

SMART TC°



User Guide

Digital clock thermostat
Smart TC°



Dear end user,

Thank you for choosing this Smart TC°. You can control your home heating using the Smart TC° or also by using an app. With this Smart TC°, you are in the driver's seat to control the temperature of your home. It's all about your comfort, just the way you want it.

This manual contains easy to use information and is intended for installers and end users.

Use the manual menu to get quick access to the instructions you need. For your own safety and optimum performance of the Smart TC°, we advise you to read the manual first.

The manual is subject to change, the online version is always the latest. If you are using a printed copy, please check the website for the latest version. See contact details on the front or back cover.

We hope you will enjoy working with the Smart TC°.

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1 Manual menu

Fig.1 Introduction



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Introduction

This chapter introduces you to the thermostat. You will find basic information, e.g. how to use the rotary dial and buttons plus how to interpret the information on the screen.

➔ Chapter: Introduction, page 6

Fig.2 General use



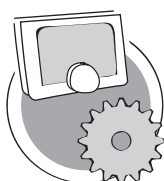
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General use

This chapter helps you with the daily use of the thermostat. You will find instructions for daily use like how to change temperatures in different modes, changing control modes.

➔ Chapter: General use, page 13

Fig.3 Customisation



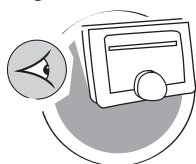
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Customisation

This chapter helps you with customising the thermostat.

➔ Chapter: Customisation, page 21

Fig.4 Messages and data



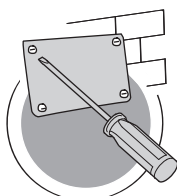
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Messages and data

This chapter helps you with navigating to information and data of the thermostat and system.

➔ Chapter: Messages and data, page 35

Fig.5 Installation



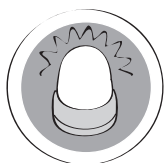
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Installation

This chapter helps you with the installation and commissioning of the thermostat.

➔ Chapter: Installation, page 38

Fig.6 Troubleshooting



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Troubleshooting

This chapter helps you when there is a problem with the thermostat, an error message will appear on the home screen.

➔ Chapter: Troubleshooting, page 41

Fig.7 Appendix



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Appendix

This chapter gives you more technical information about the thermostat.

➔ Chapter: Appendix, page 42

2 Introduction



AD-3001023-01

This chapter introduces you to the thermostat. You will find basic information, e.g. how to use the rotary dial and buttons plus how to interpret the information on the screen.

→ Next chapter: General use, page 13

🏠 First chapter: Manual menu, page 5

2.1 Symbols used in the manual

This manual uses various symbols to draw attention to special instructions. We do this to improve user safety, to prevent problems and to guarantee correct operation.



Warning

Risk of dangerous situations that may result in minor personal injury.



Caution

Risk of material damage.



Important

Please note: important information.



See

Reference to other manuals or pages in this manual.

2.2 Introducing the Smart TC°

Intended use. The Smart TC° is designed to operate as a room thermostat with the possibility to operate your heating system. It has a Wi-Fi connection to be able to connect to the Internet, making it possible to operate the Smart TC° with an app on a mobile device.



Warning

Do not use the Smart TC° for systems that are not in accordance with the intended use.

A simple user interface. Like many other interfaces you have to scroll through menus, select and enter options and confirm changes. The Smart TC° has only two buttons that you can either short-press or long-press. There is one rotary dial to scroll forward or backward. It's as easy as that!

Controlling the temperature. Your plans change. No problem, control the temperature as you wish, in manual mode or schedule mode. You can even be flexible by switching between three schedules. Do you prefer using your mobile device anywhere in the house? The Smart TC° app is available for iOS, Android and Windows.

What do I do when I ...? I want to ...? How do I ...? Are you going away for a holiday? Do you want to make a fire in your fireplace? Do you need a hot water boost? Or do you want a short temperature change? You can find most answers in the "General use" chapter.

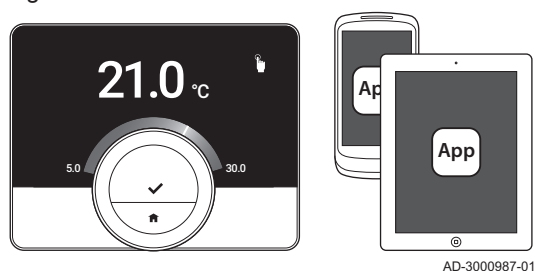


For more information, see

General use, page 13

2.3 The Smart TC° and its app

Fig.8



The climate in your home contributes to your comfort; with the Smart TC° you are able to control the temperature in your home the way you want it.

In case you prefer to control your climate with your mobile device (e.g. smartphone or tablet) you can download the Smart TC° app and connect it with your Smart TC°. You can also connect your home automation application with the Smart TC°.



Important

The Smart TC° needs a reliable connection with other devices (e.g. appliance, wi-fi router) in your home.

2.4 What's new for the Smart TC°

This document is based on software version 1.47 for the Smart TC°. These are the new possibilities of use:

- Automatic topping up (this option is available if your installation is fit for it).
- Connection with a home automation application.
- Connection with an access point in the wi-fi network (WPS).
- Exact actual time retrieval from the internet (NTP).
- Choice of unit system for the display: imperial system or metric system.
- Privacy policy readable in the Settings Menu.
- New menu item Installer.
- New advanced settings (these options are available if your installation is fit for them):
 - Heating Curve
 - Control Strategy
 - Heatup speed
 - Cool down speed
 - Minimum central heating power
 - Maximum central heating power
 - Maximum domestic hot water power
- New icons for No connection and for the anti-frost mode.
- Period setting for short temperature change.
- Temperature setting for the anti-frost mode (this option is available if your installation is fit for it).
- Error message to the manufacturer.
- Several menu changes.

2.5 How to use the Smart TC°

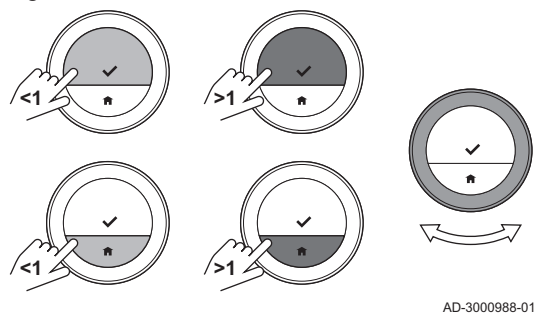
Before you can use the Smart TC°, it first needs to be installed.



For more information, see
Installation, page 38

2.5.1 Using the rotary dial and buttons

Fig.9



The rotary dial has two buttons: the top button is the select button, the bottom button is the home button. Pressing a button for a shorter or longer time will start different actions, as shown in this manual.

- **Short button press:** Press less than a second on the button (<1).
- **Long button press:** Press longer than a second on the button (>1).
- **Rotary dial:** Turn the rotary dial to choose and adjust menus, submenus and settings.

Fig.10

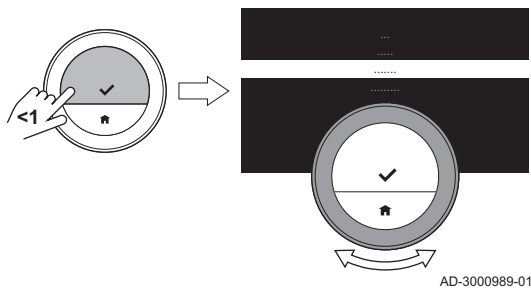


Fig.11

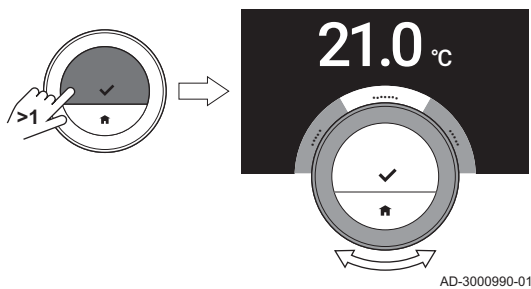


Fig.12

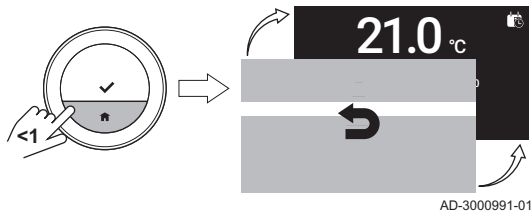
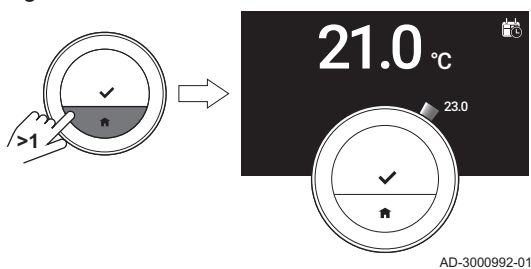


Fig.13



2.5.2 Entering the main menu and menu items

The main menu gives you access to all submenus and settings.

- Short-press the select button to enter the main menu from the home screen.
- Turn the rotary dial forward or backward to select a menu item.
- Short-press the select button to confirm the selection.

2.5.3 Entering the Quick Access menu and menu items

The Quick Access menu gives you access to a selection of menu items.

- Long-press the select button to enter the Quick Access menu from the home screen.
- Turn the rotary dial forward or backward to select a menu item.
- Short-press the select button to confirm the selection.

2.5.4 Returning to the previous step or home screen

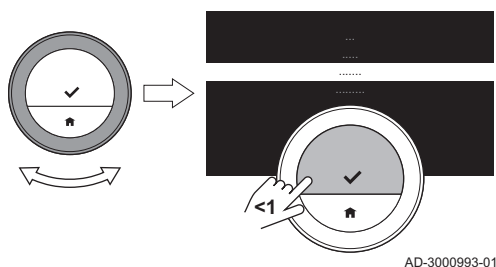
You can return to the previous step of the menu or return immediately to the home screen.

1. Short-press the home button to return to the previous step.
2. Long-press the home button to return to the home screen.

2.5.5 Scrolling through menu items and changing settings

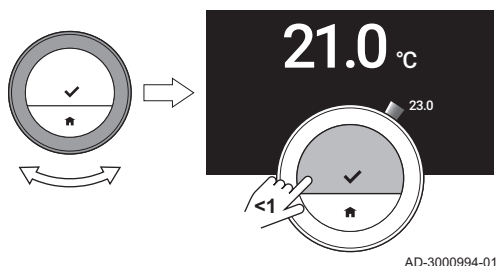
With the rotary dial you can scroll through menu items and change values, temperatures and time settings.

Fig.14



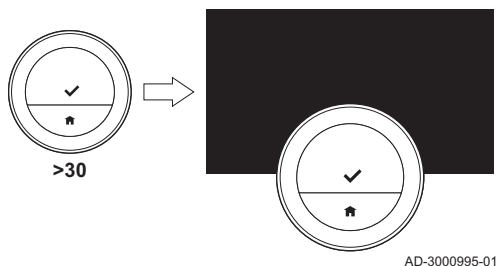
1. Turn the rotary dial to scroll through the menu items.
2. Select the menu item you want to change.
3. Short-press the select button to confirm the selection.
4. Turn the rotary dial to scroll through the submenu items.
5. Select the submenu item you want to change.
6. Short-press the select button to confirm the selection.

Fig.15



7. Turn the rotary dial to change the setting.
8. Short-press the select button to confirm the selection.

Fig.16



2.5.6 Screen shows no information

When the rotary dial, select button or home button are not operated and no people are in front of the Smart TC° for 30 seconds, the display of the Smart TC° goes in stand-by mode and will show no information (black screen).



Important

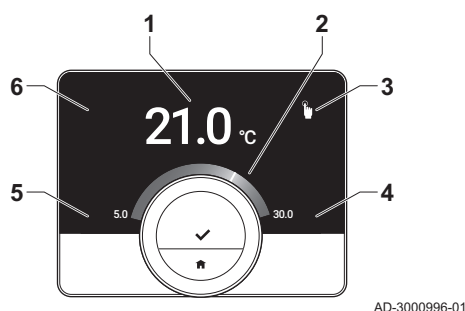
- Press a button, turn the rotary dial or use the presence sensor to activate the display.
- The Smart TC° will display the home screen after activation of the display. Any unconfirmed setting or selection will be lost.
- On delivery the presence sensor is active. You can switch off the presence detection.



For more information, see
Presence sensor, page 23

2.6 Description of the display

Fig.17



- 1 Current temperature (or target temperature)
- 2 Temperature scale
- 3 Control mode icon
- 4 Main screen information box
- 5 Main screen information box
- 6 Zone icon, Error icon or Filling needed icon

The temperature scale in the main screen shows the difference between the current and target temperature. The white line represents the current temperature. The target temperature is displayed in small digits next to the scale. The temperature scale is visible when the current temperature differs from the target temperature.



Important

The Smart TC° displays the current temperature in a large font by default. You can change the display of the temperature to show the target temperature.



















For more information, see
Screen shows no information, page 9
Main screen setting, page 23
Changing the display settings, page 25











2.6.1 Description of the icons in the display









Possible icons in the display (depending on the configuration of your installation).

Tab.1 Control mode icons















	Manual mode: Manual mode is active	 See Changing the mode quickly, page 13 Changing the temperature in manual mode, page 13
	Anti-frost mode: Anti-frost mode is active	 See Changing the mode quickly, page 13 Activating antifrost mode, page 19
	Holiday period: Holiday period is active	 See Changing the mode quickly, page 13 Setting a holiday schedule, page 17
	Fireplace mode: Fireplace mode is active	 See Changing the mode quickly, page 13 Activating fireplace mode, page 19
	Temperature scheduling: Temperature scheduling is active	 See Changing the mode quickly, page 13 Creating a temperature schedule to control the room temperature, page 14
	Short temperature change: Scheduling mode is interrupted for a short temperature change	 See Changing the mode quickly, page 13 Changing the temperature for a short period in scheduling mode, page 14
	Topping up: manual or automatic refill for the installation.	 See Topping up, page 17
	Rotary dial: You are turning the rotary dial to set the temperature	 See Changing the temperature in manual mode, page 13 Changing the temperature for a short period in scheduling mode, page 14

Tab.2 Main screen icons





	Date	 See • Setting the date and time, page 22 • Main screen setting, page 23
	Time	 See • Setting the date and time, page 22 • Main screen setting, page 23
	Outdoor temperature	 See • Main screen setting, page 23 • Outside temperature, page 35
	Boiler status: Heating demand	 See Main screen setting, page 23
	Boiler status: Heating active	 See Main screen setting, page 23

	Appliance mode: On	 See <ul style="list-style-type: none"> Switching the central heating on/off, page 20 Main screen setting, page 23
	Appliance mode: Off	 See <ul style="list-style-type: none"> Switching the central heating on/off, page 20 Main screen setting, page 23
	Appliance mode: Cooling	 See <ul style="list-style-type: none"> Switching to cooling mode, page 20 Main screen setting, page 23
	Appliance mode: Auto	 See <ul style="list-style-type: none"> Switching to auto mode, page 20 Main screen setting, page 23

Tab.3 Zone icons

	Basement	 See Changing the zone temperatures, page 17 Changing the name of a zone, page 25
	Bedroom	 See Changing the zone temperatures, page 17 Changing the name of a zone, page 25
	Kitchen	 See Changing the zone temperatures, page 17 Changing the name of a zone, page 25
	Living room	 See Changing the zone temperatures, page 17 Changing the name of a zone, page 25
	Study	 See Changing the zone temperatures, page 17 Changing the name of a zone, page 25
	Swimming pool	 See Changing the zone temperatures, page 17 Changing the name of a zone, page 25
	Generic	 See Changing the zone temperatures, page 17 Changing the name of a zone, page 25

Tab.4 Error icon

	Error display: The appliance reports an active error	 See Error messages overview, page 36 Troubleshooting, page 41
	Error display: The Smart TC° has no internet connection	 See Smart TC° connections, page 26

2.6.2 Customising the main screen display

You can configure the main screen of the display by adding two information boxes on the screen, one to the left and one to the right of the rotary dial.

The information boxes can show:

- Time and date
- Detailed information about your system

You can also change the display of the temperature to show the current or target temperature.



For more information, see

Main screen setting, page 23

Display current or target temperature, page 23

2.7 Zone selection

In case you have multiple zones in your heating system, it is possible to control temperatures in multiple zones. A zone can be a room or, for example, the ground or first floor. The zones are named CircA, CircB etc. by default. These factory names can be changed in any name you prefer. You can change the names on the Smart TC° or in the app.

The multiple zoning options needs to be supported by a matching appliance configuration.



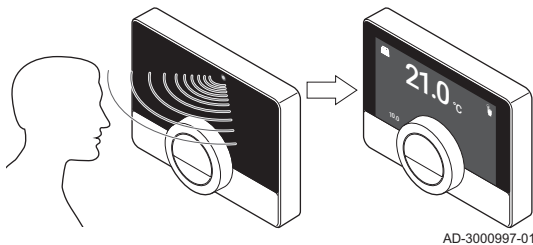
For more information, see

Changing the name of a zone, page 25

Changing the zone temperatures, page 17

2.8 Presence detection

Fig.18



The main screen of the display will light up (for 5 seconds) if the presence sensor detects that you are in front of the Smart TC° or pass by. You can disable the presence sensor in the settings menu.



For more information, see

Presence sensor, page 23

3 General use



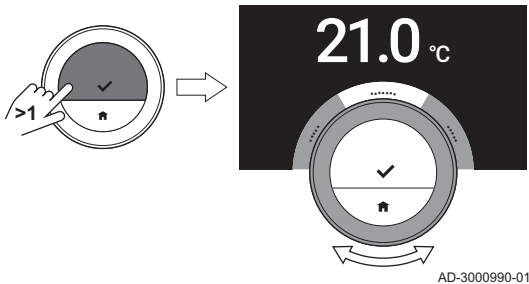
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This chapter helps you with the daily use of the thermostat. You will find instructions for daily use like how to change temperatures in different modes, changing control modes.

- ➡ Next chapter: Customisation, page 21
- ⬅ Previous chapter: Introduction, page 6
- 🏠 First chapter: Manual menu, page 5

3.1 Changing the mode quickly

Fig.19



AD-3000990-01

You can change the control mode quickly from the access menu.

1. Long-press the select button to enter the Quick Access menu.
2. Turn the rotary dial to select the desired mode.
3. Short-press the select button to confirm your choice.

Tab.5 Possible mode and description

Manual: The room temperature can be set instantly with the rotary dial.
Antifrost: The room temperature is set to the antifrost temperature setting.
Holiday: The room temperature is set to the holiday temperature setting.
Fireplace: Continue heating other rooms in the same zone while an additional heat source heats the room where the Smart TC ° is located.
Scheduling: The room temperature is controlled by a temperature schedule. ⁽¹⁾
(1) When multiple schedules are enabled, Schedules 1 to 3 are shown.

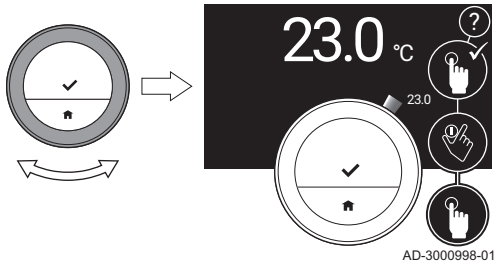


For more information, see
Changing the temperature in manual mode, page 13
Changing the temperature for a short period in scheduling mode, page 14
Setting a holiday schedule, page 17
Activating fireplace mode, page 19
Activating antifrost mode, page 19

3.2 Changing the room temperature

3.2.1 Changing the temperature in manual mode

Fig.20



AD-3000998-01

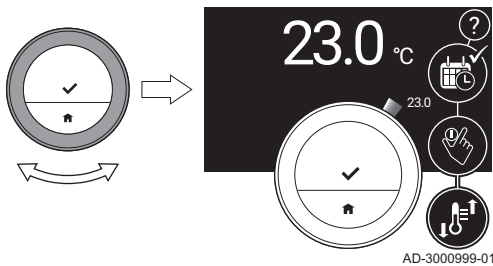
In manual mode you can easily change the room temperature.

1. Check that the Smart TC° operates in manual mode (see icon in top-right corner of main screen).
2. Turn the rotary dial to change the temperature.
⇒ While you turn the rotary dial, the target temperature is displayed in light digits. After a few seconds, the Smart TC° shows the home screen again with the current temperature (or target temperature) in bold digits.



Important
When the Smart TC° is in manual mode, only a scheduled holiday period can automatically change the room temperature.

Fig.21



3.2.2 Changing the temperature for a short period in scheduling mode

You can change the temperature for a short set period when the Smart TC° is in scheduling mode. At the end of the period the Smart TC° will return to the scheduled temperature.

1. Check that the Smart TC° operates in scheduling mode: see the icon in the top-right corner of the main screen.
2. Change the temperature with the rotary dial.
3. Long-press the select button.
4. Change the period between 0 and 24 hours.



Important

If you change it to 0 hours, the short temperature change is deleted.

5. Confirm the change.



Important

You can delete the set temperature change by selecting **Clear Short Temperature Change** in the main menu..

3.3 Creating a temperature schedule to control the room temperature

A temperature schedule enables you to change the target temperature at any moment that you choose. You can set a different schedule for each day of the week.

You can customise each day schedule to your own preference:

- Change the switch time.
- Choose another activity between two switch times.
- Change the temperature of an activity.
- Add up to a maximum of 6 switch times per day.
- Remove switch times to a minimum of none (resulting in constant temperature all day long based on the last activity from the previous day).

You can create up to three week schedules. For example, you can create time schedules for:

- A week with normal working hours.
- A week with different working hours.
- A week when you are at home most of the time.

3.3.1 Changing the weekdays of a temperature schedule

You can change, add or delete temperature intervals in one or more weekdays of a timer program. For example, you can lower the temperature during the night and when you are out of the house. You can set the switch point and the activity (with its temperature) for each interval of the schedule.

1. Enter the main menu.
2. Select **Change Temperature Scheduling**, **Change Heating Temperature Scheduling** or **Change Cooling Temperature Scheduling**.



Important

Availability of the submenus depends on your appliance.

3. If multiple schedules is enabled: Select **Schedule 1**, **Schedule 2** or **Schedule 3**.

Fig.22

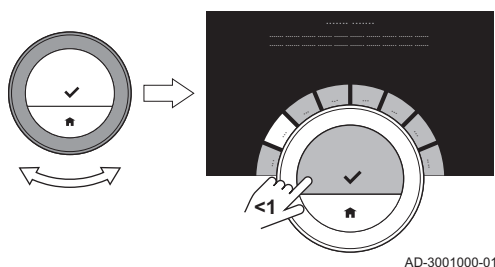
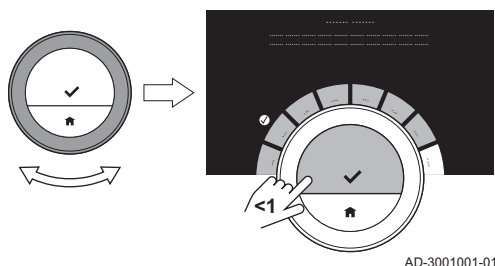


Fig.23



4. Select and confirm the day(s) that you want to program.



Important

- When you select more than one day, the days will be assigned the same day schedule.
- Help text on the display above the schedule helps you perform changes.

5. Confirm the selected day(s) by rotating the rotary dial to **DONE** and pressing the select button.

6. Change, add or delete activities and switch times.



Important

You can short-press the home button to go back one step.

■ Changing an activity

The temperature of a time interval in the day schedule is set by the selected activity. By changing the activity another target temperature is set.



Important

When you change an activity the cursors mark the item you are changing.

1. Select the activity with the rotary dial.
2. Confirm the selection.
3. Choose another activity with the rotary dial or leave it as is.
4. Confirm the selection.
5. Change the temperature of the activity or leave it as is.



Important

- The temperature you set for an activity is the same for every day of the week where you use this activity.
- The **Custom** activity, however, can have a different temperature on each day of the week.

6. Confirm the selection.



For more information, see

Changing the name of an activity, page 24

■ Changing a switch time

The switch time is the start time of new activity interval in the day schedule.



Important

When you change a switch time the cursors mark the item you are changing.

1. Select the switch time with the rotary dial.
2. Confirm the selection.
3. Change the switch time.
4. Confirm the selection.

Fig.25

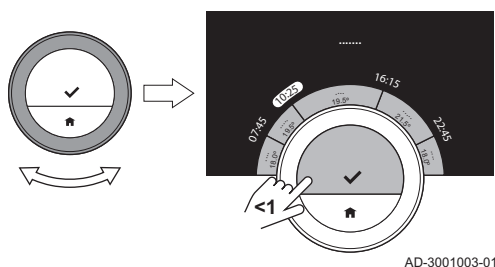


Fig.26

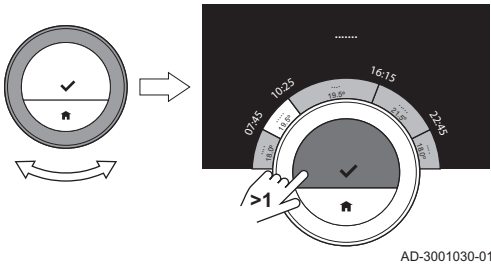
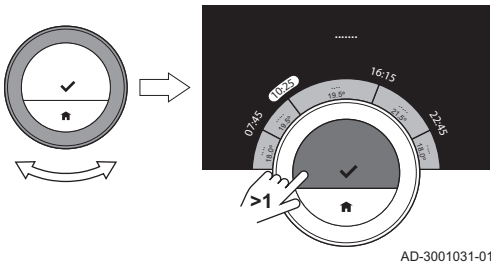


Fig.27



■ Adding or deleting activities and switch times

You can add or remove activity intervals from the day schedule.

1. Select an activity and long-press the select button to add an interval.
⇒ An new interval is created within the start and end time of the existing activity interval.
2. Repeat step 1 to add more intervals, if required.
3. Change the activity of the new interval(s).
4. Change the switch time of the new interval(s), if required.

5. Select a switch time and long-press the select button to delete an interval.
6. Select **DONE** using the rotary dial to save the day schedule.

3.3.2 Copying a weekday of a temperature schedule

You can copy the schedule of one weekday to other weekdays, to speed up the creation of a temperature schedule.

1. Enter the main menu.
2. Select **Change Temperature Scheduling, Change Heating Temperature Scheduling** or **Change Cooling Temperature Scheduling**.



Important

Availability of the submenus depends on your appliance.

3. If multiple schedules is enabled: Select **Schedule 1, Schedule 2** or **Schedule 3**.
4. Select the weekday you want to copy.
5. Confirm the selected day(s) by rotating the rotary dial to **DONE** and pressing the select button.
⇒ The day schedule is opened.
6. Select **Copy** using the rotary dial.
7. Confirm the selection.
⇒ The week schedule is opened.
8. Select and confirm the weekday(s) on which you want to copy the day schedule.
9. Confirm the selected day(s) by rotating the rotary dial to **DONE** and pressing the select button.
⇒ The day schedule is copied to the selected day(s).

3.3.3 Selecting another temperature schedule

Your weekly programme can differ from week to week. The Smart TC° offers you three possible schedules to program. You can set which temperature schedule is active. First you have to enable the use of multiple schedules.

1. Enter the main menu.
2. Select **Settings**.
3. Select **Enable multiple schedules**.
4. Enter the main menu.
5. Select **Select Active Temperature Schedule**.
6. Select **Schedule 1, Schedule 2** or **Schedule 3**.

7. Confirm the selection.
 - ⇒ The selected temperature schedule becomes active, which is shown by the icon in the top-right corner of the main screen.

3.4 Changing the zone temperatures

If you have multiple zones in your heating system you can control the temperature in each zone.

1. Enter the main menu.
2. Select **Zone Selection**.
3. Confirm the selection.
 - ⇒ The available zones are displayed.
4. Select a zone.
5. Confirm the selection.
 - ⇒ The main screen is displayed with the icon and the name of the selected zone.
6. Change the temperature using the rotary dial.
7. Confirm the selection.

3.5 Topping up

When your appliance is fitted with a refilling unit, you can top up your installation in two ways: automatic and manual. You select the automatic or manual topping up option via the Smart TC° app or the control panel on your appliance.

3.5.1 Topping up manually

As soon as the water pressure becomes too low, the display shows a warning: **Water pressure is too low. Top up your installation via the auto-fill menu.**

1. Enter the main menu.
2. Select **Water pressure low**.
3. Confirm the selection.
4. Select **Ok** to confirm that the appliance can start topping up the installation.



Important

- Topping up stops automatically when the maximum water pressure is reached.
- Topping up stops automatically and the display shows an error message when topping up takes too long.

5. Select **Abort** when you want to stop topping up before the maximum water pressure is reached.

3.5.2 Topping up automatically

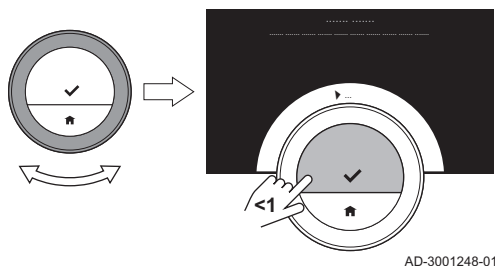
As soon as the water pressure becomes too low, the refilling unit starts topping up the installation. Topping up stops automatically when the maximum water pressure is reached. The display shows a message **Congratulations! Your installation has been topped up successfully..**



Important

When topping up takes too long it stops automatically and the display shows an error message.

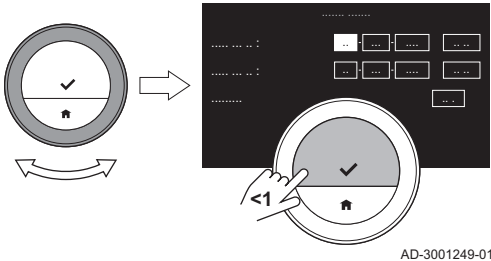
Fig.28



3.6 Setting a holiday schedule

When you will be away for a longer period you can decrease the room temperature to save energy. The holiday mode temperature overrules the temperature(s) set in scheduling mode or manual mode.

Fig.29



3.6.1 Creating a holiday schedule

You can create a holiday schedule via the main menu or via the quick access menu.

■ Creating a holiday schedule via the main menu

1. Enter the main menu.
2. Select **Input Holiday Period**.
3. Confirm the selection.
4. Set the starting date and end date of the holiday period:
 - 4.1. Select an item.
 - 4.2. Confirm the selection.
 - 4.3. Turn the rotary dial to change the item.
 - 4.4. Confirm the change.
5. Set the room temperature for the holiday period:
 - 5.1. Turn the rotary dial to select **Temperature**.
 - 5.2. Confirm the selection.
 - 5.3. Turn the rotary dial to change the temperature.



Important

The heating device in your installation determines what is the minimum temperature for the holiday period.

- 5.4. Confirm the change.
 - ⇒ The display shows: **Holiday period set**.
 - The main screen will show the holiday icon in the top right corner when the holiday period starts.



Important

The holiday mode can also be set for any other appliance in your installation, such as a cooling unit or a hot water generator.

■ Creating a holiday schedule via the quick access menu

1. Long-press the Select button.
2. Select **Holiday**.
3. Confirm the selection.
4. Set the starting date and end date of the holiday period:
 - 4.1. Select an item.
 - 4.2. Confirm the selection.
 - 4.3. Turn the rotary dial to change the item.
 - 4.4. Confirm the change.
5. Set the room temperature for the holiday period:
 - 5.1. Turn the rotary dial to select **Temperature**.
 - 5.2. Confirm the selection.
 - 5.3. Turn the rotary dial to change the temperature.



Important

The heating device in your installation determines what is the minimum temperature for the holiday period.

- 5.4. Confirm the change.
 - ⇒ The display shows: **Holiday period set**.



Important

The holiday mode can also be set for any other appliance in your installation, such as a cooling unit or a hot water generator.

3.6.2 Changing a holiday schedule

You can change the holiday schedule via the main menu and via the quick access menu..

■ Changing the holiday schedule via the main menu

1. Enter the main menu.
2. Select **Input Holiday Period**.

3. Confirm the selection.
4. Select **Edit**.
5. Confirm the selection.
6. Change the period and/or temperature.
7. Select **Save**.
8. Confirm the change.

■ Changing the holiday schedule via the quick access menu

1. Long-press the Select button to enter the quick access menu.
2. Select **Holiday**.
3. Confirm the selection.
4. Select **Edit**.
5. Confirm the selection.
6. Change the period and/or temperature.
7. Select **Save**.
8. Confirm the change.

3.6.3 Deleting a holiday schedule

You can delete the holiday schedule via the main menu and via the quick access menu.

■ Deleting the holiday schedule via the main menu

1. Enter the main menu.
2. Select **Input Holiday Period**.
3. Confirm the selection.
4. Turn the rotary dial to the left to select **Clear**.
5. Confirm the selection.

■ Deleting the holiday schedule via the quick access menu

1. Long-press the Select button to enter the quick access menu.
2. Select **Holiday**.
3. Confirm the selection.
4. Turn the rotary dial to the left to select **Clear**.
5. Confirm the selection.

3.7 Activating fireplace mode

Fireplace mode enables you to continue heating other rooms that are controlled by your system while another heat source heats the room where the Smart TC° is. For instance a fire lighted in your fireplace or a large number of people can heat the room so much, that the appliance stops heating all the rooms.



Important

Activate the Fireplace mode before the other heat source becomes active.

1. Enter the main menu.
2. Select **Enable Fireplace**.
3. Confirm the selection.
 - ⇒ The fireplace icon appears in the top right corner of the main screen.



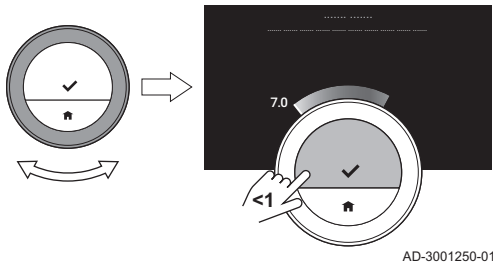
Important

You can switch off fireplace mode by selecting **Fireplace disabled** in the main menu.

3.8 Activating antifrost mode

You can activate the antifrost mode for central heating and domestic hot water production, when you will be out of the house in winter for a longer period of time. The heating system will keep the temperature just high enough to avoid frost damage and thus save the maximum amount of energy.

Fig.30

**Caution**

Freezing can still occur in rooms that are not heated. Open all radiators and zones of the central heating system to prevent freezing.

1. Enter the main menu.
2. Select **Enable Frost Protection**.
3. Confirm the selection.
 - ⇒ The display shows a message that you can change the frost protection temperature.
4. Long-press the select button while the message is visible.
5. Turn the rotary dial to change the temperature.

**Important**

The appliance in your installation determines what is the minimum temperature for the antifrost mode.

6. Confirm the change.
 - ⇒ Antifrost mode is on and the display shows the antifrost icon in the top right corner of the main screen.

**Important**

- In antifrost mode you cannot change the room temperature. If you try to do so, the display shows a message.
- You can deactivate the antifrost mode by selecting **Enable Manual Mode** or **Enable Temperature Scheduling**.

3.9 Switching the central heating on/off

You can switch off the central heating function of the installation, to save energy during e.g. the summer period.

If heating is switched off, the appliance will continue providing hot tap water (depending on the configuration of your system).

1. Enter the main menu.
2. Select **Operating mode**.
3. Select and confirm **OFF** to switch off the heating function.
4. Select and confirm **ON** to switch the heating function on again.

3.9.1 Switching to cooling mode

If your installation has a cooling unit, you can activate the cooling mode via the Smart TC°.

If cooling is switched on, the appliance will continue providing hot tap water (depending on the configuration of your system).

1. Enter the main menu.
2. Select **Operating mode**.
3. Select **COOLING** to switch to the cooling mode.

3.10 Switching to auto mode

If your installation has a cooling unit and an outside temperature sensor, you can activate the auto mode via the Smart TC°.

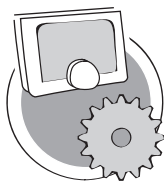
In auto mode, the Smart TC° can automatically adjust the inside temperatures by activating the heating and/or cooling function of the installation. Switching between heating and/or cooling depends on the set threshold.

1. Enter the main menu.
2. Select **Operating mode**.
3. Select **AUTO** to switch to the auto mode.

**For more information, see**

Setting the threshold for auto mode, page 30

4 Customisation



AD-3001025-01

This chapter helps you with customising the thermostat.

→ Next chapter: Messages and data, page 35

← Previous chapter: General use, page 13

🏠 First chapter: Manual menu, page 5

4.1 Hot water settings

Important

- The hot water settings can only be changed for combi appliances. An appliance that can produce both central heating water and hot tap water.
- This menu item is not available for appliances with an on/off communication protocol.

4.1.1 Changing the hot water temperature

If you want to change the maximum temperature of the hot tap water, you have to change the hot water setpoint.

1. Enter the main menu.
2. Select **Hot Water**.
3. Select the option **Hot water setpoint**.
4. Use the rotary dial to change the hot tap water temperature.
5. Confirm the selection.

4.1.2 Setting the hot water comfort mode

If you need hot water immediately when you open the hot water tap, you can select the comfort setting. The appliance permanently keeps the tap water heated, even when you are not using the taps.

1. Enter the main menu.
2. Select **Hot Water**.
3. Select the submenu **Enable permanent comfort**.
4. Confirm the selection.

4.1.3 Setting the hot water reduced (energy-saving) mode

If you want to save energy, you can set the appliance to the hot water energy-saving mode. The appliance will only start heating tap water when you open the hot tap. In this case it will take more time before the tap water reaches the maximum temperature.

The energy saving mode can be active permanently or at scheduled times.

1. Enter the main menu.
2. Select **Hot Water**.
3. Select the submenu **Enable permanent reduced** to activate the energy-saving mode permanently.
4. Select the submenu **Enable scheduling** to activate the energy-saving mode at scheduled times.
5. Confirm the selection.

4.1.4 Changing the hot water schedule

In the hot water schedule you can set at which times the appliance must deliver hot water in comfort mode or reduced mode. In comfort mode hot water is delivered immediately, in reduced mode you have to wait shortly. You can set the comfort mode during periods when you need hot water immediately (e.g. for taking a shower or bath) and the reduced mode to save energy during periods when you don't need hot water (immediately).

1. Enter the main menu.
2. Select **Hot Water**.
3. Select the submenu **Change hot water scheduling**.
4. Select and confirm the day(s) that you want to program.

**Important**

- When you select more than one day, the days will be assigned the same day schedule.
- Help text on the display above the schedule helps you perform changes.

5. Confirm the selected day(s) by rotating the rotary dial to **DONE** and pressing the select button.
6. Create the day schedule with the switching times and hot water settings (comfort or reduced).
7. Confirm the selection.
8. Copy the schedule to other weekdays, if required.

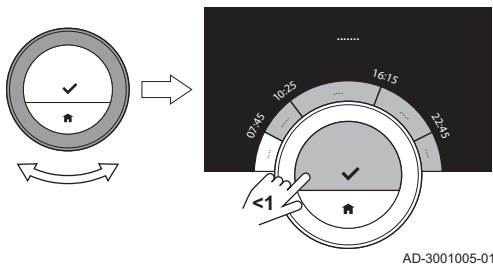
**Important**

You can change the hot water schedule in a similar way to the temperature schedules for heating.

**For more information, see**

Creating a temperature schedule to control the room temperature, page 14

Fig.31



4.2 Smart TC° settings

4.2.1 Setting the date and time

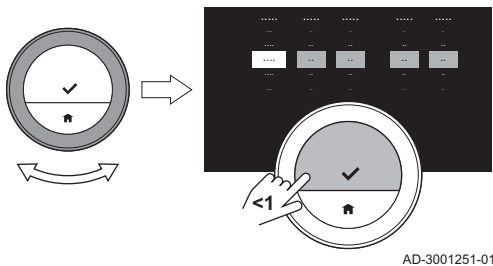
When you start up the Smart TC° for the first time, you enter automatically the menu to set the time and date.

You enter this menu also when there has been a power outage and the Smart TC° has no internet connection.

During normal operation you can change the date and time settings by navigating to the menu.

1. Enter the main menu.
2. Select **Settings**.
3. Confirm the selection.
4. Select **Date time settings**.
5. Confirm the selection.
6. Select **Date time**.
7. Confirm the selection.
8. Change the date and time setting.
9. Confirm the change.

Fig.32



4.2.2 Setting country and language

You select the country where you are and the language for the text on your display.

When you start up the Smart TC° for the first time, you enter automatically the menu to set the country and language.

During normal operation of the Smart TC° you can change the country and language settings at a later moment by navigating to the menu.

1. Enter the main menu.
2. Select **Settings**.
3. Confirm the selection.
4. Select **Country and language**.
5. Confirm the selection.
6. Select your country.
7. Confirm the selection.
8. Select your language.
9. Confirm the selection.

**Important**

The Smart TC° uses the set country for the selection of the current time zone, when connected to the internet.

4.2.3 Main screen setting

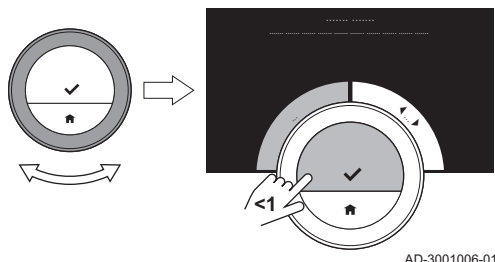
You can add two information boxes on the main screen, one to the left and one to the right of the rotary dial.

1. Enter the main menu.
2. Select **Settings**.
3. Select the submenu **Mainscreen settings**.
4. Use the rotary dial to select the left information box.
5. Select one of the options.
6. Confirm the selection.
7. Use the rotary dial to select the right information box.
8. Select one of the options.
9. Confirm the selection.

**Important**

You can short-press the home button to go back one step.

Fig.33



4.2.4 Presence sensor

The Smart TC° has a sensor for presence detection. When you pass by or approach the Smart TC°, the main screen of the display will light up for 5 seconds. This setting is on by default.

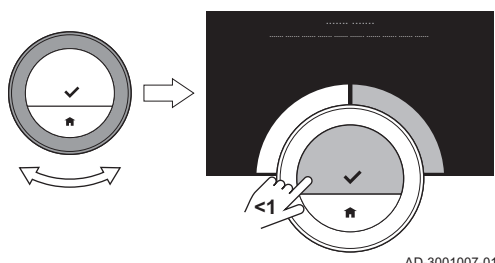
You can switch off the presence detection.

1. Enter the main menu.
2. Select **Settings**.
3. Select the submenu **Presence sensor detection**.
4. Select **Off**.
5. Confirm the selection.

**Important**

- With the presence sensor switched off you need to press a button or turn the rotary dial to activate the display. The main screen of the display will light up for 30 seconds.
- Set **Presence sensor detection** to **On** to activate the presence sensor again.

Fig.34



4.2.5 Display current or target temperature

The Smart TC° displays the current temperature in a large font by default. The target temperature is in a small font near the temperature scale.

You can change the display of the temperature to show the target temperature in large font and the current temperature in a small font.

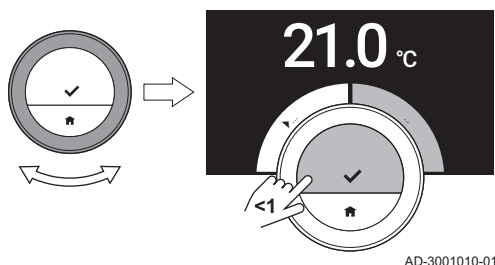
1. Enter the main menu.
2. Select **Settings**.
3. Select the submenu **Display current or target temperature**.
4. Select **Current Temperature** or **Target Temperature**.
5. Confirm the selection.

This setting will stay until you change this setting again or reset the Smart TC° to factory settings.

**Important**

The instructions in this manual are based on the default setting for current temperature. Changing the display of the temperature influences the instructions given.

Fig.35



4.2.6 Child lock

The Smart TC° has a child lock that can be activated to prevent children changing the settings like the room temperature.

■ Activating the child lock

1. Enter the main menu.
2. Select **Settings**.
3. Select and confirm **Enable child lock**.
 - ⇒ The message **Child lock enabled** will appear of the screen. The screen will be locked when the display of the Smart TC° goes in stand-by mode.
4. Short-press a button or turn the rotary dial to reactivate the display.
 - ⇒ The message **Screen locked** will appear of the screen.
5. Press the select button for more than 5 seconds to unlock the screen.
 - ⇒ The message **Screen unlocked** will appear of the screen. The Smart TC° can be operated.



Important

The child lock can also be used to prevent unwanted access to the Smart TC° in public buildings.

■ Deactivating the child lock

1. Press the select button for more than 5 seconds to unlock the screen.
 - ⇒ The message **Screen unlocked** will appear on the screen.
2. Enter the main menu.
3. Select **Settings**.
4. Select and confirm **Disable child lock**.
 - ⇒ The message **Child lock disabled** will appear on the screen. The screen is permanently unlocked.

4.2.7 Changing the name of an activity

You can change the names of the activities for the temperature schedules. The default activity names are dependant on the appliance in your installation.



Important

The **Custom** activity can be set to a different temperature on each day of the week.



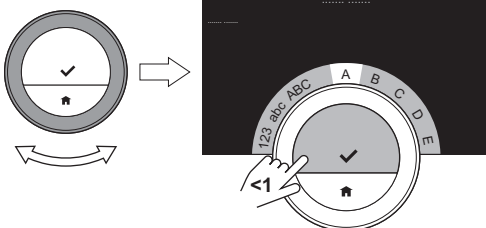
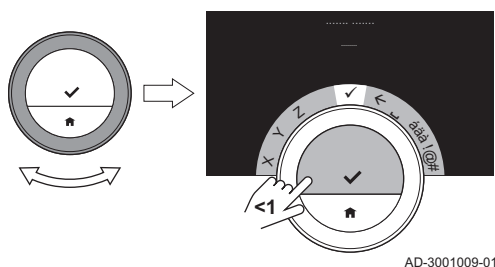
1. Enter the main menu.
2. Select **Settings**.
3. Confirm the selection.
4. Select **Change activity names**.
5. Confirm the selection.
6. Select the name you want to change.
7. Confirm the selection.
8. Change the name:
 - 8.1. Select the backspace  in the character selection menu.
 - 8.2. Confirm the selection to delete the character.
 - 8.3. Delete more characters until you can start with the new name.
 - 8.4. Select  in the character selection menu.
 - 8.5. Confirm the selection to add a space to the name.
 - 8.6. Select a character for the new name.
 - 8.7. Confirm the selection to add the character to the name.
 - 8.8. Add more characters until you finish the name.

Fig.36



AD-3001008-01

Fig.37



9. Select ✓ in the character selection menu.
10. Confirm to save the new name.

4.2.8 Changing the name of a zone

You can change the names of the zone(s) of your heating system.

Fig.38

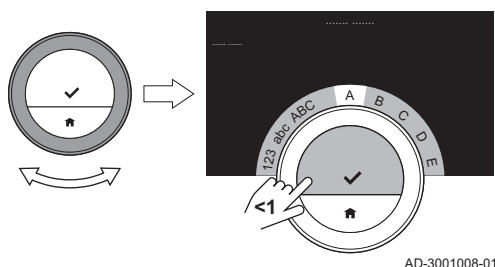
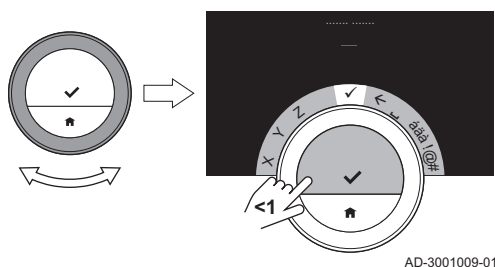


Fig.39



1. Enter the main menu.
2. Select **Settings**.
3. Confirm the selection.
4. Select **Change %1Zone friendly Name**.
5. Confirm the selection.
6. Select the zone name you want to change.
7. Confirm the selection.
8. Change the name:
 - 8.1. Select the backspace ← in the character selection menu.
 - 8.2. Confirm the selection to delete the character.
 - 8.3. Delete more characters until you can start with the new name.
 - 8.4. Select **␣** in the character selection menu.
 - 8.5. Confirm the selection to add a space to the name.
 - 8.6. Select a character for the new name.
 - 8.7. Confirm the selection to add the character to the name.
 - 8.8. Add more characters until you finish the name.
9. Select ✓ in the character selection menu.
10. Confirm to save the new name.



Important

You can choose another zone icon for the Smart TC° with the app on your mobile device.

4.2.9 Changing the display settings

You can change the screen brightness and click sound of the rotary dial of the display.

■ Changing the display brightness

You can change the brightness of the display. The brightness can be set to any value between 10% and 100%.

1. Enter the main menu.
2. Select **Settings**.
3. Select the submenu **Display brightness**.
4. Choose a brightness level between 10% and 100% using the rotary dial.
5. Confirm the setting.

■ Turning the click sound on/off

When you turn the rotary dial the Smart TC° makes a click sound at every change. You can choose to turn this click sound off (or on again).

1. Enter the main menu.
2. Select **Settings**.
3. Select the submenu **Click sound**.
4. Select **Off** or **On**.

5. Confirm your setting.

4.2.10 Enabling time synchronization by internet

You can enable or disable the time synchronization of your Smart TC° with an NTP server on the internet.

1. Enter the main menu.
2. Select **Settings**.
3. Confirm the selection.
4. Select **Date time settings**.
5. Confirm the selection.
6. Select **NTP**.
7. Confirm the selection.
8. Select **On** or **Off**.
9. Confirm the setting.

4.2.11 Enabling daylight saving

You can enable or disable automatic switching to summer time and winter time if your appliance system is fit for this option.

1. Enter the main menu.
2. Select **Settings**.
3. Confirm the selection.
4. Select **Date time settings**.
5. Confirm the selection.
6. Select **Enable daylight save**.
7. Select **On** or **Off**.
8. Confirm the setting.

4.2.12 Changing unit system

You can choose the unit system in the display: the metric system shows temperature in °C and water pressure in bar. The imperial system shows temperature in °F and pressure in psi.

1. Enter the main menu.
2. Select **Settings**.
3. Confirm the selection.
4. Select **Change unit system**.
5. Confirm the selection.
6. Turn the rotary dial to select **Metric** or **Imperial**.
7. Confirm the selection.

4.3 Smart TC° connections

You can operate the Smart TC° with the Smart TC° app on a mobile device or with a home automation application. This allows you to control the appliance(s) in your installation when you are not near the Smart TC°. You need a wi-fi network and a mobile device with Apple iOS, Android or Windows to make the connection.

4.3.1 Establishing the wi-fi connection

To be able to connect the Smart TC° to your mobile device, you must first connect the Smart TC° to your wi-fi network.

When you start up the Smart TC° for the first time, you enter automatically the menu to connect to your wi-fi network. Before you start to set your wi-fi connection you have to approve the **Terms and Conditions**.



See

Terms and conditions, page 42

During normal operation of the Smart TC° you can decide to change or reconnect to your wi-fi network at a later moment.

1. Enter the main menu.
2. Select **Settings**.
3. Confirm the selection.
4. Select **Wi-fi**.
5. Confirm the selection.
6. Accept the **Terms and Conditions**.

**Important**

The display only shows the option to accept the Terms and Conditions when you declined them or when you reset the Smart TC° to default settings.

7. Read the Privacy Policy.

**Important**

The display only shows the Privacy Policy if it showed the option to accept the Terms and Conditions.

8. Select your wi-fi network in the list of available networks.
9. Confirm the selection.
10. Enter the password with the rotary dial and the select button.
11. Select ✓ in the character selection menu to confirm the password.
⇒ The Smart TC° is now connected to the wi-fi network.

■ Connecting the Smart TC° to an access point

You can connect the Smart TC° to an access point in your wi-fi network.

1. Select **WPS Button** in the list of available networks.

**Important**

If you select **Back**, the display shows the previous screen.

2. Activate the **WPS** on your router (if the router has this option).
⇒ The Smart TC° is now automatically connected to the access point.

■ Connecting the Smart TC° to a hidden network

You can connect to a hidden wi-fi network, if you know the name and password.

1. Select **Other...** in the list in the list of available networks.
2. Enter the network name with the rotary dial and the select button.
3. Select ✓ in the character selection menu.
4. Confirm the selection to save the network name.
5. Select the security mode.
6. Confirm the selection.
7. Enter the password with the rotary dial and the select button.
8. Select ✓ in the character selection menu.
9. Confirm the selection to save the password.
⇒ The Smart TC° is now connected to the hidden wi-fi network.

4.3.2 Downloading the app

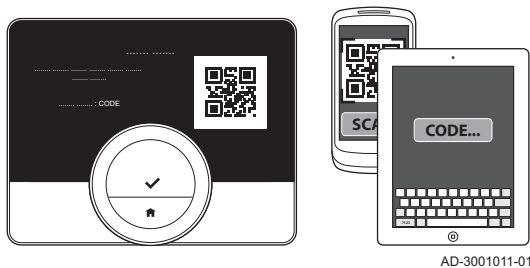
You can install the Smart TC° app on your mobile device.

1. Download the free app in the App Store, Google Play or Microsoft Store. Refer to the information on the Smart TC° box.
2. Start the app and follow the instructions on your mobile device until the app requests a registration code from the Smart TC°.

4.3.3 Connecting the app with the Smart TC°

When you start up the Smart TC° for the first time, you enter automatically the menu to register your Smart TC° app or home automation application. You need an account based on your email address for the connection. During normal operation of the Smart TC° you can decide to connect or reconnect the app with the Smart TC° at a later moment.

Fig.40



AD-3001011-01

1. Open the Smart TC° app and create an account in the settings menu.
⇒ If you create a new account, you will receive an email message for confirmation.
2. Read the email message.
⇒ Check your spam folder if the email does not appear in your inbox.
3. Confirm your account on the website.
4. Enter the main menu of the Smart TC°.
5. Select **Settings**.
6. Select **Register device or service**.
⇒ The Smart TC° displays a registration code and QR-code.
7. Enter the registration code in the app or scan the QR-code with your mobile device.
8. Complete the registration process.

4.3.4 Connecting your home automation application with the Smart TC°

When you start up the Smart TC° for the first time, you enter automatically the menu to register your app or home automation application. If your home automation application can communicate with the IFTTT protocol, you can connect it with the Smart TC°. You need an account based on your email address for the connection. During normal operation of the Smart TC° you can decide to connect or reconnect the home automation application with the Smart TC° at a later moment.

1. Open the home automation application and create an account for the Smart TC°.
2. Read the email message.
⇒ Check your spam folder if the email does not appear in your inbox.
3. Confirm your account on the website of the manufacturer of the Smart TC°.
4. Enter the main menu of the Smart TC°.
5. Select **Settings**.
6. Select **Register device or service**.
⇒ The Smart TC° displays a registration code and a QR-code.
7. Enter the registration code in the home automation application or scan the QR-code with your mobile device.
8. Complete the registration process.

4.3.5 Registering installer access

If you want your installer to make any changes, you can allow the installer to log in to your device.

1. Enter the main menu.
2. Select **Settings**.
3. Select the submenu **Register installer access**.
4. Confirm the installer access.
⇒ This gives your installer access for up to 72 hours.

4.4 Advanced settings

4.4.1 Resetting to default settings

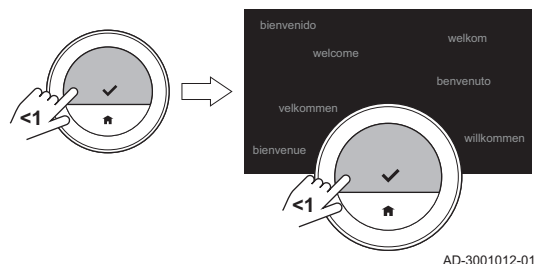
You can reset most of the Smart TC° settings to their default settings at the same time.



Important

- All connection settings for communication will be deleted too!
- The temperature schedules, control mode and holiday period will not be reset.

Fig.41



1. Enter the main menu.
2. Select **Settings**.
3. Select the submenu **Reset to default settings**.
4. Select **Reset**.
5. Confirm the selection.
 - ⇒ The display will show 'welcome' in all languages.
6. Press the select button to continue.
 - ⇒ The setup procedure will start.



For more information, see
Setup procedure, page 40

4.4.2 Check for software update

If your Smart TC° is connected to Wi-Fi, the internet and the server, software will be updated automatically. It's possible to manually check the status of the software:

1. Enter the main menu.
2. Select **Settings**.
3. Select the submenu **Check for software update**.
 - ⇒ The status of the software appears on the screen.

4.4.3 Temperature calibration

You can manually calibrate the temperature if the Smart TC° displays a temperature that does not correspond with the actual room temperature. This procedure should normally not be necessary.

1. Wait for a least 30 minutes after installation of the Smart TC°.
2. Measure the actual room temperature.
3. Enter the main menu.
4. Select **Settings**.
5. Confirm the selection.
6. Select **Temperature calibration**.
7. Confirm the selection.
 - ⇒ The display shows the temperature measured by the Smart TC° as **Temperature detected**.
8. If the detected temperature does not match with the temperature you have measured: turn the rotary dial to change the temperature at **Calibrate this temperature to**.
9. Confirm the change.



Important

- It may take some time before the Smart TC° shows the new offset on the **Current Temperature**.
- The new offset will be used over the entire temperature range.

4.4.4 Activating Preheat

You can choose to preheat the room or a zone for a set period to give it a set temperature at the start time of the scheduled heating period.

1. Enter the main menu.
2. Select **Settings**.
3. Confirm the selection.
4. Select **Pre heat**.
5. Confirm the selection.
6. Turn the rotary dial to change the preheat period.

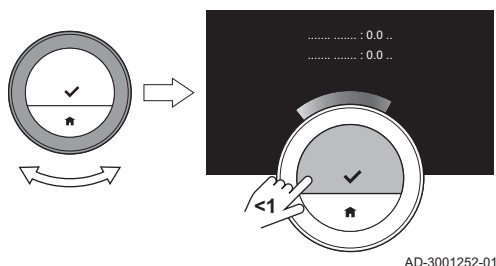


Important

If you turn the rotary dial to 0 minutes, the preheat function is deactivated.

7. Confirm the change.

Fig.42



4.4.5 Setting the threshold for auto mode

You can set the threshold temperature for switching between heating and/or cooling.

1. Enter the main menu.
2. Select **Settings**.
3. Select **RedRoomTempCool Zone**.
4. Use the rotary dial to change the threshold setpoint.

4.5 Installer settings

When you enter the Installer menu, the display shows a warning that the settings in the Installer Menu may affect the performance of your appliance. It may be a better idea that your installer does these settings.

4.5.1 Changing the heating curve

The heating curve relates the water temperature of the heating system to the outside temperature. With a good heating curve the installation can maintain a constant temperature in the room.

1. Enter the main menu.
2. Select **Installer**.
3. Confirm the selection.
4. Select **Yes** to continue.
5. Confirm the selection.

Fig.43

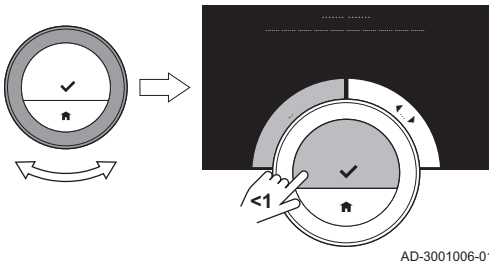
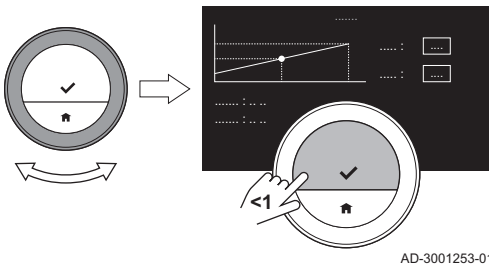


Fig.44



6. Select **Heating Curve**.

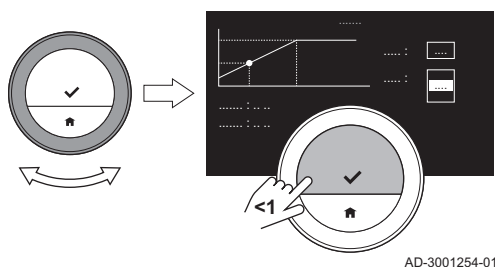


Important

The display shows **Heating Curve** only if your installation is fit for this option.

7. Confirm the selection.
⇒ The display shows the heating curve diagram.
8. Short-press the select button to select the central curve point.
9. Use the rotary dial to move the central curve point over the oblique line in order to see the outside temperatures and the related water temperatures in the bottom-left corner.
10. Short-press the select button to deselect the central curve point.
11. Use the rotary dial to select **Min:** (the minimum water temperature of the appliance).
12. Confirm the selection.
13. Use the rotary dial to change the temperature.
14. Confirm the change.
15. Use the rotary dial to select **Slope:** (the steepness of the heating curve).
16. Confirm the selection.

Fig.45



AD-3001254-01

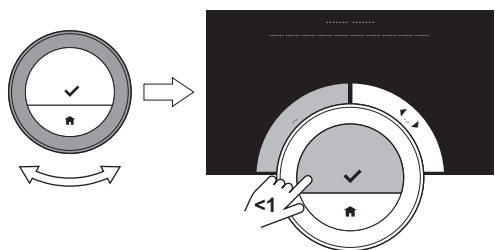
17. Use the rotary dial to change the steepness.
18. Confirm the change.
19. Use the rotary dial to select **Save** at the bottom-right corner of the display.
20. Confirm to save the changes in the heating curve.

4.5.2 Setting the control strategy

The control strategy determines the way in which the Smart TC° controls the heating of the room or a zone.

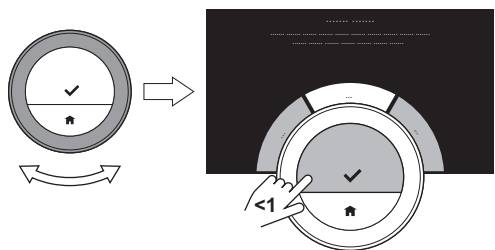
1. Enter the main menu.
2. Select **Installer**.
3. Confirm the selection.
4. Select **Yes** to continue.
5. Confirm the selection.

Fig.46



AD-3001006-01

Fig.47



AD-3001255-01

6. Select **Control strategy**.



Important

The display shows **Control strategy** only if your installation is fit for this option.

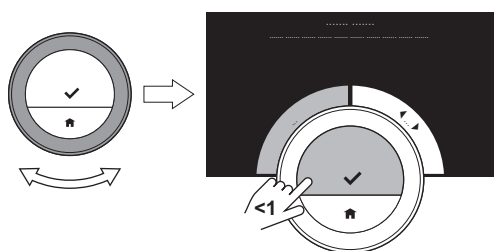
7. Confirm the selection.
8. Select the **Control strategy** that you want:
 - **Room temperature:** the Smart TC° controls the heating on the basis of the room thermostat.
 - **Outside temperature:** the Smart TC° controls the heating on the basis of the outside thermometer.
 - **Room & Outside:** the Smart TC° controls the heating on the basis of a mix of the outside thermometer and for a minor part on the basis of the room thermostat.
 - **Automatic:** the Smart TC° chooses one of the three control strategies on the basis of the connected sensors.
9. Confirm the selection.

4.5.3 Setting the heat up speed

The heat up speed determines how slow or fast the installation will heat up the room or zone at the start time of the scheduled heating period.

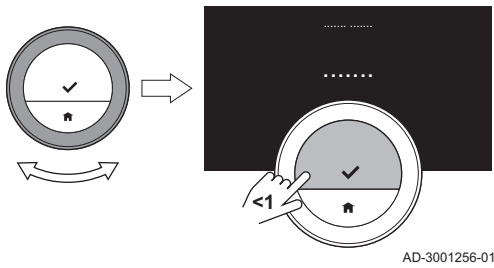
1. Enter the main menu.
2. Select **Installer**.
3. Confirm the selection.
4. Select **Yes** to continue.
5. Confirm the selection.

Fig.48



AD-3001006-01

Fig.49



6. Select **Heatup speed**.



Important

The display shows **Heatup speed** only if your installation is fit for this option.

7. Confirm the selection.

8. Select the heat up speed that you want.



Important

The list of available speed indications depends on the appliance in your installation.

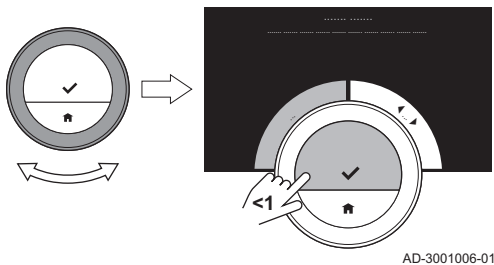
9. Confirm the selection.

4.5.4 Setting the cool down speed

The cool down speed determines how slow or fast the installation will cool down the room or zone at the switch time in the cooling schedule.

1. Enter the main menu.
2. Select **Installer**.
3. Confirm the selection.
4. Select **Yes** to continue.
5. Confirm the selection.

Fig.50



6. Select **Cool down speed**.



Important

The display shows **Cool down speed** only if your installation is fit for this option.

7. Confirm the selection.

8. Select the cool down speed that you want.

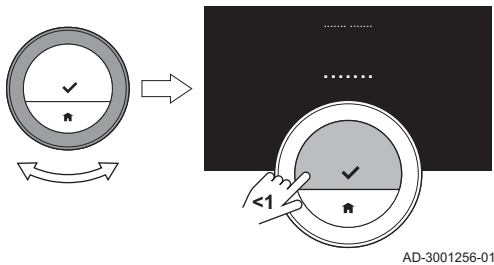


Important

The list of available speed indications depends on the appliance in your installation.

9. Confirm the selection.

Fig.51



4.5.5 Setting the minimum central heating power

The minimum central heating power determines what is the lowest heating capacity of your appliance.

1. Enter the main menu.
2. Select **Installer**.
3. Confirm the selection.
4. Select **Yes** to continue.
5. Confirm the selection.
6. Select **Min. power**.



Important

The display shows **Min. power** only if your installation is fit for this option.

Fig.52

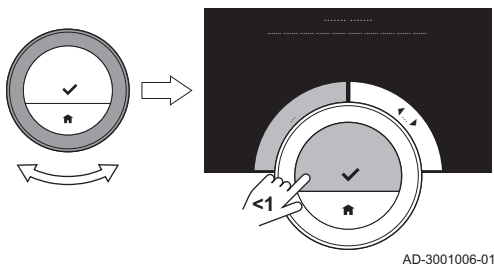
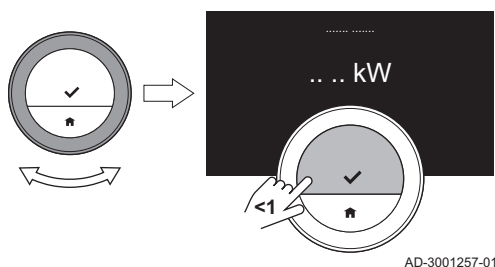


Fig.53



7. Confirm the selection.
8. Turn the rotary dial to select the number of kW.
9. Confirm the selection.

4.5.6 Setting the maximum central heating power

The maximum central heating power determines what is the highest heating capacity of your appliance.

1. Enter the main menu.
2. Select **Installer**.
3. Confirm the selection.
4. Select **Yes** to continue.
5. Confirm the selection.

Fig.54

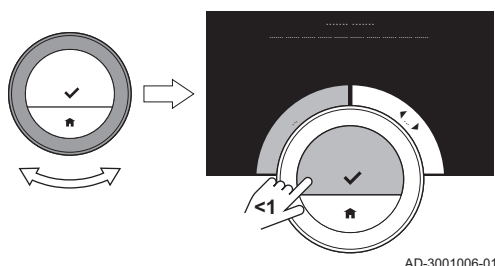
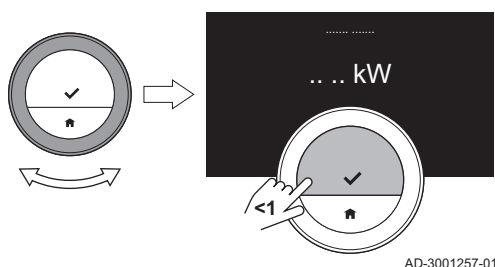


Fig.55



6. Select **CH Max. power**.



Important

The display shows **CH Max. power** only if your installation is fit for this option.

7. Confirm the selection.
8. Turn the rotary dial to select the number of kW.
9. Confirm the selection.

4.5.7 Setting maximum domestic hot water power

The maximum domestic hot water power determines what is the highest capacity of your appliance for producing hot tap water.

1. Enter the main menu.
2. Select **Installer**.
3. Confirm the selection.
4. Select **Yes** to continue.
5. Confirm the selection.
6. Select **DHW Max. power**.



Important

The display shows **DHW Max. power** only if your installation is fit for this option.

Fig.56

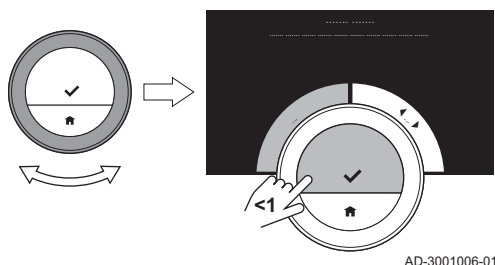
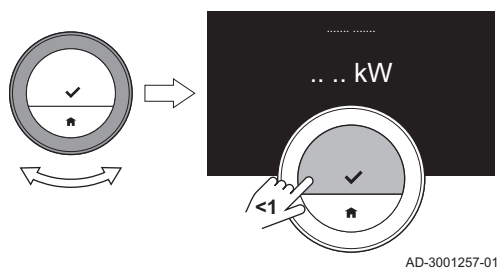
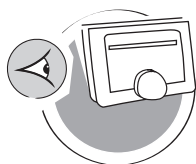


Fig.57



7. Confirm the selection.
8. Turn the rotary dial to select the number of kW.
9. Confirm the selection.

5 Messages and data



AD-3001026-01

This chapter helps you with navigating to information and data of the thermostat and system.

- Next chapter: Installation, page 38
- ← Previous chapter: Customisation, page 21
- 🏠 First chapter: Manual menu, page 5

5.1 Outside temperature

If an external temperature sensor is connected, you are able to read the outside temperature.

1. Enter the main menu.
2. Select **Outside Temperature**.
3. Confirm the selection.
 - ⇒ The Smart TC° will now display the current outside temperature.

5.2 Energy consumption

The Smart TC° can display the energy that was used for heating and hot tap water supply from the moment of first use of the appliance.



Important

- This menu item is only available for combi appliances. An appliance that can produce both central heating water and hot tap water.
- This menu item is not available for appliances with an on/off communication protocol.

1. Enter the main menu.
2. Select **Energy Consumption**.
3. Confirm the selection.
 - ⇒ The Smart TC° will now display the current energy consumption.

5.3 Installer details

The Smart TC° can display the name and telephone number of the installer for ease of contact.

1. Enter the main menu.
2. Select **Installer Contact Details**.
 - ⇒ The Smart TC° will now display the contact details of your installer.



Important

The installer contact details can be edited in the app on your mobile device.

5.4 Appliance data

The Smart TC° can display some appliance data from your heating system. If your appliance supports this function, you can read the water pressure and water temperature.



Important

This menu item is not available for appliances with an on/off communication protocol.

1. Enter the main menu.
2. Select **Heater**.
3. Select the submenu **Water Pressure** or **Current Boiler Temperature**.
 - ⇒ The Smart TC° will now display the appliance data.

5.5 Technical information

The Smart TC° can display various built-in properties and parameters.

1. Enter the main menu.
 2. Select **Technical Information**.
 3. Confirm the selection.
- ⇒ The display shows:

Tab.6 Device Information

Serial Number:
Software Version:
Wifi SSID:
Wifi Connection:
Internet Connection:
Server Connection:
Register Status:
IP Address:
MAC Address:
Server up time:
Wifi up time:
date:
time:
Time server:

Tab.7 Appliance Information

Name:
Software Version:
Connection:
date:
time:

Tab.8 Miscellaneous

License Information Open
Logging Sent to Server

5.6 Error messages overview

You can open the error messages list from the main menu to get an overview of all error messages.

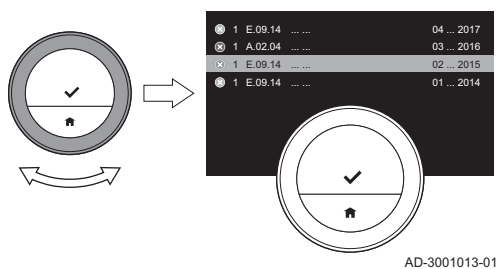
1. Enter the main menu.
 2. Select **Error History**.
 3. Confirm the selection.
- ⇒ The display shows the list of error messages.



Important

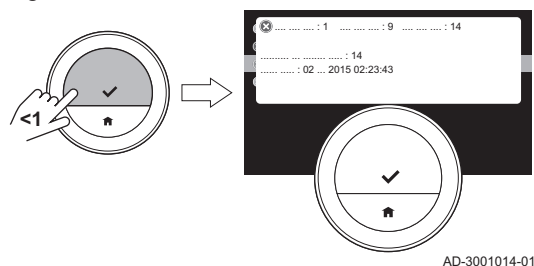
The list contains the complete history of error messages. Only one error message can be active at a time and it is situated at the top of the list.

Fig.58



4. Select the active error message.

Fig.59



5. Confirm the selection and read the message for more details.

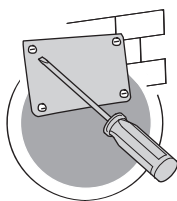
6. If you cannot solve the problem yourself: Note down the error message code and contact your installer.

5.7 Sending error information to manufacturer

When the Smart TC° has an error, you can send error information to the manufacturer.

1. Enter the main menu.
 2. Select **Technical Information**.
 3. Confirm the selection.
 4. Select **Sent to Server**.
 5. Confirm the selection.
 - ⇒ The Smart TC° sends information to the manufacturer:
 - The error code.
 - Usage data of the Smart TC° from maximum the last four days.
- The display shows a message: **The logging will be sent to the server.**

6 Installation



AD-3001027-01

This chapter helps you with the installation and commissioning of the thermostat.

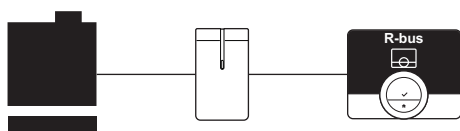
→ Next chapter: Troubleshooting, page 41

← Previous chapter: Messages and data, page 35

🏠 First chapter: Manual menu, page 5

6.1 System overview

Fig.60



AD-3001019-01

6.1.1 Systems with gateway

The Smart TC° can be connected to three types of appliances (based on the communication protocol):

- On/off protocol
- OpenTherm protocol
- BSB protocol

The communication protocol depends on the type of appliance used in your system. Consult your installer for technical details about your appliance and information how to connect the Smart TC° with the appliance. You can connect the Smart TC° yourself, or ask your installer.



For more information, see
Setup procedure, page 40

6.1.2 System without gateway

Appliances with built-in gateway are available. The Smart TC° can be directly connected to the appliance.



See
The website of the manufacturer to find information about the available appliances.

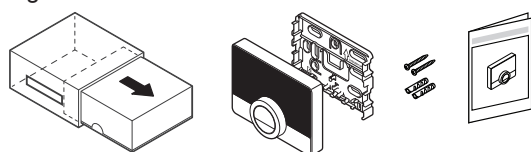
Fig.61



AD-3001020-01

6.2 Standard delivery

Fig.62

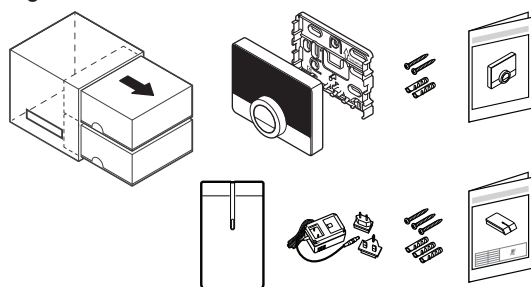


AD-3001021-01

Tab.9 Smart TC° package

Smart TC° room thermostat
Mounting bracket
Fasteners
Plug fittings
Quick reference guide

Fig.63



AD-3001022-01

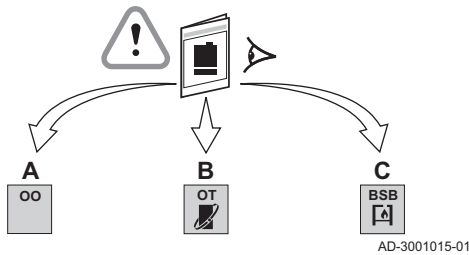
Tab.10 Smart TC° and gateway package

Smart TC° room thermostat
Mounting bracket
Fasteners
Plug fittings
Quick reference guide
Gateway
230V Power supply
Installation instructions

6.3 Preparation

You must check which gateway is needed for the communication between the Smart TC° and your appliance.

Fig.64

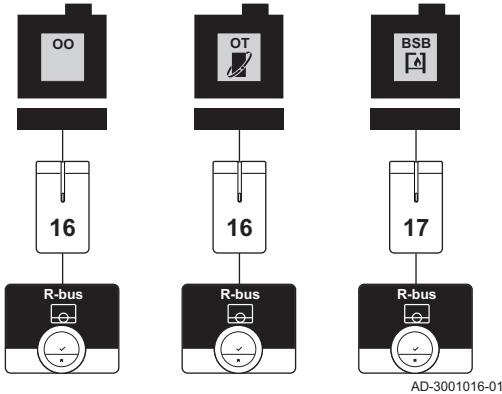


1. Check the documentation to know which communication protocol is used for the control of your appliance:

Tab.11 Communication protocol

A	On/off protocol
B	OpenTherm protocol
C	BSB protocol

Fig.65



2. Use the diagram to determine which gateway matches the communication protocol of your appliance: Gateway 16 or 17

Important
If your appliance supports the R-bus communication protocol, you don't need a gateway.

6.4 Installation of the gateway

Warning
The installation must be performed by a qualified professional.

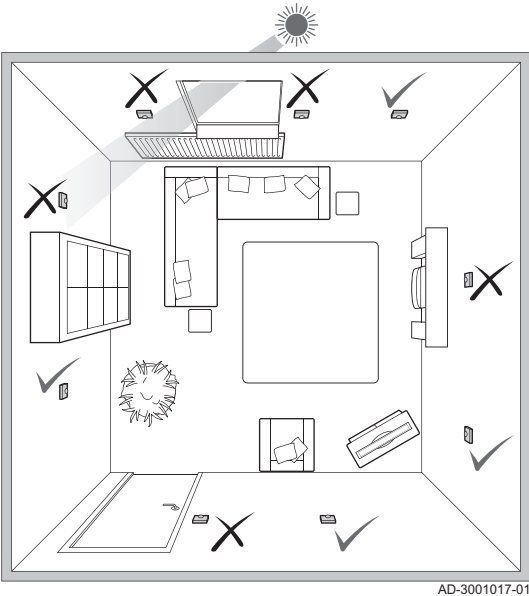
1. Switch off the appliance.

Important
Refer to the documentation of the appliance.

2. Install the gateway following the instructions in the gateway documentation.

6.5 Location of the Smart TC°

Fig.66



Choose the right location for the Smart TC°.

1. Choose the room where you spend most of your time.
2. Choose a suitable place on the wall:
 - 2.1. Away from heat sources (fire place, radiator, light, candles, direct sunlight, etc.)
 - 2.2. Away from draughts
3. Check that the distance between the Smart TC° and the appliance or gateway does not exceed 50 m (maximum cable length).

6.6 Installation of the Smart TC°

The installation of the Smart TC° is described in the Quick Start Guide that is delivered in the Smart TC° package.

1. Mount the mounting bracket to the wall following the instructions in the Quick Start Guide.
2. Install the Smart TC° on the mounting bracket following the instructions in the Quick Start Guide.

6.7 Setup procedure

When the Smart TC° is connected to the electrical power, the display shows the welcome screen within one minute. The Smart TC° guides you through the setup procedure.

1. Select the country.
2. Select the language.
3. Accept the **Terms and Conditions**.



Important

If you decline the legal **Terms and Conditions** you proceed to the date and time setting and finish the setup procedure. At a later time you can still accept the **Terms and Conditions** and set up your wi-fi connection and app connection.

4. Read the Privacy Policy.
5. Establish a wi-fi connection.
6. Download the app.
7. Connect your mobile device and/or home automation application with the Smart TC°.



For more information, see

How to use the Smart TC°, page 7
 Setting the date and time, page 22
 Setting country and language, page 22
 Smart TC° connections, page 26
 Terms and conditions, page 42

6.8 Software update

Software updates are available for your Smart TC°. To update the software the Smart TC° must be connected to:

- Wi-Fi
- The internet
- The server

When all the connections are made the Smart TC° will automatically update the software.



Important

The first software update will be available within one day.

It's also possible to manually check the status of the software.



See

Check for software update, page 29

Each time the software has been successfully updated:

- The Smart TC° will restart.
- A message will appear on the home screen.

7 Troubleshooting



AD-3001028-01

This chapter helps you when there is a problem with the thermostat, an error message will appear on the home screen.

→ Next chapter: Appendix, page 42

← Previous chapter: Installation, page 38

🏠 First chapter: Manual menu, page 5

7.1 Error messages

If there is a problem, an error message will appear in the display of the Smart TC°.

1. Press the select button to see more details about the error.
⇒ The error icon will remain visible in the display until the problem is solved.
2. Open the error messages list to find details on the active error.
3. Solve the problem(s).
4. Reset the error on the appliance. Refer to the manual of the appliance for more information.
⇒ The error icon will disappear from the home screen.



For more information, see
Error messages overview, page 36

7.2 Other problems or questions

If you have problems or questions about certain situations, please refer to the table below before you contact your installer for help.

Tab.12 Problems and solutions

Problem	Possible cause	Solution or answer
The display does not show the temperature ring.	The Smart TC° is in antifrost mode.	In antifrost mode the temperature does not show.
	The current temperature is equal to the target temperature.	The display will show the temperature ring when the temperatures are different.
The Smart TC° shows a wrong date and time setting.	<ul style="list-style-type: none"> • The power supply of the appliance was interrupted for more than 2 minutes, • or the wifi connection does not function, • or the Smart TC° has no connection to time synchronisation on the internet (NTP). 	<ul style="list-style-type: none"> • Connect the Smart TC° to the wi-fi network • and to the internet • and to the time synchronization • Or: set the current date and time.
The display does not go black after 30 seconds.	The presence sensor is set to On and an object is in front of the Smart TC°.	<ul style="list-style-type: none"> • Put the object at a larger distance. • Set the presence sensor to Off.
The target temperature cannot be set with the rotary dial.	The Smart TC° is in antifrost or holiday mode.	Set the Smart TC° to manual mode or temperature scheduling mode.
The Energy Consumption menu shows no consumption information or a value that seems to be incorrect.	<ul style="list-style-type: none"> • The minimum and maximum power of the appliance is not set correctly in the Installer menu. • Your installation is not fit for this option. 	<ul style="list-style-type: none"> • Ask for the correct power settings of your appliance. • Enter the Installer menu and set: <ul style="list-style-type: none"> - minimum power for central heating. - maximum power for central heating. - maximum power for domestic hot water.

8 Appendix



AD-3001029-01

This chapter gives you more technical information about the thermostat.

← Previous chapter: Troubleshooting, page 41

🏠 First chapter: Manual menu, page 5

8.1 Terms and conditions

The legal **Terms and Conditions** are for the wi-fi connection and use of the Smart TC° app. Before you start to setup your wi-fi connection and app connection you have to approve the **Terms and Conditions**.

The **Terms and Conditions** cannot be viewed on the Smart TC°. You have two options to view them:

- Visit the website of the manufacturer.
- Open the Smart TC° app on your mobile device.

Approve the **Terms and Conditions** after you have read and agreed to them.

If you decide to accept the **Terms and Conditions** you have four extra features with the Smart TC°:

- You can control your heating (and cooling) system via your mobile device and/or home automation application.
- The Smart TC° automatically restores the right date and time after a power outage.
- The Smart TC° will receive automatic updates with new functions.
- You can report errors of your system to the manufacturer.

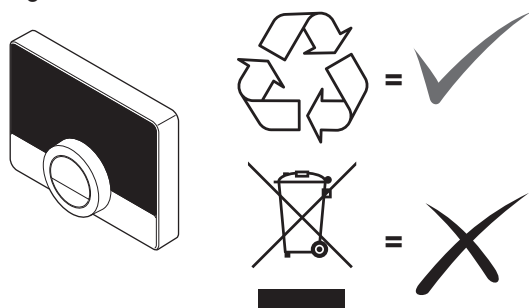


Important

You have to accept the **Terms and Conditions** only once, unless you reset the default settings of the Smart TC°.

8.2 Disposal

Fig.67



The Smart TC° is a regular electronic device.

Dispose of the Smart TC° in an environmentally friendly way and in accordance with local regulations.

8.3 Technical specifications

Tab.13 Dimensions

Width x height x depth (maximum dimensions)	121 x 90 x 29 mm
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Tab.14 Power supply

Bus connection voltage	24 V ± 5%
Maximum power consumption	2 W

Tab.15 Electrical connection

Maximum cable length for dedicated Smart TC° bus	50 m
Maximum cable resistance	2 x 5 ohm

Tab.16 Wi-Fi connection

Supported frequency band	2.4 Ghz (802.11b/g)
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Tab.17 Ambient conditions

Storage temperature	from - 25 °C to 70 °C
Relative humidity	from 5 % to 95 % Condensation is not allowed
Operating conditions	from 0 °C to 60 °C

Tab.18 Temperature

Room temperature measurement range	from 0 °C to 50 °C ⁽¹⁾
Temperature control area	from 10 °C to 30 °C ⁽¹⁾
(1) Depends on appliance.	

Tab.19 Compliant with standards

EMC: 108/2004/EC, EN 55022, 55014
Immunity: EN2-6-61000
EN2-6-61000 (EMC part 6.2 Generic Standards)
ETSI-EN 17-489 301 (Electromagnetic compatibility and radio spectrum matters)
R&TTE Directive 5/1999/EC
EN 1-60950 (ITE – Safety – Part 1: General Requirements)
Low voltage directive (95/2006/EC)
WEEE directive (96/2002/EC) (disposal requirements)
Drop test: IEC 32-2-60068
Protection classification: IP21

8.4 ErP information

8.4.1 Product fiche

Tab.20 Product fiche

De Dietrich - Smart TC°		Smart TC° ⁽¹⁾	Smart TC° ⁽²⁾	Smart TC° ⁽³⁾
Class		IV	V	VI
Contribution to space heating energy efficiency	%	2	3	4
(1) Combined with On/Off appliance (2) Combined with modulating appliance (3) Combined with modulating appliance and outdoor sensor				

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