

# User Guide

Vaisala Handheld Indicator  
**Indigo80**



## PUBLISHED BY

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# 1. About this document

## 1.1 Version information

This document provides instructions for using and maintaining Vaisala Indigo80 Handheld Indicator.

Table 1 Document versions (English)

Document code	Date	Description
M212722EN-B	May 2023	This document. Added sections: <ul style="list-style-type: none"> <li>• <a href="#">Start-up wizard (page 16)</a></li> <li>• <a href="#">Writing a problem report (page 46)</a></li> <li>• <a href="#">Recycling instructions (page 53)</a></li> </ul> Updated sections: <ul style="list-style-type: none"> <li>• <a href="#">Related manuals (page 7)</a></li> <li>• <a href="#">Basic features and options (page 9)</a></li> <li>• <a href="#">Indigo80 indicator parts (page 11)</a></li> <li>• <a href="#">Status LED (page 12)</a></li> <li>• <a href="#">Main menu (page 16)</a></li> <li>• <a href="#">Connecting probes to Indigo80 (page 29)</a></li> <li>• <a href="#">Vaisala Insight PC software (page 33)</a></li> <li>• <a href="#">Updating Indigo80 firmware version (page 40)</a></li> <li>• <a href="#">Spare parts and accessories (page 50)</a></li> </ul>
M212722EN-A	March 2023	First version.

## 1.2 Related manuals



For the latest versions of these documents, see [docs.vaisala.com](https://docs.vaisala.com).

Table 2 Related manuals

Document code	Name
M212901EN	<a href="#">Firmware version compatibility of Indigo80-compatible devices Technical Note</a>
M212723EN	<a href="#">Vaisala Indigo80 Handheld Indicator Quick Guide</a>
M212872EN	<a href="#">Vaisala Indigo80 Handheld Indicator Safety Guide</a>
M212022EN	<a href="#">Vaisala HMP Series with MMP8 and TMP1 User Guide</a>
M212357EN	<a href="#">Vaisala DMP Series User Guide</a>

Document code	Name
M211888EN	<a href="#">Vaisala HPP271 Hydrogen Peroxide Probe User Guide</a>
M211972EN	<a href="#">Vaisala HPP272 Hydrogen Peroxide, Humidity and Temperature Probe User Guide</a>
M211435EN	<a href="#">Vaisala DMT143 Dew Point Transmitter User Guide</a>
M212849EN	<a href="#">Vaisala Indigo300 Transmitter User Guide</a>
M212287EN	<a href="#">Vaisala Indigo500 Series Transmitters User Guide</a>

### 1.3 Documentation conventions



**WARNING! Warning** alerts you to a serious hazard. If you do not read and follow instructions carefully at this point, there is a risk of injury or even death.



**CAUTION! Caution** warns you of a potential hazard. If you do not read and follow instructions carefully at this point, the product could be damaged or important data could be lost.



**Note** highlights important information on using the product.

### 1.4 Trademarks

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## 2. Product overview

### 2.1 Introduction to Indigo80

Vaisala Indigo80 Handheld Indicator is an industrial-grade portable diagnostics tool for spot-checking and process monitoring, as well as for configuring, troubleshooting, calibrating, and adjusting Vaisala Indigo-compatible probes and transmitters.

The Indigo80 indicator has two cable ports by which a combination of two probes or transmitters can be simultaneously connected to the indicator. Indigo80 can communicate with most current and future Vaisala probes and transmitters for measuring a wide range of parameters.

Indigo80 has a multilingual, menu-based user interface that shows live measurement data both numerically and graphically. The Indigo80 user interface is available in 10 languages.

Indigo80 user guidance is available for download at [docs.vaisala.com](https://docs.vaisala.com).

For more information on the Indigo product family, see [www.vaisala.com/indigo](https://www.vaisala.com/indigo).

### 2.2 Basic features and options

- Flexible operation with one or two Vaisala Indigo-compatible probes or transmitters
- Numerical and graphical views of live measurement data
- Intuitive user interface available in 10 languages
- Rechargeable battery
- Data can be logged and transferred to PC via Vaisala Insight PC software (available for download at [www.vaisala.com/insight](https://www.vaisala.com/insight))

Figure 1 Indigo80 handheld indicator

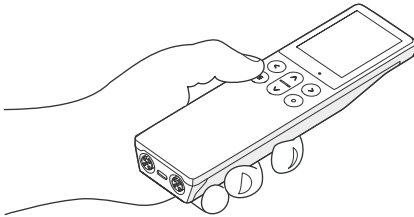


Table 3 Vaisala devices compatible with Indigo80

Device	Measurement type
<b>Vaisala Indigo-compatible devices</b>	
HMP1, HMP3, HMP4, HMP5, HMP7, HMP8, HMP9, HMP80L, HMP80N	Humidity and temperature
TMP1	Temperature

Device	Measurement type
DMP5, DMP6, DMP7, DMP8, DMP80A, DMP80B	Dew point temperature
GMP251, GMP252	Carbon dioxide
HPP271, HPP272	Hydrogen peroxide
MMP8	Moisture in oil
Indigo300, Indigo510, Indigo520	(Host devices)
<b>Other Vaisala devices</b>	
HMP60, HMP63, HMP110, HMP110REF, HMP113, HMP115, HMM170 <sup>1)</sup>	Humidity and temperature
HMP110T, HMP115T, TMP115 <sup>1)</sup>	Temperature
DMT143, DMT143L	Dew point temperature

1) *Indigo80 compatibility with these devices to be added during 2023.*



See [Firmware version compatibility of Indigo80-compatible devices Technical Note \(M212901EN\)](#) for firmware version compatibility.

#### More information

- [Indigo80 indicator parts \(page 11\)](#)
- [Indigo80 menus and views \(page 16\)](#)
- [Connecting probes to Indigo80 \(page 29\)](#)
- [Indigo80 battery \(page 37\)](#)
- [Indigo80 specifications \(page 47\)](#)

## 2.3 Indigo80 indicator parts

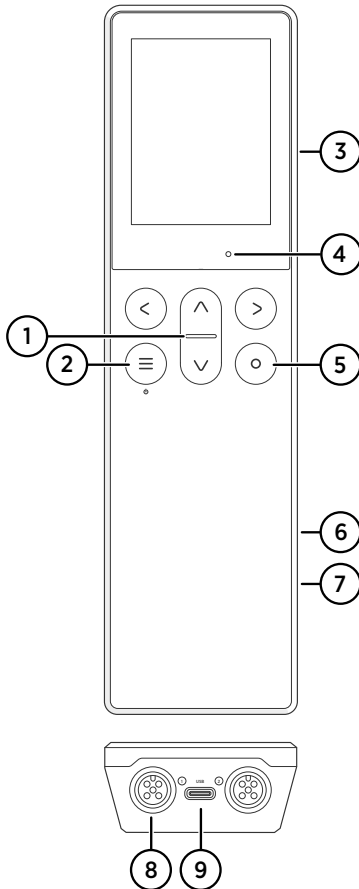


Figure 2 Indigo80 indicator parts, front and bottom views

- 1 Status indicator LED
- 2 Power on/off and main menu button
- 3 Magnetic hanger at the back of the device (optional accessory).  
**Handle with care.**
- 4 Ambient light sensor (controls display brightness)
- 5 Select button for selecting items in the user interface and opening the shortcut menu with options to edit views
- 6 Battery compartment at the back of the device
- 7 Type label located under the battery. Also shown in the **Indigo80 > About** view of the user interface.
- 8 M12-5F A-coded ports (2 pcs, labeled 1 and 2) for connecting compatible Vaisala devices
- 9 USB-C port for charging the battery and connecting Indigo80 to a computer to transfer data and configure Indigo80 settings with Insight PC software

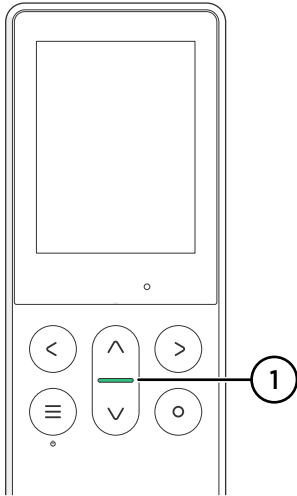


Take the **Getting started** tour in the **Help** menu of Indigo80 to familiarize yourself with the keypad buttons and menus.

### More information

- [Indigo80 menus and views \(page 16\)](#)
- [Indigo80 battery \(page 37\)](#)
- [Indigo80 specifications \(page 47\)](#)

## 2.4 Status LED



1 Status LED on Indigo80 keypad

Table 4 Indigo80 LED modes

Action/State	LED color and behavior
Indigo80 is switched on	Green, flashes briefly
USB-C cable connected while Indigo80 is powered on	Green, flashes briefly
Indigo80 is connected to a power source and the battery is charging while the display is off	Green, slow flashing
Indigo80 battery charge level is below 5 % or the battery is empty	Red, slow flashing
Data logging is ongoing while Indigo80 display is off	Green, slow flashing
Error(s) from a probe or transmitter connected to Indigo80	Red, constant

## 2.5 Safety



**CAUTION!** Do not modify the unit or use it in ways not described in the documentation. Modification, improper use, and/or careless handling may lead to safety hazards, equipment damage, failure to perform according to specification, decreased equipment lifetime, and/or the warranty becoming void.



**CAUTION!** The optional magnetic hanger of Indigo80 contains a strong magnet. Handle it with care and keep it away from devices that are sensitive to magnetic fields (for example, pacemakers, magnetic cards, and mechanical watches).

### 2.5.1 Lithium-ion battery related precautions



**WARNING!** Take the following precautions when handling lithium-ion batteries:

- Do not place the lithium-ion battery in fire or apply heat to the battery.
- Do not damage the battery with a sharp or blunt object, step on the battery, or otherwise damage the outer casing.
- Do not subject the battery to strong impacts or shocks.
- Do not expose the battery to water or salt water, or allow the battery to get wet.
- Do not disassemble or modify the battery. The battery contains safety and protection devices which, if damaged, may cause the battery to generate heat, rupture, or ignite.
- Do not leave the battery in direct sunlight, or use or store the battery inside cars in hot weather. Doing so may cause the battery to generate heat, rupture, or ignite. Using the battery in this manner may also result in shortened lifespan and loss of performance.
- Never short circuit, reverse polarity, disassemble, damage, or heat the battery over 100 °C (212 °F).
- DO NOT SPILL WATER ON A BURNING BATTERY. A fire extinguisher must be used. If an exposed lithium-ion battery catches fire, it will burn even more violently if it comes into contact with water or even moisture in the air.



**CAUTION!** The preinstalled Indigo80 battery is not user-replaceable. Using batteries other than those provided by Vaisala will void the warranty of Indigo80. Contact your nearest Vaisala Service Center for any battery-related maintenance needs. See [www.vaisala.com/support](http://www.vaisala.com/support).



**CAUTION!** Remove the battery before shipping Indigo80 to Vaisala for repairs. For shipping instructions, contact your nearest Vaisala Service Center. See [www.vaisala.com/support](http://www.vaisala.com/support).



**CAUTION!** Follow local laws and regulations to dispose of used or damaged lithium-ion batteries in a safe manner.

## 2.5.2 AC adapter related precautions



**CAUTION!** Make sure that the AC adapter you are using to charge Indigo80 is an isolated power source that fulfills the requirements of one of the following:

- Limited-Energy Circuit (LEC) in accordance with IEC/EN/UL/CSA 61010-1
- Limited Power Source (LPS) in accordance with IEC/EN/UL/CSA 60950-1 or IEC/EN/UL/CSA 62368-1, Annex Q
- Class 2 supply source that complies with the National Electrical Code (NEC), NFPA 70, Clause 725.121 and Canadian Electrical Code (CEC), Part I, C22.1.

For technical requirements of a compatible AC adapter, see [Indigo80 specifications \(page 47\)](#).



**CAUTION!** Use the AC adapter only in its specified environmental conditions.

## 2.5.3 ESD protection

Electrostatic discharge (ESD) can damage electronic circuits. Vaisala products are adequately protected against ESD for their intended use. However, it is possible to damage the product by delivering electrostatic discharges when touching, removing, or inserting any objects in the equipment housing.

To avoid delivering high static voltages to the product:

- Handle ESD-sensitive components on a properly grounded and protected ESD workbench or by grounding yourself to the equipment chassis with a wrist strap and a resistive connection cord.
- If you are unable to take either precaution, touch a conductive part of the equipment chassis with your other hand before touching ESD-sensitive components.
- Hold component boards by the edges and avoid touching component contacts.

## 2.5.4 FCC Part 15 compliance statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



**CAUTION!** Changes or modifications to this equipment not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## 3. Indigo80 menus and views

Indigo80 has a versatile and intuitive user interface available in 10 languages.

### 3.1 Start-up wizard

When you take Indigo80 into use for the first time, a start-up wizard prompts you to set the date, time, and preferred units. You can connect Indigo80 to the Insight PC software for automatic setup, or you can configure the device manually. The start-up wizard is initiated also after each firmware update.

After completing the setup, you can take the **Getting started** tour showing the basics of the Indigo80 user interface.

#### More information

- [Indigo80 menu \(page 27\)](#)
- [Help menu \(page 28\)](#)

### 3.2 Main menu

Pressing the  button while navigating the Indigo80 menus and views opens the main menu.

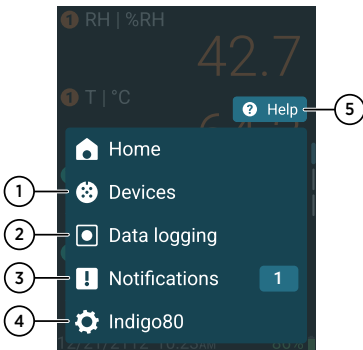


Figure 3 Indigo80 main menu

- 1 **Devices** menu contains, for example, options related to sensor purge, calibration, and environment settings (depending on the connected device).
- 2 **Data logging** menu for setting logging interval and duration, and browsing data files.
- 3 **Notifications** menu displays notifications related to Indigo80 and the connected devices.
- 4 **Indigo80** menu for changing the settings of Indigo80 (for example, date, time, and language) and viewing device information.
- 5 **Help** menu contains a **Getting started** tour showing the key features of Indigo80, as well as instructions for sending devices to Vaisala for calibration and maintenance.



### 3.3 Measurement view

The versatile measurement view of Indigo80 can be edited to show multiple types of views and comparisons of measurement data from connected devices.

To access the measurement view, press  $\ominus$  and select **Home** in the Indigo80 main menu.

For more information on editing options, see [Editing measurement view \(page 18\)](#). The graph view associated with the measurement view is introduced in [Graph view \(page 21\)](#).

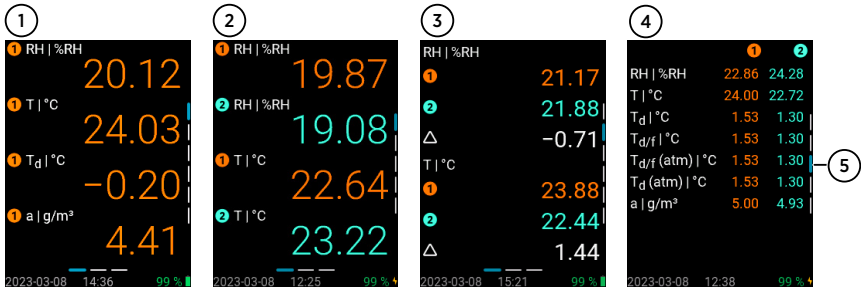


Figure 4 Types of measurement views in Indigo80

- 1 Measurement view with four measurement parameters from one probe shown.
- 2 Measurement view with two measurement parameters from two probes shown.
- 3 Comparison view showing the measured values from two probes and their difference (indicated by the delta symbol).
- 4 Parameter list view showing all the output parameters available from the connected probes.
- 5 The bars on the right indicate the number of views stacked vertically. Use the  $\odot$  and  $\odot$  buttons on the keypad to move between views.

A pause in normal measurement activity (for example, because of sensor purge or unavailable readings) is indicated by the caution symbol, a textual notification, and yellow font. The font turns back to white once the measurement is stable again.

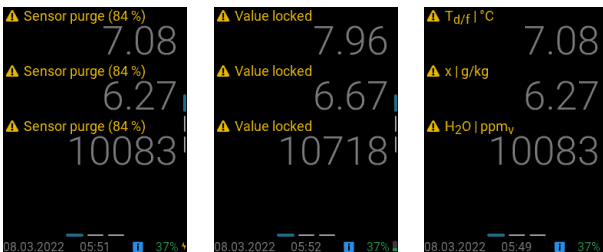


Figure 5 Measurement view with sensor purge ongoing

### 3.3.1 Editing measurement view

You can add, edit, and delete the measurement views in Indigo80. Press  $\odot$  while in the measurement view to open the shortcut menu for editing the views.

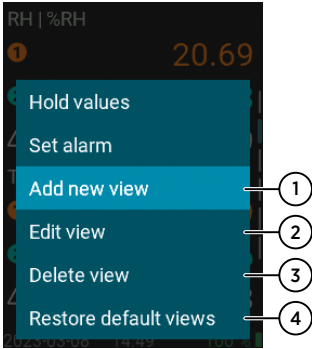


Figure 6 Shortcut menu for editing measurement views

- 1 Two types of templates are available for new views (for examples of different types of measurement views, see [Figure 4 \(page 17\)](#)):
  - **Default:** allows you to add a maximum of 11 new vertically-stacked views. The total number of views in the stack is 12. Each view fits a maximum of four measurement parameters.
  - **Comparison:** allows you to add a maximum of 10 new vertically-stacked views. The comparison template is available only when two probes are connected to Indigo80.
- 2 **Edit view:** you can add new parameters into an existing view (space allowing), or delete parameters from a view.
- 3 **Delete view** deletes the active measurement view or comparison view, as well as the related graph views.
- 4 **Restore default views** deletes all created custom views and restores the default views, which vary depending on the type and number of probes connected to Indigo80.


The number of new views that can be added is higher for probes with just one output parameter, for example, GMP252. For multiparameter probes, such as HMP7, the parameter list views at the bottom of the stack reserve up to three views of the total, allowing for fewer new views to be added.

#### More information

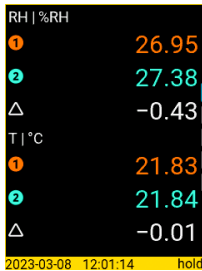
- [Graph view \(page 21\)](#)



### 3.3.2 Holding values in measurement view

With the **Hold values** function you can freeze the measurement view, for example, for taking a photo of the readings. Date and time are shown on the bottom of the display.

- ▶ 1. While in the measurement view, press  to open the shortcut menu.
2. Select **Hold values**.


The measurement view freezes and the altered state is indicated by a yellow frame and the text **hold** in the bottom right corner of the display.

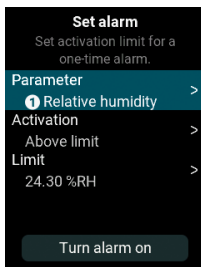


3. Exit the view by pressing  or .


### 3.3.3 Setting measurement limit alarm

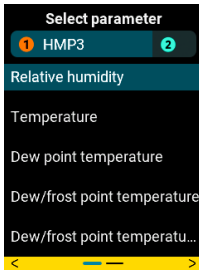
You can set a one-time measurement limit alarm for any one parameter output by your probe. When the measured value exceeds or falls below the set limit, this triggers a visual and audible alarm.<sup>1)</sup> Note that you can set the alarm for one parameter from one probe at a time.

- ▶ 1. While in the measurement view, press  to open the shortcut menu.
2. Select **Set alarm > Parameter**.

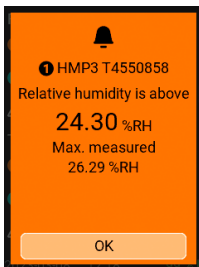


1) Turn sounds on in Indigo80 settings to activate the audible alarm.

- All output parameters from the connected probe are shown in the list. If you have two probes connected, use the arrow buttons to switch between the lists showing the parameters from each probe. Press  to select a parameter and exit the list view.



- Set values for **Activation** and **Limit** of the alarm.
- Select **Turn alarm on** to activate the alarm.
- A notification is shown and sounded when the alarm is activated.



- Select **OK** to turn off the alarm.

To turn off an alarm that has not yet activated, select **Set alarm** in the shortcut menu and select **Turn alarm off**.

## 3.4 Graph view

Each measurement view (excluding the parameter list view) has a graph view associated to it. The graph view shows you the measurements as a curve. From the curve you can examine the data trend and history. To open the graph view, press  $\odot$  while in the measurement view.

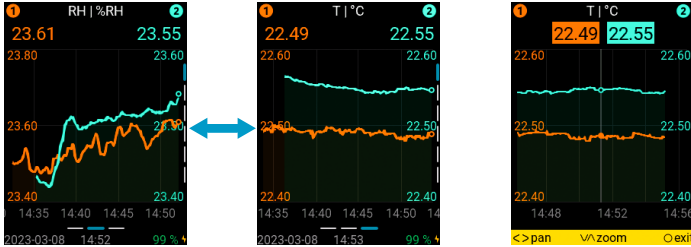


Figure 7 Graph views in Indigo80

You can zoom in and out in the graph and move back and forward on the timeline:

- To enable moving on the graph, press the  $\odot$  button
- To zoom in and out, press the  $\odot$  and  $\odot$  buttons
- To move back and forward on the timeline, use the  $\odot$  and  $\odot$  buttons
- To exit the zoom functionality, press the  $\odot$  button.

## 3.5 Devices menu

In the **Devices** menu of Indigo80 you can see all devices connected to Indigo80. The menu contains calibration and adjustment options for connected devices, as well as device-specific settings. Note that all settings related to the indicator itself are located in the **Indigo80** menu (see [Indigo80 menu \(page 27\)](#)).

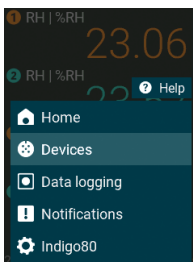


Figure 8 Devices menu in Indigo80 main menu

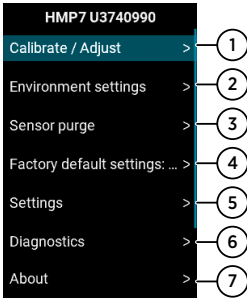


Figure 9 Options in Devices menu, HMP7 probe example

- 1 In the **Calibrate / Adjust** menu you can select the **Guided calibration** wizard or, alternatively, enter manually the values needed to calibrate and adjust the probe. The available options depend on the probe model and the parameter selected for calibration and adjustment. For more information, see also [Overview of calibration and adjustment with Indigo80 \(page 23\)](#).  
The **Calibrate / Adjust** menu also contains calibration information about the connected probe.
- 2 In the **Environment settings** menu you can give additional information about the connected probe's measurement environment (such as pressure or temperature) to improve measurement accuracy. The settings in **Environment settings** are interconnected to the settings applied in **Settings > Compensation setpoints**.  
The available environment settings depend on the probe and probe firmware version. For detailed information on the probe-specific requirements for the settings, see your probe's user documentation.
- 3 In the **Sensor purge** menu you can manually start the purge function for the probe models that support it. Sensor purge heats up the sensor briefly to evaporate possible contaminants that otherwise could affect measurement accuracy.  
Before starting purge, you can set purge interval and activate/deactivate interval purge and startup purge in the **Settings > Sensor purge** menu.
- 4 In the **Factory default settings** menu you can restore the connected probe back to its factory default settings, if needed.
- 5 In the **Settings** menu you can configure settings such as filtering factor (affects the speed at which the latest measurement is integrated into the output of the probe) and compensation setpoints (information about measurement environment to improve measurement accuracy).  
The available settings depend on the probe and probe firmware version. For detailed information on the probe-specific requirements for the settings, see your probe's user documentation.
- 6 The **Diagnostics** view shows any probe-specific Modbus error codes. See the connected probe's Modbus documentation in the probe's User Guide for register information. The security hash shown in the **Diagnostics** view changes when any change is made to the settings of the device connected to Indigo80.
- 7 The **About** view contains information about the connected device, such as firmware revision, configuration code, serial number, and calibration date.

**More information**

- [Overview of calibration and adjustment with Indigo80 \(page 23\)](#)
- [Configuring probe features with Indigo80 handheld indicator \(page 31\)](#)
- [Configuring environment settings with Indigo80 handheld indicator \(page 32\)](#)

**3.5.1 Overview of calibration and adjustment with Indigo80**

The Indigo80 handheld indicator provides two ways to calibrate and adjust measurements for probes: **Guided calibration** and **Manual adjustment**.

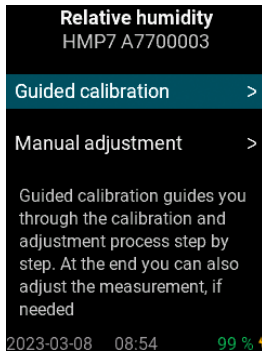


Figure 10 Indigo80 calibration methods for probes

- Choose **Guided calibration** when you want the indicator to guide you through the calibration process step by step. At the end you can also adjust the measurement, if needed.
- Choose **Manual adjustment** when you want to freely set the reference and measured values to adjust the measurement.

Calibrating a measurement with the indicator, including purge and adjustment, typically takes 1... 2 hours depending on the number of calibration points.



For detailed information on using Indigo80 for calibration and adjustment, see your Indigo80-compatible probe's user documentation at [docs.vaisala.com](https://docs.vaisala.com).



If you have a transmitter connected to Indigo80, you can also use the indicator to test and adjust the input and output channels of the transmitter. For more information, see your transmitter's user documentation at [docs.vaisala.com](https://docs.vaisala.com).

**More information**

- [Devices menu \(page 21\)](#)

## 3.6 Data logging menu

In the **Data logging** menu you can select the measurement parameters for logging, logging duration, and sampling interval. The device memory available for logging is also shown in this menu. You can view logged data in graph format and rename and delete data files.

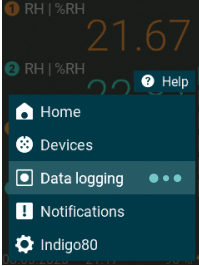


Figure 11 Data logging menu in Indigo80 main menu. Ongoing data logging indicated by the animated dots next to the menu name.

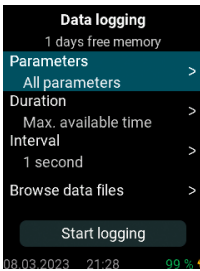


Figure 12 Data logging menu, top level

Data logging options selectable in Indigo80:

### Parameters

All output parameters from the connected probe are listed. If you have two probes connected, use the arrow buttons to switch between the parameter lists. Press  $\odot$  to make selections in the list.

### Duration

1 minute ... Max. available time (depends on the amount of memory available for logging data)

### Interval



1 second ... 12 hours

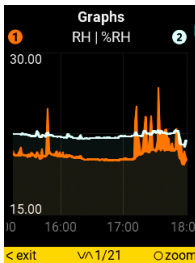
Yellow font in the **Data logging** menu highlights accidentally selected impossible combinations, for example, logging duration of 5 minutes and interval of 15 minutes.





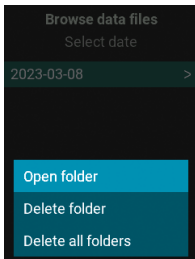
### 3.6.1 Viewing and managing data files in Data logging menu

You can view the logged measurement data in numerical and graphical format, and rename and delete data files.

1. In the **Data logging** menu, select **Browse data files > [data folder name] > [data file name]**.
2. Select **Graphs** to view a graph of the measurements for each parameter. Use the  button and the arrow buttons to zoom in the graph and move left and right on the timeline. Press  to exit the graph view.



3. Select **Summary** to view the minimum, maximum, and mean values for each logged parameter in the data file. Press  to exit the view.
4. Select **Data file info** to view other details about the data logging session: for example, duration, interval, connected probes and their serial number and firmware version.
5. To rename or delete data folders, press  while in the **Browse data files** view. This opens a shortcut menu with options to open or delete the folder or to delete all data folders.



To export data files from Indigo80, connect the device to a computer with Insight PC software installed. For more information, see [Indigo80 data files in Insight PC software \(page 35\)](#).

## 3.7 Notifications menu

All active and past notifications related to Indigo80 or devices connected to Indigo80 are listed in the **Notifications** menu.

You can access the **Notifications** menu from the main menu of Indigo80.

The number of active notifications is displayed next to the name of the menu.

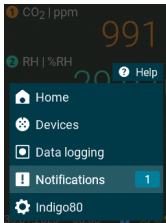


Figure 13 Notifications menu in Indigo80 main menu

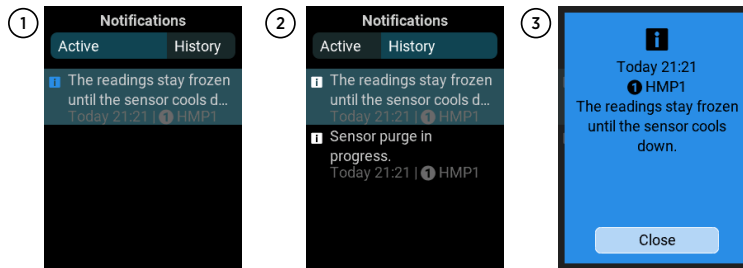






Figure 14 Notifications menu with Active and History tabs and opened notification shown

- 1 The **Active** tab lists notifications related to ongoing activities of Indigo80 or a connected device. The most recent notifications are listed at the top of the list. Items stay on the **Active** tab until the status or activity that has triggered the notification expires or stops. The notifications have three severity levels:

-  Error/Warning
-  Caution
-  Info

- 2 Up to 50 past notifications are listed on the **History** tab, with the most recent notifications shown at the top of the list.
- 3 Press  to read the full details of the notification.

### More information

- [Troubleshooting \(page 44\)](#)

## 3.8 Indigo80 menu

The **Indigo80** menu in the main menu contains user interface settings, information about the device, as well as the option to restore factory default settings of Indigo80.

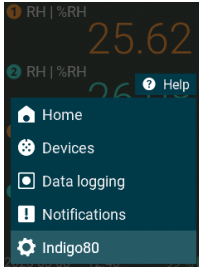


Figure 15 Indigo80 menu in the main menu

User interface settings selectable in Indigo80:

**Display brightness**

Automatic - 25 % - 50 % - 75 % - 100 %

**Sound volume**

Off - Low - Medium - High. This selection affects all the notification sounds of Indigo80.

**Keypad sounds**

Off - Low - Medium - High

**Automatic power off**

Never - After 15 minutes - After 60 minutes

**Language**

English - Japanese - Chinese - Finnish - German - French - Spanish - Swedish - Portuguese - Italian

**Date format**

DD.MM.YYYY - MM/DD/YYYY - YYYY-MM-DD

**Time format**

12-hour clock - 24-hour clock

**Units**

**Preferred units:** Metric - Non-metric

**Units per parameter:** preferred output units selectable per parameter, for example, Celsius or Fahrenheit for temperature and  $\text{g}/\text{m}^3$  or  $\text{gr}/\text{ft}^3$  for absolute humidity

The **About** view contains Indigo80 type label and information about the device, such as serial number and firmware version.

In the **Factory default settings** view you can restore Indigo80 to its default settings, with option to delete all data files stored in the device. For instructions, see [Restoring factory default settings \(page 42\)](#).

### 3.9 Help menu

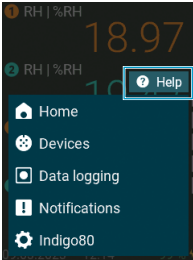


Figure 16 Help menu in Indigo80 main menu

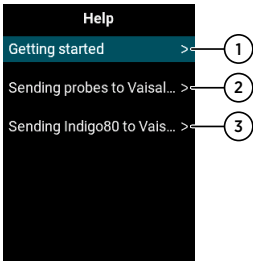


Figure 17 Help menu, top level

- 1 **Getting started:** contains a tour showing the basics of the Indigo80 user interface, such as keypad button functions, different types of menus, and navigation in the views.
- 2 **Sending probes to Vaisala for calibration:** contains instructions for sending probes to Vaisala and a QR code for accessing [store.vaisala.com](https://store.vaisala.com).
- 3 **Sending Indigo80 to Vaisala:** contains instructions for sending Indigo80 to Vaisala and a QR code for accessing [store.vaisala.com](https://store.vaisala.com).



Note that the lithium-ion battery of Indigo80 needs to be removed before shipping the device to Vaisala for repairs.

#### More information

- [Removing battery \(page 38\)](#)
- [Maintenance and calibration services \(page 51\)](#)

## 4. Using probes with Indigo80



For detailed information on using Indigo80, for example, for calibration and adjustment, see your Indigo80-compatible probe's or transmitter's user guidance at [docs.vaisala.com](https://docs.vaisala.com).

### 4.1 Connecting probes to Indigo80



**CAUTION!** You can connect only Indigo-compatible Vaisala devices to the indicator.

Up to two Vaisala Indigo-compatible probes or transmitters can be connected to the ports located on the bottom of Indigo80. You can connect and disconnect devices both when the indicator is powered on and when it is off.

Vaisala recommends using cables provided by Vaisala when connecting devices to the indicator. Cables and other accessories are available to order at [store.vaisala.com](https://store.vaisala.com).

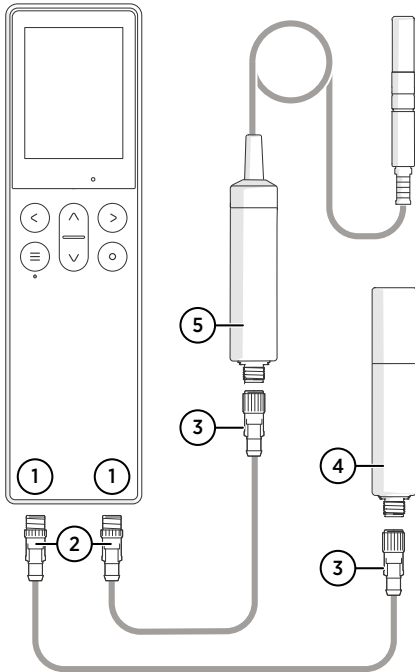
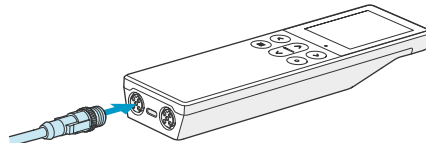
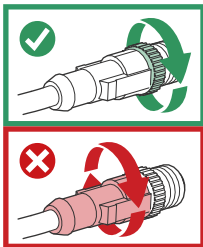


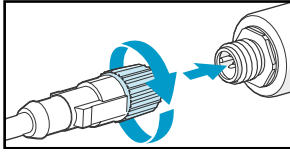
Figure 18 Connecting probes to Indigo80

- 1 M12-5F ports on the bottom of Indigo80 for connecting compatible Vaisala devices. Ports are labeled 1 and 2.
- 2 M12-5M A-coded cable connector
- 3 M12-5F A-coded cable connector
- 4 Probe displayed as 1 by Indigo80 (GMP252 shown)
- 5 Probe displayed as 2 by Indigo80 (HMP7 shown)

- ▶ 1. If the indicator is powered and no devices are connected to it, the text **Please connect a probe** will be shown on the display.
- 2. Insert the probe connection cable in one of the ports on the bottom of the indicator.
  - **Note the orientation of the cable connector when inserting it**
  - **Hold the connector in place while turning its locking ring clockwise - never twist the connector body!**



3. Connect the probe to the M12-5F end of the probe connection cable.



When the indicator recognizes the connected probe, it shows a notification on the display (for example, **GMP252 connected**). A probe connected to the leftmost port in the indicator is labeled **1** on the indicator's display, while the probe in the rightmost port is labeled **2**.

4. To change probes, simply detach the cable from the probe and connect a new probe.



You can attach the probes to the wall using the mounting accessory provided with the probes. For more information, see your probe's user guidance (available at [docs.vaisala.com](https://docs.vaisala.com)).

## 4.2 Configuring probe features with Indigo80 handheld indicator



- Probe connection cable

You can use the Indigo80 handheld indicator to configure probe features such as compensation setpoints, filtering factor, and serial communication. The available features depend on the probe model and firmware version.



Accessing certain configuration options for your probe requires using the free Insight PC software, downloadable at [www.vaisala.com/insight](https://www.vaisala.com/insight).

1. Connect the probe(s) to the indicator.
2. Open the main menu by pressing **⊖**.
3. Select **Devices**. If you have more than one device connected to the indicator, make a further selection between the devices.
4. Select **Settings** to access and change the features available for your probe.
5. Exit the menu by pressing **⊙** or return to the main menu by pressing **⊖**.

**More information**

- [Devices menu \(page 21\)](#)
- [Connecting probes to Indigo80 \(page 29\)](#)

## 4.3 Configuring environment settings with Indigo80 handheld indicator



- Probe connection cable

For optimal measurement accuracy, you can use the Indigo80 handheld indicator to give additional information about the connected probe's measurement environment.



The environment settings available via Indigo80 correspond to the environmental compensation settings of the probe. Therefore, **Environment settings** and **Settings > Compensation setpoints** are interconnected: the configuration set in either menu is applied to both.

- ▶ 1. Connect the probe(s) to the indicator.
2. Open the main menu by pressing  $\ominus$ .
3. Select **Devices**. If you have more than one device connected to the indicator, make a further selection between the devices.
4. Select **Environment settings** to access the settings for your probe.

The available environment settings depend on the probe and probe firmware version. For detailed information on the probe-specific requirements for the settings, such as **Pressure** and **Temperature**, see your probe's user documentation.

5. Exit the menu by pressing  $\odot$  or return to the main menu by pressing  $\ominus$ .

**More information**

- [Devices menu \(page 21\)](#)
- [Connecting probes to Indigo80 \(page 29\)](#)



## 5. Using Indigo80 with Insight PC software

### 5.1 Vaisala Insight PC software

Vaisala Insight PC software is a configuration software for Indigo-compatible probes and other supported devices. Insight is available for Microsoft Windows® operating systems (64-bit only).

For a full list of supported operating system versions, see [www.vaisala.com/insight](http://www.vaisala.com/insight).

Insight PC software is available for download at [www.vaisala.com/insight](http://www.vaisala.com/insight).

With the Insight PC software, you can:

- See device information and status
- See real-time measurement data from connected probes
- Configure transmitter settings
- Calibrate and adjust the connected devices
- Configure probe features and settings such as condensation prevention, compensation setpoints, calculation coefficients, sensor purge, filtering factor, and serial communication. The available features and settings depend on the probe model and firmware version. For more information, see your probe's user documentation at [docs.vaisala.com](http://docs.vaisala.com).

Insight PC software version 1.2.0 and later support the Indigo80 indicator.

With Indigo80 connected to Insight, you can:

- Configure Indigo80 settings (for example, date, time, and user interface preferences)
- View, rename, delete, and export files containing logged data
- Update Indigo80 firmware version.

### 5.2 Connecting Indigo80 to Insight PC software



**CAUTION!** When connecting several devices at the same time, note that your computer may not be able to supply enough power through its USB ports. Use an externally powered USB hub that can supply >2 W for each port.



- Computer with Microsoft Windows® operating system (64-bit version) and Insight PC software (version 1.2.0 or later) installed
- USB cable with a USB-C connector (type C to A or type C to C)

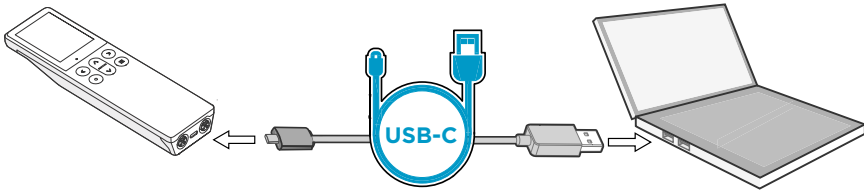


Figure 19 Connecting Indigo80 to Insight PC software with USB-C cable

1. Open the Insight PC software on your computer.
2. Connect a USB cable to a free USB port on your computer.
3. Connect the other end of the cable to the USB-C connector located on the bottom of Indigo80.
4. Switch Indigo80 on by pressing  $\ominus$  (if not powered on already).
5. Wait for the Insight PC software to detect Indigo80.

## 5.3 Insight PC software overview

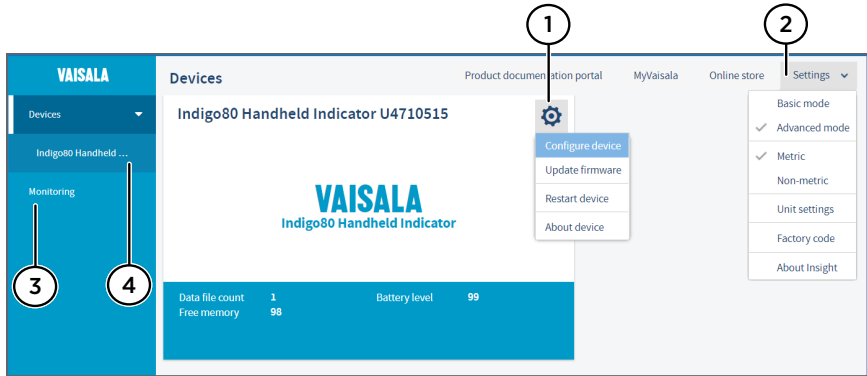



Figure 20 Insight PC software main menu with Indigo80 connected

- 1 Select  to access Indigo80 settings.
  - **Configure device:** options for selecting language, power off delay, preferred units (metric/non-metric), keypad and notification sounds, date and time settings, and display brightness control.
  - **Update firmware:** opens a dialog for updating Indigo80 firmware.
  - **Restart device:** for restarting Indigo80.
  - **About device:** information about Indigo80, for example, device serial number and firmware version.
- 2 Select **Settings** to switch between the **Basic mode** and **Advanced mode** user modes, change the units for probes connected to Insight, enter a factory code to access restricted functionalities, or view information about the Insight software.
- 3 The **Monitoring** menu provides options for monitoring and logging selected parameters from probes connected to Insight, and exporting the logged data as a CSV (comma-separated value) file to, for example, Microsoft Excel. The **Monitoring** menu shows only devices connected directly to Insight. Devices connected to Indigo80 which is connected to Insight are not shown in the menu.
- 4 **Indigo80 Handheld Indicator** menu containing the **Data files** tab. The files generated by the data logging functionality of Indigo80 can be viewed, renamed, deleted, and exported on the **Data files** tab.

### More information

- [Indigo80 data files in Insight PC software \(page 35\)](#)
- [Updating firmware version with Insight PC software \(page 40\)](#)

### 5.3.1 Indigo80 data files in Insight PC software

The files generated by the data logging functionality of Indigo80 can be viewed, renamed, deleted, and exported as CSV files on the **Data files** tab of Insight PC software.

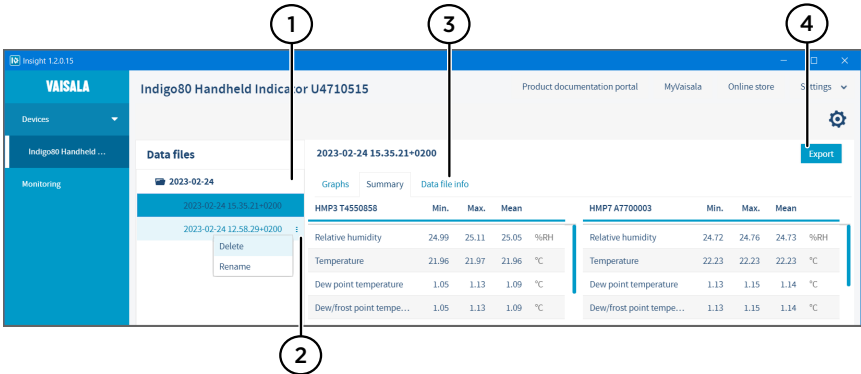


Figure 21 Data files tab in Insight PC software

- 1 Select the data file folder to open the list of data files.
- 2 You can delete and rename data files. Select the three dots next to the data file name to open the edit menu.
- 3
  - Logged data is displayed in graphical and numerical format on the **Graphs** and **Summary** tabs.
  - **Data file info** contains information about the devices used for logging, as well as logging duration and interval, and the number of parameters, samples, and data values.
- 4 Select **Export** to save the logged data in CSV format, for example, for viewing in Microsoft Excel.



You can rename and delete data folders and files also in the **Data logging** menu of Indigo80.

**More information**

- [Data logging menu \(page 24\)](#)

## 6. Indigo80 battery

### 6.1 Indigo80 battery



**WARNING!** When handling batteries, see also [Lithium-ion battery related precautions](#) (page 13).



**CAUTION!** The preinstalled Indigo80 battery is not user-replaceable. Using batteries other than those provided by Vaisala will void the warranty of Indigo80. Contact your nearest Vaisala Service Center for any battery-related maintenance needs. See [www.vaisala.com/support](http://www.vaisala.com/support).



**CAUTION!** If you are using a different AC adapter than the one provided with the Indigo80 indicator, make sure the specifications of the adapter match those given in [Table 2](#).



Indigo80 has a rechargeable battery that is already in place as shipped from the factory. The battery is delivered partially charged.



For battery and AC adapter specifications, see [Table 2](#).

#### 6.1.1 Battery charge level indicator

The battery charge level indicator displays an estimate of the charge remaining in the Indigo80 battery. Battery charge level percentage and a corresponding symbol are shown in the lower right corner of the Indigo80 display.

Table 5 Battery charge level indicator

Symbol on display	Description
	Charge level percentage and green battery symbol shown when the battery level is 100 % ... 15 %.
	Charge level percentage and yellow battery symbol shown when the battery level is 14 % ... 5 %. The notification <b>Battery level below 15 %</b> is displayed briefly.

Symbol on display	Description
	<p>Charge level percentage and red battery symbol shown when the battery level is below 5 %.</p> <p>A full-screen notification <b>Battery level below 5 %</b> is displayed.</p> <p>The Indigo80 status LED will blink red to indicate that the battery needs recharging.</p>
	<p>Charge level percentage and yellow lightning symbol shown when the indicator is connected to a power supply and the battery is charging.</p>

## 6.1.2 Recharging Indigo80 battery



Note the charging temperature of the battery, 0 ... +45 °C (+32 ...+113 °F).

- ▶ 1. Connect the USB-C connector of an AC adapter to Indigo80.

The USB-C port is located on the bottom of Indigo80.

- ▶ 2. Plug in the AC adapter to a wall socket.

A yellow lightning symbol in the lower right corner of the display indicates that the battery is charging. When the display is off, charging status is indicated by a green LED in the keypad. Typical recharge duration from empty to full battery with a 45 W adapter is approximately 2 h.

## 6.1.3 Removing battery



**CAUTION!** If you need to replace the M4×14 hex screws on the back cover of Indigo80 with new ones, make sure the replacing screws are identical to the original ones: exactly 14 mm (0.55 in) in length. Screws that are shorter or longer than 14 mm (0.55 in) may damage the device or compromise its ingress protection.

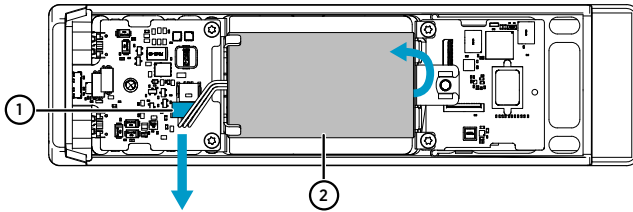


- 2-mm Allen key for the M4×14 hex screws on the back cover of Indigo80

- ▶ 1. Detach any USB or probe connection cables from Indigo80.
- ▶ 2. Turn off Indigo80 by pressing the power button for 2 seconds.
- ▶ 3. Place the indicator on a clean, flat surface, with the display facing down.
- ▶ 4. Open the screws (2 pcs) on the back cover and lift the cover to remove it.

5. Detach the battery connector from the component board by pulling it out gently.

**Do not** touch the connector with conducting material, for example with a metallic screwdriver.



- 1 Battery connector, connected to battery with 3 wires
- 2 Lithium-ion battery

6. Lift the top end of the battery and remove the battery from the cradle.
7. Reattach the back cover and fasten it tightly with the screws.

## 7. Maintenance and troubleshooting

### 7.1 Updating Indigo80 firmware version

#### 7.1.1 Updating firmware version with Insight PC software




- Firmware update package (.zip file) for Indigo80
- Computer with Microsoft Windows® operating system (64-bit version) and Insight PC software (version 1.2.0 or later) installed
- USB-C cable for connecting Indigo80 to computer




Link to the latest Indigo80 firmware update package is available on the Indigo80 product page at [www.vaisala.com/indigo80](http://www.vaisala.com/indigo80).

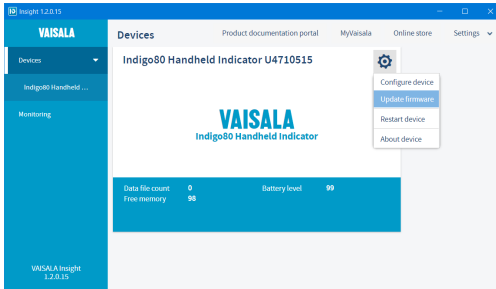


Updating Indigo80 firmware takes approximately 5 minutes. Do not disconnect the USB cable during firmware transfer.

- ▶ 1. Make sure you have the latest Indigo80 firmware update package ('Indigo80-<version>-firmware.zip') available on your computer.  
Do not unzip the package, as Insight will only accept the file in .zip format.
2. Open Insight software on your PC.
3. Connect a USB cable to a free USB port on your computer.
4. Connect the other end of the cable to the USB-C connector located on the bottom of Indigo80.
5. Switch Indigo80 on by pressing  (if not powered on already).
6. Wait for Insight to detect Indigo80.



7. In the **Devices** menu of Insight, select the Indigo80 settings icon  to open the **Update firmware** dialog.



8. Select **Browse...** to locate the .zip file. Select the file and select **Open**.

If Indigo80 has powered off before firmware transfer starts, restart the device and wait for Insight software to detect it. Continue from [step 7](#).

9. Select **Update**.
10. Firmware transfer starts. The notifications **Transferring firmware... > Updating firmware... > Processing update... > Firmware updated** are shown on the Indigo80 display.

After successful update, the notification **Firmware updated successfully** is shown.

## 7.1.2 Updating firmware version with file manager



- Firmware update package (.zip file) for Indigo80
- USB-C cable for connecting Indigo80 to computer
- Computer with Microsoft Windows® operating system (64-bit version) (recommended).

Updating the firmware version using macOS or Linux operating system is possible, but may require installing Media Transfer Protocol (MTP) add-on files first. The specific software needed for accessing MTP devices varies depending on your operating system variant. Successful firmware update cannot be guaranteed with other than the Windows operating system.




Link to the latest Indigo80 firmware update package is available on the Indigo80 product page at [www.vaisala.com/indigo80](http://www.vaisala.com/indigo80).

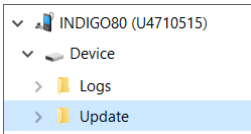


Updating Indigo80 firmware takes approximately 5 minutes. Do not disconnect the USB cable during firmware transfer.

- ▶ 1. Unzip the firmware update package ('Indigo80-<version>-firmware.zip') into any folder on your computer.

The package contains the firmware file and other relevant resource files.

- 2. Connect a USB cable to a free USB port on your computer.
- 3. Connect the other end of the cable to the USB-C connector located on the bottom of Indigo80.
- 4. Switch Indigo80 on by pressing  (if not powered on already).
- 5. Copy all content from the unzipped firmware package into folder **INDIGO80 (serial number) > Device > Update** in your computer's file manager.



- 6. Firmware transfer starts. The notifications **Transferring firmware... > Updating firmware... > Processing update... > Firmware updated** are shown on the Indigo80 display.

After successful update, the notification **Firmware updated successfully** is shown.

**More information**


- [Troubleshooting \(page 44\)](#)

## 7.2 Restoring factory default settings

You can restore all Indigo80 settings back to factory defaults. Restoring the settings will not affect the settings of devices connected to Indigo80.



**CAUTION!** A factory reset deletes all current settings of the device. After the factory reset, you need to reconfigure the settings.

- ▶ 1. In the Indigo80 main menu, select **Indigo80 > Factory default settings**.
- 2. If you wish to remove all data files stored in Indigo80 in addition to resetting the device, highlight the **Also delete data files** check box and press the  button to select the option. To deselect the option, press  again.
- 3. Select **Restore > OK**. The device restarts.

4. At device restart, you are prompted to complete the **Indigo80 setup** sequence:
  - a. Select language
  - b. Set date, time, and preferred units either with Insight PC software (requires connecting Indigo80 to a computer with USB cable) or manually.

## 7.3 Cleaning Indigo80



Keep the connectors on the bottom of Indigo80 clean of any type of dirt or dust.



Use only a soft, lint-free cloth to wipe the display. Avoid abrasive cloths and any type of sharp items, as they will damage the anti-fingerprint and anti-reflection coatings on the glass.

You can clean the Indigo80 body by wiping it with a moist cloth. The following chemicals can be used:

- Alcohol-based cleaning agents such as ethanol and IPA (70 % Isopropyl Alcohol, 30 % water)
- Deionized water
- Mild soap solution



Avoid exposing Indigo80 to chemicals for unnecessarily long periods of time. Do not immerse it in a chemical, and wipe chemicals off the surface after cleaning.



Refer to the probe-specific cleaning instructions when cleaning the probe connected to Indigo80. Do not spray anything directly on the probe head, since that may deposit impurities on the sensor.

## 7.4 Fastening magnetic hanger accessory



**CAUTION!** The optional magnetic hanger of Indigo80 contains a strong magnet. Handle it with care and keep it away from devices that are sensitive to magnetic fields (for example, pacemakers, magnetic cards, and mechanical watches).



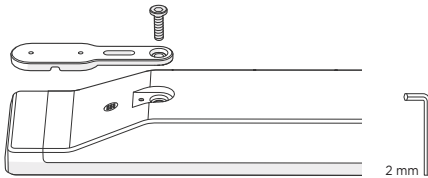
**CAUTION!** If you need to replace the M4×14 hex screws on the back cover of Indigo80 with new ones, make sure the replacing screws are identical to the original ones: exactly 14 mm (0.55 in) in length. Screws that are shorter or longer than 14 mm (0.55 in) may damage the device or compromise its ingress protection.

A magnetic hanger is available as an optional accessory for attaching Indigo80 to metallic surfaces while taking measurements. Vaisala item code of the hanger is ASM214318SP.



- 2-mm Allen key for the M4×14 hex screws on the back cover of Indigo80

- ▶ 1. Detach any USB or probe connection cables from Indigo80.
2. Turn off Indigo80 by pressing the power button for 2 seconds.
3. Place the indicator on a clean, flat surface, with the display facing down.
4. Remove the topmost screw from the back cover and place it aside.
5. Position the screw hole of the magnetic hanger on Indigo80, with the text VAISALA on the hanger facing out.



6. Keep the hanger positioned in line with Indigo80 and tighten the screw to fasten the hanger into place.

#### More information





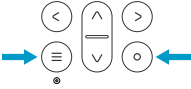
- [Spare parts and accessories \(page 50\)](#)






## 7.5 Troubleshooting

If you have a problem with using Indigo80, check the following tables before contacting Vaisala. If the problem you have is not listed in the tables, or if the proposed solution does not fix the problem, contact Vaisala. See [Technical support \(page 52\)](#) for more information.

If you suspect that the problem is with the devices attached to Indigo80, you can also check the device diagnostics and status with Insight PC software and Modbus status registers. For device-specific register information, see the connected device's user documentation at [docs.vaisala.com](https://docs.vaisala.com).

<b>Problem: There is no measurement data from a connected probe.</b>	
<b>Possible cause:</b> The probe may be disconnected from Indigo80.	<b>Solution:</b> <ol style="list-style-type: none"> <li>1. If the connected probe has an LED status indicator, check its color.</li> <li>2. If the status indicator is off, make sure that the probe connection cable is properly connected at both ends.</li> <li>3. If the status indicator is red, check the probe sensor. If the sensor is faulty, replace it.</li> </ol>
The probe sensor may be faulty.	
<b>Problem: Notification "Firmware update incomplete. Please try again." shown during firmware update</b>	
<b>Possible cause:</b> Error updating one or more update files, or not all update files copied to <b>Update</b> folder.	<b>Solution:</b> Retry updating the firmware. For instructions, see <a href="#">Updating Indigo80 firmware version (page 40)</a> .
<b>Problem: Notification "Firmware update failed" shown after Indigo80 has attempted to update firmware</b>	
<b>Possible cause:</b> The firmware update file is corrupted or otherwise incompatible.	<b>Solution:</b> Download the latest Indigo80 firmware update file and retry the procedure. For instructions, see <a href="#">Updating Indigo80 firmware version (page 40)</a> .
<b>Problem: Notification "Device failure. Please contact Vaisala for support." shown</b>	
<b>Possible cause:</b> Damaged hardware	<b>Solution:</b> Contact Vaisala for support.

<b>Problem: Indigo80 buttons become unresponsive</b>	
<b>Possible cause:</b> Temporary software issue	<b>Solution:</b> Press the  button for 20 seconds until the device reboots.  If pressing the  button does not resolve the issue, press the  and  buttons simultaneously for 20 seconds to reboot the device and restore factory settings. See also <a href="#">Restoring factory default settings (page 42)</a> .  

<b>Problem: Indigo80 user interface has wrong language selected</b>	
<b>Possible cause:</b> Wrong language setting in the user interface	<b>Solution:</b> If the Indigo80 user interface language has been set to a wrong language, you can access the language selection menu with the following button presses:  <ol style="list-style-type: none"> <li>1. Press the  button. This opens the Indigo80 main menu.</li> <li>2. Press the  button four times so that the <b>Indigo80</b> menu is highlighted.</li> <li>3. Press the  button once.</li> <li>4. Press the  button four times.</li> <li>5. Press the  button once.</li> </ol> <p>You can now select another language from the list.</p>

### 7.5.1 Writing a problem report

When troubleshooting the product, write a problem report including:

- What failed (what worked / did not work)?
- Where did it fail (location and environment)?
- When did it fail (date, immediately / after a while / periodically / randomly)?
- How many failed (only one defect / other same or similar defects / several failures in one unit)?
- What was done when the failure was noticed?
- What was connected to the product and to which connectors?
- Input power source type, voltage, and list of other items (such as lighting, heaters, and motors) that were connected to the same power output.
- Are all parts connected and grounded properly? Take a photo to help the troubleshooting.

## 8. Technical data

### 8.1 Indigo80 specifications


Table 6 Indigo80 operating environment

Property	Description/Value
Operating temperature	-20 ... +50 °C (-4 ... +122 °F)
Storage temperature	-20 ... +60 °C (-4 ... +140 °F), recommended +20 °C (+68 °F)
Operating and storage humidity	20 ... 85 %RH, when Ta ≤ +40 °C (+104 °F)
Charging temperature	0 ... +45 °C (+32 ... +113 °F) <sup>1)</sup>
IP rating	IP40
Use in wet location	No
Operating environment	Indoor use
Pollution degree	3
Maximum operating altitude	2000 m (approx. 6500 ft)

1) The battery will not charge at temperatures below 0 °C (+32 °F).

Table 7 Indigo80 inputs and outputs

Property	Description/Value
Max. number of connected probes	2
Connector type	M12 5-pin female (2 pcs)
<b>Battery</b> <sup>1)</sup>	
Type	Rechargeable lithium-ion battery
Nominal voltage	7.2 V
Rated capacity	2900 mAh / 20.88 Wh
Charge limit voltage	8.4 V
<b>AC adapter</b> <sup>2)</sup>	
Type	45 W USB-C AC adapter <sup>3)</sup>
Connector type	USB-C
AC input	100-240 V AC, 1.2 A, 50-60 Hz

Property	Description/Value
DC output	5.0 V/9.0 V/12.0 V/15.0 V DC, 3.0 A 20.0 V DC, 2.25 A 45 W
Insulation	Double or reinforced, indicated with the following symbol: 
PC interface	Vaisala Insight PC software with USB-C cable (Windows OS). <sup>4)</sup> Data can be logged and transferred also without Insight.

- 1) *The battery is not user-replaceable. Contact Vaisala Service Center for any battery-related maintenance needs. See also the lithium-ion battery related precautions in this document.*
- 2) *The AC adapter is an optional accessory. If using an AC adapter not provided by Vaisala, make sure it fulfills the specifications given in this table. See also the AC adapter related precautions in this document.*
- 3) *45 W AC adapter recommended for optimal performance of Indigo80. An AC adapter with a lower power rating can also be used.*
- 4) *Insight software is available for download at [www.vaisala.com/insight](http://www.vaisala.com/insight).*

Table 8 Indigo80 mechanical specifications

Property	Description/Value
Weight	385 g (14 oz)
Dimensions (H × W × D)	213 × 58 × 27 mm (8.4 × 2.3 × 1.1 in)
<b>Materials</b>	
Main body and rear piece	Aluminum EN AW-6082 T6
Back cover	Rubber (TPE) and polycarbonate (PC), reinforced with fiberglass Flammability rating UL94 V-1
Display	Strengthened glass with anti-fingerprint (AF) and anti-reflection (AR) coatings

Table 9 Indigo80 battery operation time

Property	Description/Value
Charging time	2 hours <sup>1)</sup>
Operation time (continuous use)	10 h at +20 °C (+68 °F) <sup>1)</sup>

- 1) *Typical value. Actual performance depends on, for example, the number and type of devices connected to Indigo80 and the logging interval.*



Table 10 Indigo80 data logging and user interface specifications

Property	Description/Value
Data logging capacity	Up to 5.5 million real-time data values
Logging interval	1 s ... 12 h
Logging duration	1 min ... memory full <sup>1)</sup>
Alarm	Audible alarm function
Supported languages	English, Chinese, Finnish, French, German, Italian, Japanese, Portuguese, Spanish, Swedish
Display	2.7" sunlight readable transfective TFT LCD color display with backlight and automatic brightness control

- 1) For example, logging duration for one measurement parameter with a logging interval of one second is over eight weeks. Use an AC adapter to power Indigo80 during long-term logging.

Table 11 Indigo80 compliance

Property	Description/Value
EU directives and regulations	EMC Directive (2014/30/EU) RoHS Directive (2011/65/EU) amended by 2015/863
Electromagnetic compatibility (EMC)	IEC/EN 61326-1, industrial environment CISPR 32 / EN 55032, Class B FCC part 15 B, Class B ICES-3 / NMB-3 (Class B)
Compliance marks	CE, China RoHS, FCC, RCM, UKCA

Table 12 Vaisala devices compatible with Indigo80

Probe/transmitter model	Measurement type
<b>Vaisala Indigo-compatible devices</b>	
HMP1, HMP3, HMP4, HMP5, HMP7, HMP8, HMP9, HMP80L, HMP80N	Humidity and temp.
TMP1	Temperature
DMP5, DMP6, DMP7, DMP8, DMP80A, DMP80B	Dew point
GMP251, GMP252	Carbon dioxide
HPP271, HPP272	Hydrogen peroxide
MMP8	Moisture in oil

Probe/transmitter model	Measurement type
Indigo300, Indigo510, Indigo520	(Host devices)
<b>Other Vaisala devices</b>	
HMP60, HMP63, HMP110, HMP110REF, HMP113, HMP115, HMM170 <sup>1)</sup>	Humidity and temp.
HMP110T, HMP115T, TMP115 <sup>1)</sup>	Temperature
DMT143, DMT143L	Dew point

1) Indigo80 compatibility with these devices to be added during 2023.



For more information about the compatible probes and transmitters, visit [www.vaisala.com](http://www.vaisala.com) and [docs.vaisala.com](http://docs.vaisala.com).

## 8.2 Dimensions

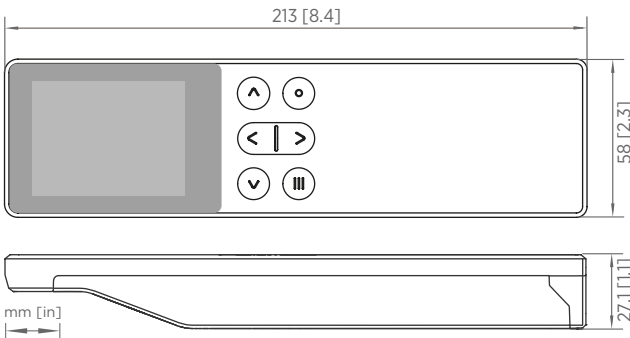


Figure 22 Indigo80 indicator dimensions

## 8.3 Spare parts and accessories

Table 13 Indigo80 spare parts and accessories

Description	Item code
<b>Cables</b>	
Cable for transmitters (M12-M8), 1.5 m (4 ft 11 in)	262195SP
Cable for probes (M12-M12), 1.5 m (4 ft 11 in)	272075SP
Flat cable for probes (M12-M12), 1 m (3 ft 3 in)	CBL210493SP

Description	Item code
Probe connection cable (M12-M12), 10 m (32 ft 10 in)	INDIGOCABLE10M
<b>Other</b>	
Weatherproof carrying case	ASM214759
Magnetic hanger for indicator	ASM214318SP



For more information on ordering spare parts and accessories, visit Vaisala Online Store at [store.vaisala.com](https://store.vaisala.com).

## 8.4 Maintenance and calibration services



Vaisala offers comprehensive customer care throughout the life cycle of our measurement instruments and systems. Our factory services are provided worldwide with fast deliveries. For more information, see [www.vaisala.com/calibration](https://www.vaisala.com/calibration).

- Vaisala Online Store at [store.vaisala.com](https://store.vaisala.com) is available for most countries. You can browse the offering by product model and order the right accessories, spare parts, or maintenance and calibration services.
- To contact your local maintenance and calibration expert, see [www.vaisala.com/contactus](https://www.vaisala.com/contactus).

## 8.5 Warranty

For standard warranty terms and conditions, see [www.vaisala.com/warranty](https://www.vaisala.com/warranty).

Please observe that any such warranty may not be valid in case of damage due to normal wear and tear, exceptional operating conditions, negligent handling or installation, or unauthorized modifications. Please see the applicable supply contract or Conditions of Sale for details of the warranty for each product.

## 8.6 Technical support



Contact Vaisala technical support at [helpdesk@vaisala.com](mailto:helpdesk@vaisala.com). Provide at least the following supporting information as applicable:

- Product name, model, and serial number
- Software/Firmware version
- Name and location of the installation site
- Name and contact information of a technical person who can provide further information on the problem

For more information, see [www.vaisala.com/support](http://www.vaisala.com/support).

## Appendix A. Recycling instructions

These recycling instructions guide you on the end-of-life treatment of this Vaisala product. As waste regulations and infrastructure vary in each country, these instructions only indicate the different components to be separated and common ways to handle them. Always follow local requirements when disposing of the product. Vaisala encourages to use the best available recycling practices to minimize related environmental impacts.



Vaisala is committed to meeting the requirements of the EU Waste Electrical and Electronic Equipment (WEEE) Directive. This directive aims to minimize the impact of electrical and electronic goods on the environment, by increasing reuse and recycling, and reducing the amount of WEEE going to landfill. This symbol indicates that the product should be collected separately from other waste streams and treated appropriately.

If applicable, Vaisala recommends removing the battery unit before recycling the rest of the device. The battery unit can be recycled separately in accordance with local waste management practices and regulations.

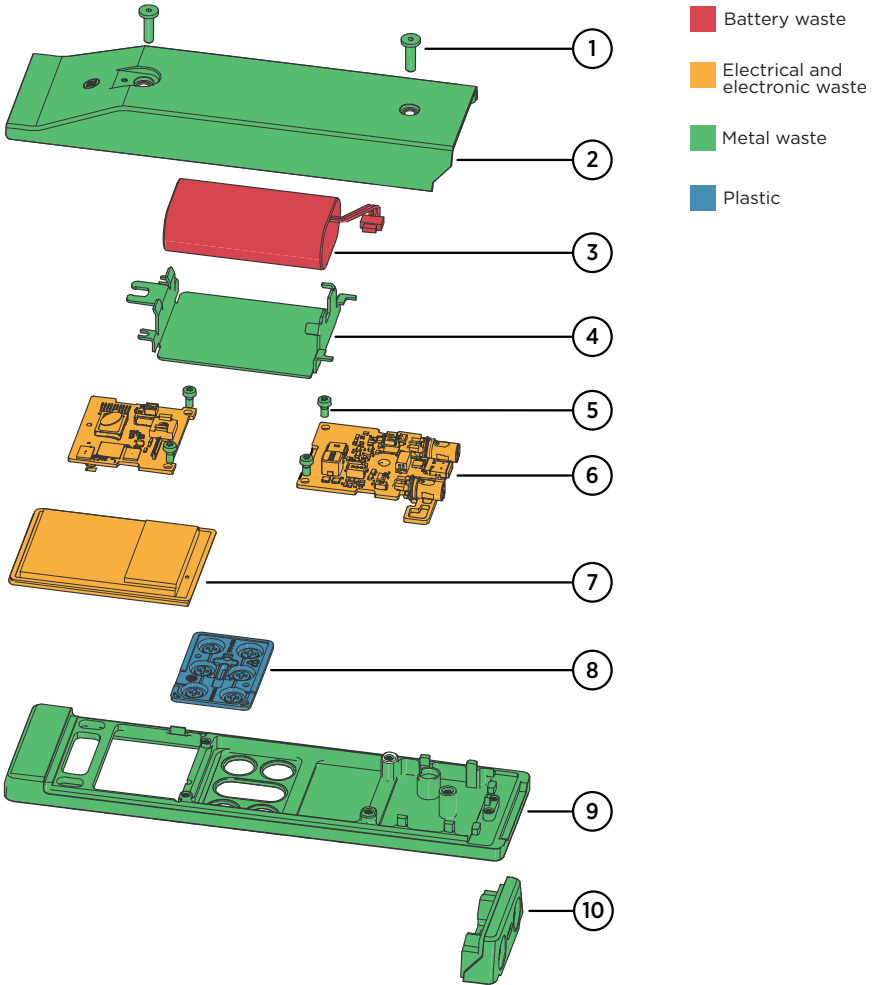


Figure 23 Materials for recycling

Table 14 Materials for recycling

Part		Material	Recycling
1	Screws for back cover	Stainless steel	Metal waste
2	Back cover	Various materials	Dispose of with mixed waste

Part		Material	Recycling
3	Lithium-ion battery	Various materials	Battery waste. Dispose of or recycle as battery waste, hazardous waste, or electrical and electronic waste in accordance with local waste management practices and regulations.
4	Battery cradle	Stainless steel	Metal waste
5	Screws for component board	Stainless steel	Metal waste
6	Component boards	Various materials	Electrical and electronic waste
7	Display	Various materials	Electrical and electronic waste
8	Keypad	Rubber (TPE) and polyamide (PA)	Dispose of or recycle as plastic according to local waste management practices and regulations
9	Front piece	Aluminum alloy	Metal waste
10	Rear piece	Aluminum alloy	Metal waste





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