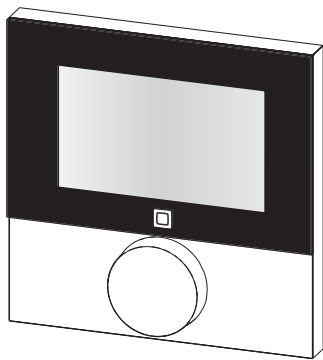


# Alpha IP

RTD 61001-N1



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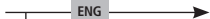
3



4



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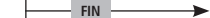
30

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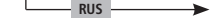
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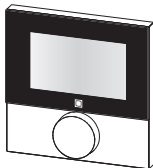
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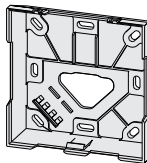


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1x



1x



2x



M3 x 30 mm

2x



2x

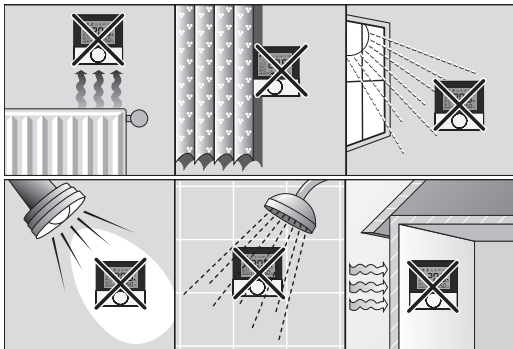
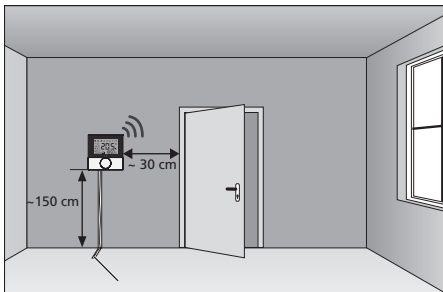


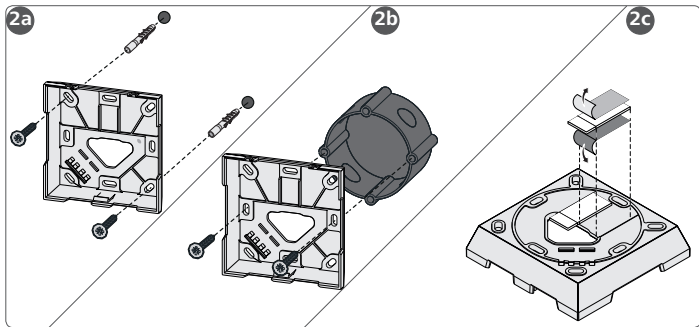
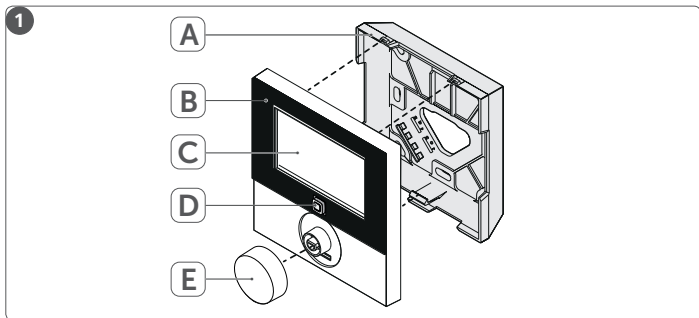
5 mm

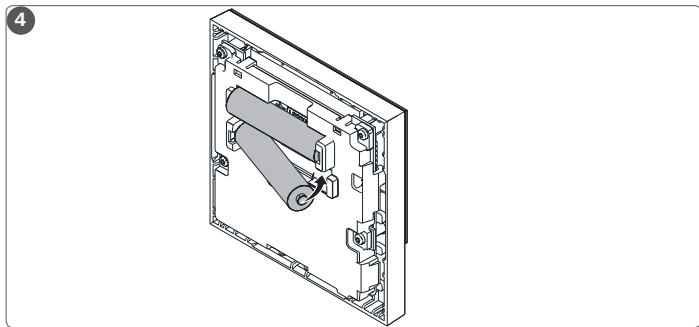
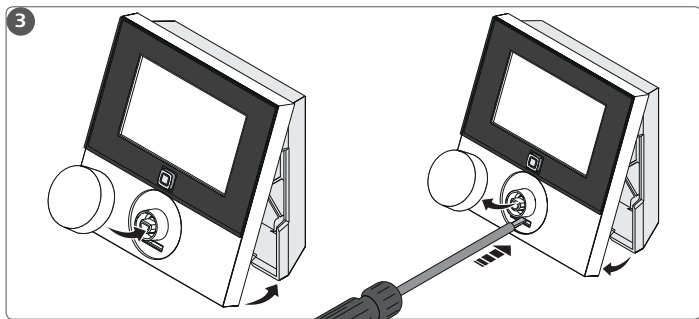
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# 1 About these instructions

## 1.1 Validity, storage and forwarding of the instructions

These instructions apply to the room control unit Display RTD 61001-N1. These instructions include information necessary for commissioning and operation. These instructions must be read completely and thoroughly before commencing any work with the device. These instructions must be kept and to be handed over to future users.



The latest version of these instructions/of Additional Alpha IP System information can be found under [www.alphaip.de](http://www.alphaip.de).



System information, functions and operating steps from the instructions for Alpha IP Access Point (HAP 21001) must be observed.

## 1.2 Symbols

The following symbols are used in this manual:



**Note:** Identifies important or useful information



Preconditions



Result from an action



List without fixed order

1., 2.

List with fixed order



## 2 Safety

### 2.1 Intended use

The room control unit Display RTD 61001-N1 is a component of the Alpha IP System and serves for

- the installation in residence-related environments,
- the registration of the actual temperature (room temperature) and the humidity,
- the setting of the target temperature (comfort temperature),
- the control of the actual temperature by an activation of the Alpha IP Base station for the control of floor heating systems (FAL-x10x1-xx1) or connected Alpha IP radiator thermostats,
- a wireless communication in the Alpha IP network.

Every other use, modification and conversion is expressly forbidden. Improper use leads to dangers the manufacturer cannot be held liable for, and to an exclusion of warranty and liability.

### 2.2 Safety notes

All safety notes in these instructions must be observed in order to avoid accidents with personal damage or property damage. No liability is assumed for personal and material damage caused by improper handling or non-observance of the hazard notes. Such cases render all warranty claims invalid. No liability is assumed for consequential damage!

- Only use the device if it is in flawless state.
- Observe the performance limits of the device and its environmental conditions.

- Only operate this device in a dry and dust-free environment.
- Do not expose the device to humidity, vibration, continuous sunlight or other types of heat radiation, coldness, or mechanical loads. Ensure that children do not play with this device or the packaging. Children must be monitored if necessary.

### 3 Function

The Alpha IP room control unit Display RTD 61001-N1 allows to set the room temperature in a time-controlled way in order to adapt the heating phases to your individual requirements. The room control unit measures the temperature and transmits these data cyclically to the Alpha IP Base station FAL-x10x1-xx1 or to connected Alpha IP radiator thermostats. The registered values allow an exact regulation of the room temperature. The target temperature can be set manually with the setting wheel.



The range within buildings can differ strongly from the range outside (in open air).

Communication with other components will be performed over the Homematic (HmIP) radio protocol. The radio transmission is done on a non-exclusive transmission path; thus, disturbance cannot be completely excluded. Disturbance impacts can be caused by switching processes, electric motors or electric appliances.

## 4 Device overview

Device overview (see page 4 fig. 1)

- (A) Installation bottom
- (B) Room control unit Display
- (C) Display
- (D) System button (teaching button and LED)
- (E) Removable setting wheel



Fig. 1: Display overview

Display overview (see fig. 1)

°C	Target/actual temperature
%	and humidity
💧	Condensation warning
🪟	Window-open symbol
🔋	Battery symbol
📶	Radio transmission
<b>BOOST</b>	Boost mode
<b>MANU</b>	Manual operation

<b>AUTO</b>	Automatic operation
🏠	Holiday mode
🔥	Heating
❄️	Cooling
🔒	Operating lock
<b>SET</b>	Target temperature
🕒	Date/time
<b>Offset</b>	Offset

## 4.1 Technical data

Short designation of device	RTD 61001-N1	
Supply voltage	2x 1.5 V LR03/micro/AAA	
Power consumption	max. 50 mA	
Battery service life	2 years (normally)	
Protection type	IP20	
Contamination degree	2	
Ambient temperature	0 to 50 °C	
Dimensions (W x H x D)	86 x 86 x 21.6 mm / 26.5 mm	
Weight	110 g (including batteries)	
Radio frequency	868.3 MHz/869.525 MHz	
Receiver category	SRD category 2	
Typical radio range	250 m (in open air)	
Duty Cycle	< 1 % per h/< 10 % per h	
Mode of action	Type 1	
Guidelines	2014/53/EU 2014/30/EU 2011/65/EU	EMC RoHs

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## 5 Commissioning

### 5.1 Teaching the device

In order to be integrated into the Alpha IP System and to communicate with other devices, the room control unit Display must be taught-in first. The room control unit Display is taught-in directly to the Alpha IP base station, or in conjunction with the radiator thermostats, to the Alpha IP Access Point. In case of direct teaching-in, the configuration is done on the device itself; in case of teaching-in via the Access Point, it is done via the Alpha IP app.

#### 5.1.1 Teaching to Alpha IP Base Station



For teach-in, keep a minimum distance of 50 cm between the devices.



The teach-in process can be interrupted by shortly pressing the teach-in key again. This is confirmed by a short flash in red colour of the device LED.



If no teaching-in is performed, the teach-in mode is finished automatically after 30 seconds.

If the room control unit shall be taught-in to the Alpha IP Base station, the two devices to be linked must be set to teach-in mode.

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1. Select the desired channel at the Alpha IP base station (see Alpha IP Base station instructions).
2. Activate the teach-in mode at the base station by pressing and holding the key.  
✓ The device LED starts to flash in orange.
3. Take off the room control unit Display from the installation bottom (see page 5 fig. 3).
4. Pull out the insulating strip from the battery compartment, or insert batteries (see page 5 fig. 4) If batteries have already been inserted, press the system key (D) for at least 4 seconds in order to activate the teach-in mode.  
✓ The teach-in mode is activated automatically for 3 minutes.  
✓ The device LED flashes in orange.



The LED will light up in green after a successful teach-in process. If the LED lights up red, repeat the process.

### 5.1.2 Teaching-in to Alpha IP Access Point

For a control via the Alpha IP app, the teaching-in must of the RTD 61001-N1 must be performed via the Access Point (HAP 21001). Teach-in the device as follows:

⇒ The Alpha IP Access Point has been set up via the Alpha IP App (see instructions HAP 21001).

1. Open the Alpha IP app on the smart phone.
2. Select the menu item Teach-in device.
3. Release the room control unit Display from the installation bottom (see page 5 fig. 3).
4. Pull out the insulating strip from the battery compartment, or insert batteries (see page 5 fig. 4) If batteries have already been inserted, press the system key (D) for at least 4 seconds in order to activate the teach-in mode.

5. The device is displayed automatically in the Alpha IP app.
6. Enter the last four ciphers of the device number (SGTIN) or scan the supplied QR code for confirmation. The device number can be found below the QR code or in the battery compartment.



The LED will light up in green after a successful teach-in process. If the LED lights up red, repeat the process.

7. Follow the instructions in the app.

## 5.2 Installation

The place of installation can be selected flexibly due to the battery operation. Installation can be performed with screws, with the supplied adhesive strips, or in a flush-type box.

### 5.2.1 On-surface installation

- ⇒ Select an appropriate installation position.
1. Ensure that the installation position is free from hidden lines.
  2. If necessary, release the device from the installation bottom with a suitable screwdriver (see page 5 fig. 3).
  3. Hold the installation bottom to the installation position. Take care to align the installation bottom correctly (see page 4 fig. 2a/b).
  4. Align the installation bottom horizontally.
  5. Mark two diagonally opposite bore holes using the installation bottom (see page 5 fig. 2a).



If wood walls are present, the screws can be screwed directly into the wood. Pre-drilling with a 1.5 mm wood drill can facilitate the installation of the screws.

6. For stone walls, drill the holes at the marked positions with a 5 mm masonry drill.
7. Insert dowels into the bores.
8. Install the installation bottom using the supplied screws (see page 4 fig. 5).
9. Position the device onto the installation bottom and latch it in (see page 5 fig. 3).

### 5.2.2 Installation in flush-type box

The fixing holes on the installation bottom can be used for installation on a flush-type box (see page 4 fig. 2b).

1. If necessary, release the device from the installation bottom with a suitable screwdriver (see page 5 fig. 4).
2. Align the installation bottom horizontally on the flush-type box.
3. Install the installation bottom with suitable screws (see page 4 fig. 2b).
4. Position the room control unit Display onto the installation bottom and latch it into the clips (see page 5 fig. 3).



### 5.2.3 Installation with adhesive strips

Depending on the ground, installation can be performed using the supplied double-sided adhesive tapes. Installation is possible on different grounds, as e. g. masonry, furniture, tiles or glass.

1. Select an appropriate installation position.



If the installation is done with adhesive strips, the installation surface must be smooth, level, undamaged, clean, and free from grease and solvents.

2. Remove the protective foil from one side of the adhesive strip.
3. Fix the adhesive strip on the back side of the installation bottom in the recesses provided for this (see page 4 fig. 2c).
4. Remove the protective foil from the other side of the adhesive strip.
5. Align the device horizontally to the desired position and press it on.

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## 6 Operating modes and configuration

The setting wheel E (see page 4 fig. 1) provides the operating functions of the device. Depending on the configuration, the settings are transmitted to the Alpha IP Base station or to the Alpha IP app.

### 6.1 Configuration menu

The configuration menu is opened by pressing and holding the setting wheel (E). The following symbols/menus are available by rotating the setting wheel; shortly pressing the wheel will select them.

Section	Display	Meaning
6.2.1	<b>AUTO</b>	Automatic operation
6.2.2	<b>MANU</b>	Manual operation
6.2.3		Holiday mode
6.2.4		Operating lock
6.2.5	<b>Prg</b>	Programming of heating profiles
6.2.6		Date and time
6.2.7	<b>Offset</b>	Offset temperature
6.2.8	<b>LCD</b>	Selection of temperature display/humidity
6.2.9	<b>FAL</b>	Configuration of the base station
6.2.10		Connection test

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### 6.1.1 Automatic mode

Do the following to activate automatic operation:

1. Press and hold the setting wheel (E) in order to open the configuration menu.
2. Select the symbol **"AUTO"** and confirm the selection by shortly pressing the setting wheel.

### 6.1.2 Manual operation

Proceed as follows to activate manual operation:

1. Press and hold the setting wheel (E) in order to open the configuration menu.
2. Select the symbol **"MANU"** and confirm the selection by shortly pressing the setting wheel.
3. Turn the setting wheel in order to set the desired temperature.

### 6.1.3 Holiday mode


The holiday mode can be used if a fixed temperature shall be kept during a certain span of time (e. g. for a vacation or during a party).

Proceed as follows to activate the holiday mode:

1. Press and hold the setting wheel (E) in order to open the configuration menu.
2. Select the symbol **"🏠"** and confirm the selection by shortly pressing the setting wheel.
3. Set the "Start-/End" time and date by rotating the setting wheel. Confirm each selection by shortly pressing the setting wheel. "S" shows the starting time, "E" shows the end time.
4. Set the temperature to be kept during the defined time by turning the setting wheel and confirm your selection by shortly pressing the wheel.

### 6.1.4 Operating lock

The operation at the device can be locked in order to prevent the unintentional change of settings e. g. by accidental touch. Proceed as follows in order to activate or deactivate the operation lock:

1. Press and hold the setting wheel (E) in order to open the configuration menu.
2. Select the symbol  and confirm the selection by shortly pressing the setting wheel.
3. Select "ON" by turning the wheel in order to activate the operation lock, or "OFF" in order to deactivate the operation lock. Confirm the selection by pressing the wheel shortly.

### 6.1.5 Programming of heating profiles

This menu item allows to make settings for heating or cooling profiles and the creation of week profiles according to own requirements.

1. Press and hold the setting wheel (E) in order to open the configuration menu.
2. Select the symbol **"Prg"** and confirm the selection by shortly pressing the setting wheel. The following subordinate menu items are available in the menu, to be accessed by turning the wheel:

**"type"** for switching over the base station between the modes Heating and Cooling.

1. Turn the setting wheel (E) to "HEAT" for heating or "COOL" for cooling and confirm by shortly pressing the wheel.

**"Pr.nr"** for the selection of the week profile number ("no. 1, no. 2 ... no. 6").

1. Select the number of the desired profile and confirm the selection by shortly pressing the setting wheel.

**“Pr.Ad”** for the individual setting of the week profiles („no. 1, no. 2 ... no. 6“). Up to 6 heating phases (13 switch-over points) can be set in the week profile for every week day for the selected heating profile. Programming is made for the selected days for the time from 00:00 to 23:59 o'clock.

1. In the menu item “Pr.Ad”, select the number of the desired profile by turning the setting wheel (E) and confirm the selection by shortly pressing the wheel.
2. Select the desired week day/working day/weekend/all days by turning the setting wheel (E) and confirm the selection by shortly pressing the wheel.
3. Confirm the start time of 00:00 o'clock by shortly pressing the setting wheel (E).
4. Select the desired temperature for the starting time by turning/pressing and confirm.
5. Select and confirm the time indicated in the display by turning/pressing the setting wheel.
6. Select the desired temperature for the set period by turning/pressing and confirm.
7. Repeat the process for the complete period from 00:00 to 23:59 o'clock. “OSSF” serves for activating (“On”) or deactivating (“OFF”) the Smart Start/Stop function. Once this function is activated, the system calculates in a self-teaching way when it must start the heating/cooling process in order to provide the stored temperature exactly at the defined heating times.

### 6.1.6 Setting date and time

1. Press and hold the setting wheel (E) in order to open the configuration menu.
2. Select the symbol "🕒" and confirm the selection by shortly pressing the setting wheel.
3. Set the year, month, day and time by turning/pressing the setting wheel (E) and conform each.

### 6.1.7 Offset temperature

Since the temperature is measured at the room control unit Display, it may be warmer or cooler in another position on the room. This deviation is corrected using the offset temperature (up to  $\pm 3.5$  °C).

1. Press and hold the setting wheel (E) in order to open the configuration menu.
2. Select the symbol "Offset" and confirm the selection by shortly pressing the setting wheel.
3. Turn the setting wheel and confirm the desired offset (max.  $\pm 3.5$  °C) by shortly pressing the wheel.

### 6.1.8 Selection of temperature display/humidity

The display alternately shows the actual or the set temperature as well as the humidity, as required.

1. Press and hold the setting wheel (E) in order to open the configuration menu.
2. Select the symbol "LCD" and confirm the selection by shortly pressing the setting wheel.
  - "ACT" for displaying the actual temperature or
  - "SET" for displaying the set temperature or
  - "ACTH" for displaying the actual temperature and the current humidity

## 6.1.9 Configuration of Alpha IP Base station

This menu allows to configure the Alpha IP Base station in standalone operation.

1. Press and hold the setting wheel (E) in order to open the configuration menu.
2. Select the symbol **"FAL"** and confirm the selection by shortly pressing the setting wheel.



If the room control unit is taugt-in to more than one base stations, select the desired base station with the setting wheel.

The device parameters "UnP1/UnP2" and the channel parameters "ChAn" are available in the configuration menu for the Alpha IP Base station; these parameters allow the modification of the pump lead and follow-up times, setback temperatures, time intervals and many other parameters.



Information on the configuration possibilities can be found in the Alpha IP Base station instructions.

## 6.1.10 Connection test

During this verification the room control unit Display sends a switching command to the base station. Depending on the switching status the assigned heating zone has, it will be switched on or off after receiving the command.

1. Press and hold the setting wheel (E) in order to open the configuration menu.
2. Select the symbol **"P"** and confirm the selection by shortly pressing the setting wheel.

## 7 Operation

The setting wheel (see position E in fig. 1) provides the operating functions of the room control unit. The settings are transmitted to connected radiator thermostats as well as to the Alpha IP app, and displayed there.

- **Temperature:** Turn the setting wheel to the right or to the left in order to change the temperature. In automatic operation, the set temperature remains until the next switch-over point is reached. After that, the set heating profile will be re-activated. In manual operation, the temperature remains until the next manual change is made.
- **Manual and automatic operation:** Press the setting wheel for 3 seconds in order to change between manual and automatic operating mode. In automatic operation, the heating profile set with the Alpha IP app is active. In manual operation, the temperature can be set at the device or using the app, and remains until the next manual change is made.
- **Boost function for the use with heating thermostats:** Press the setting wheel shortly in order to activate the boost function for quick, short-time heating. The boost function will be active for 5 minutes.







On connection the Alpha IP app, the Alpha IP Access Point offers many configuration options, as e. g.

- Adaptation of the boost duration (up to 30 minutes)
- Activation or deactivation of the operating lock.



## 8 Displays

### 8.1 Status indications

Display	Meaning	Meaning
 flashes	Humidity limit (standard: 60 %) in the room exceeded	Ventilate room
  flash	Humidity input activated at Multi IO Box	Ventilate room
   flashes	Operating lock active	
Short flashing in orange	Radio transmission/ Transmission attempt/ data transmission	Wait until the transmission has finished.
1 x long illumination in green	Process confirmed	Proceed operation.
Short flashing in orange (once every 10 sec.)	Teach-in mode active	Enter the last four ciphers of the device serial number into the app.
1 illumination in orange and 1 in green (after inserting batteries)	Test indication	Proceed after the LEDs are out.

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## 8.2 Error indications

Display	Meaning	Solution
	Battery voltage low.	Change the batteries.
 (flashes)	Bad connection to the Alpha IP Access Point	Check the connection.
Short illumination in orange (after reception signal)	Batteries dead	Change the batteries.
Long illumination in red	Transmission error, transmission limit reached (duty cycle)	Re-send the command, in case of exceeding the duty cycle after one hour at the latest. Check the device for a defect, e. g. mechanical blocking. Eliminate radio interference.
6 x long illumination in red	Device defective	Observe the indication in the app. Have the device checked by a specialised dealer. Replace the device.

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## 9 Changing the batteries

The symbol  in the display and in the Alpha IP app indicates low battery voltage. Replacing the batteries:

1. Take off the device from the installation bottom (see page 5, fig. 4).
2. Remove the batteries from the back side.
3. Insert two new batteries (type LR03/Micro/AAA) according to the marking.
4. Position the room control unit Display onto the installation bottom and latch it in.
  - ✓ The display changes to normal indication.
  - ✓ The device is ready to operate.

## 10 Cleaning

Clean the device with a soft, clean, dry, and lint-free cloth. In order to remove heavy contamination, moisten the cloth slightly with lukewarm water. Use a solvent-free detergent for cleaning.

## 11 Restoring the factory settings

The reset to factory setting will delete all settings made by the user.

1. Take off the device from the installation bottom (see page 5, fig. 4).
  2. Remove the batteries.
  3. Re-insert the batteries according to the marking in the battery compartments. At the same time press the system key D for 4 seconds until the LED flashes rapidly in orange.
  4. Release the system button.
  5. Press the system key again for 4 seconds until the LED lights up in green.
  6. Release the system key.
- ✓ The device restarts.
  - ✓ The factory settings are restored.

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## 12 Decommissioning

1. Take off the room control unit Display from the installation bottom (see page 5 fig. 6).
2. Remove the batteries from the back side.
3. Uninstall the device and dispose of properly.

## 13 Disposal



The device must not be disposed with domestic waste. The operator has the duty to hand the device to a suitable collection point. The separate collection and orderly disposal of all materials will help to conserve natural resources and ensure a recycling in a manner that protects human health and the environment. If you need information about collection points for the device, please contact your local municipality or your local waste disposal services.

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