#)).

Once the password has been entered after selecting the [Device settings] button, all submenus for parameter settings are enabled until the device is restarted.

Set language

- ▶ Go to the [Home] > [Settings] > [Device settings] > [Set language] menu.
In factory settings: [Home] > [Settings] > [Device Settings] < [Set language].
- ▶ Select one of the languages for the text in the display:
 - Danish
 - German
 - English
 - French
 - Italian
 - Dutch
 - Norwegian
 - Polish
 - Portuguese
 - Romanian
 - Russian
 - Spanish
 - Swedish
 - Czech

- Turkish
- ▶ Confirm with [Back].

Date & Time

- ▶ Go to the [Home] > [Settings] > [Device settings] > [Date & Time] menu.
- ▶ Enter the [Actual Time] and apply with [Start].
- ▶ Enter [Time Zone] UTC
- ▶ Enable / disable [Daylight Saving].
- ▶ Apply setting with [Back].

WLAN

The [Home] > [Settings] > [Device settings] > [WLAN] menu is identical to the [Home] > [WLAN] menu: [WLAN \(→ □ 20\)](#).

SD-Card

- ▶ Go to the [Home] > [Settings] > [Device settings] > [SD-Card] menu.
- ▶ Tap [Reset Logger Database] to lock the currently saved leak data for the image view → [View Bitmaps \(→ □ 23\)](#).
 - ▷ The leak data remains stored on the SD card.
- ▶ Tap [Erase SdCard] to delete all data on the SD card.
 - ▷ A security prompt is displayed. If the user confirms the deletion, the entire journal on the device is irrevocably deleted.
- ▶ Tap [Test SdCard] to perform a test of the SD card.
 - ▷ Data is written to and read from the SD card.
 - ▷ The number of test cycles and any occurring errors with an error code are displayed in the status bar.

Update System

- ▶ Download the current firmware from the web page: documentation.ifm.com.
- ▶ Save the firmware on the USB stick supplied.
- ▶ Insert the USB stick into the device.
- ▶ Go to the [Home] > [Settings] > [Device settings] > [Update System] menu.
- ▶ Tap the [Check USB Stick for new Software updates] button.
 - ▷ New software elements are listed in red in the [Update System] window.
- ▶ Tap the [Update selections] button to transfer the new software elements to the device.



If no entries appear in red in the [Update System] window, the device is either not properly connected to the USB stick or there are no updates.



If an older software version needs to be installed, this is done using the [force all] button.

Factory Reset

The reset function is used to reset all settings.

- ▶ Go to the [Home] > [Settings] > [Device settings] > [Factory Reset] menu.
- ▶ Select one of the following two options:
 1. [Update System]:

► See [Update System](#) (→ [26](#)).

▷ The firmware on the device is updated.

2. [Reset to Defaults]:

► Confirm the security prompt with [Yes], press [OK] and then tap [Reboot System].

▷ The [National Standard] and [Cost / 1000 m3] settings are reset to the default values: [Configuration](#) (→ [17](#)). The laser and the illumination LEDs are switched off. All other settings (e.g. brightness) are not affected.



The data on the SD card is not deleted or overwritten.

Calibrate touchpanel

► Go to the [Home] > [Settings] > [Device settings] > [Calibrate touchpanel] menu.

► Tap the [Calibrate] button.

▷ A cross appears on a yellow background 5 times in different positions on the display.

► Tap the 5 crosses one after the other.

► Confirm the successful calibration message with [OK].



► If the calibration is not successful, exit the menu via [Cancel], tap the [Touchscreen kalibrieren] button again and repeat the calibration.

11 Maintenance, repair and disposal

The unit is maintenance-free.

- ▶ Contact ifm in case of malfunction.
- ▶ After use, dispose of the unit in an environmentally friendly way in accordance with the applicable national regulations.

11.1 Rechargeable battery

Charge the rechargeable battery:

- ▶ Connect the supplied plug-in power supply to the charging socket on the device, see Figure ([→ Function !\[\]\(4c6ea7329be80cc0bdbed82357d87ef5_img.jpg\) 10](#)).
- ▶ Connect the plug-in power supply to a 230 V socket.
- ▷ The device checks the battery level of the device and starts the charging process.
- ▷ The display shows [CHG] in the battery symbol, see Figure ([→ Operating and display elements !\[\]\(ce81e0f404e8751cd5280bc37d6c697f_img.jpg\) 12](#)).
- ▷ The device ends the charging process automatically after a maximum of 4 hours.
- ▷ The display shows 100% in the battery symbol.



The rechargeable battery and the device must be disposed of separately.

- ▶ Ensure that the battery is fully discharged.
- ▶ Unscrew the battery compartment on the underside of the device and remove the battery.
- ▶ Detach wiring and disconnect the battery from the device.