SIEMENS

RDS120, RDS120.B

Smart Thermostat

User Guide

Table of Contents

1 About this User guide

1.1 Revision history

Edition	Date	Changes
5	December 2021	Updated operation information about the mobile application.
4	June 2021	• Changed temporary temperature setpoint description per function change. • Added another lock schema information • Added BACnet object information
3	July 2018	Third version. • Added information on **Fan min. ON time**. • Added information on time synchronization and setting valid period after power failure. • Added information on **Free cooling**.
2	April 2018	Second version. • Added reference document Submittal Sheet.
1	December. 2017	First version.

1.2 Reference documents

Ref.	Document title	Document
[1]	Mounting instructions	Multi-lingual version
[2]	Quick guide	en
		es
		fr
[3]	Data sheet	en
		es
[4]	Commissioning	en
		es
[5]	Submittal sheet	en
		es

1.3 Before starting

Trademarks

The table below lists the third-party trademarks used in this document and their legal owners. The use of trademarks is subject to international and domestic provisions of the law.

Trademarks	Legal owner
App Store®	Apple Inc.
Google Play™	Google Inc.
Wi-Fi®	Wi-Fi Alliance

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Conventions for text marking

Notations

Special notations are shown in this document as follows:

▷	Specifies the requirements that must be met before performing this procedure.
1. 2.	Procedures must be performed in the specified order.
[→ X]	Reference to a page number
>	Relation sign and for identification between steps in a sequence, e.g., **Menu bar** >**Help** > **Help topics**.

Symbol identifications

⚠ WARNING	
	This is the symbol for hazard. It warns of **Risks of personal injury.** Comply with all measures designated by this symbol to prevent injury or death.

NOTICE	
!	This symbol identifies an important notice.

	The 'i' symbol identifies supplementary information and tips.

Before starting

It is important to read the documents supplied with or ordered at the same time as the products (equipment, applications, tools, and so on) carefully and in full.

Before getting started, ensure there is an internet connection, a valid email address and a smartphone readily available.

Please direct any comments regarding this document to sbt_technical.editor.us.sbt@siemens.com.

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2 Getting started with the thermostat

2.1 Thermostat display overview

Normal display
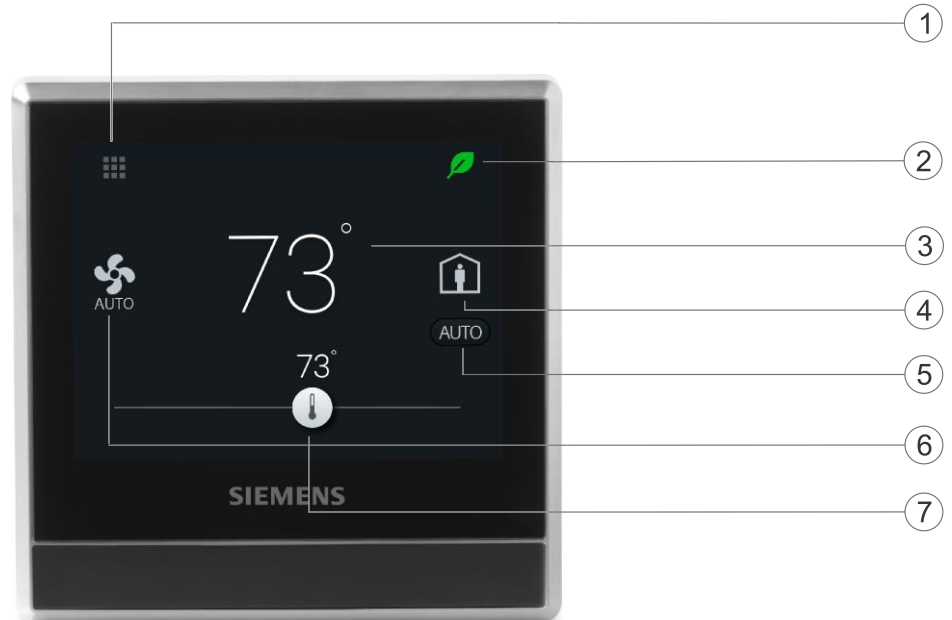
Icon	Description
1	Tap to display detailed information and additional settings.
2	Displays whether the system is in an energy-optimized mode. If the leaf is red, predefined settings were changed. Tap the red leaf to restore the energy-saving mode. The leaf turns green.
3	Room temperature.

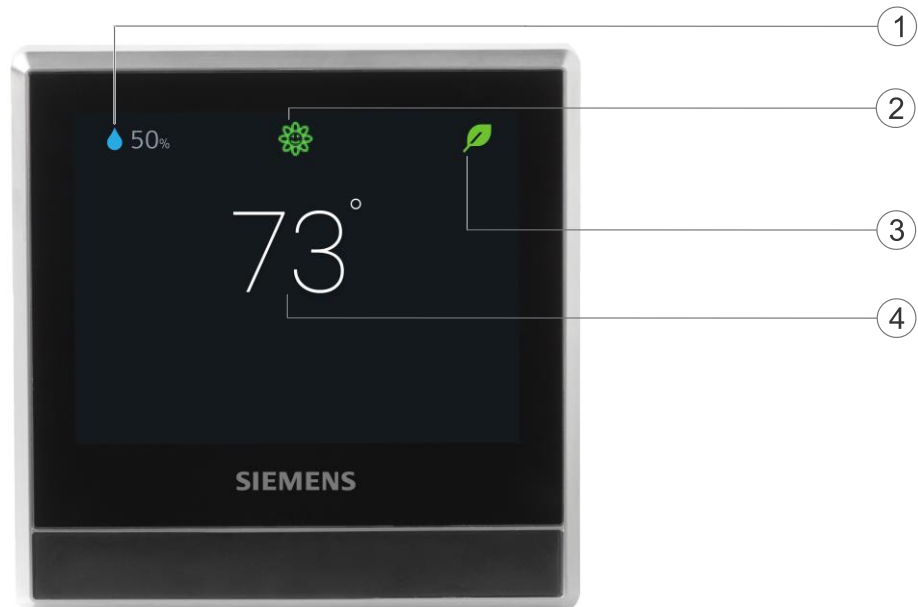| Icon	Description
4	Tap to toggle between **At home** and **AWAY**.
5	Displays whether the thermostat is following a schedule (AUTO) or following the setpoint changes permanently (⊟). Following a schedule can mean the following: ● If there is network connection and the schedule has been set, the thermostat follows the schedule. – Temporary setpoint changes within a schedule last for at least one hour. If several temporary changes occur within one hour, the thermostat extends an additional one hour as of the last temporary change. – If the next switching point is not scheduled after one hour, the thermostat still works following the temporary setpoint change until the next switching point is scheduled. – If the next switching point is scheduled within one hour, the thermostat doesn't switch to the scheduled setpoint until the last temporary setpoint change has lasted for one hour. ● If there is network connection but no schedule has been set, the thermostat follows the default schedule in the system. For more information about the default schedule, see Setting schedules. ● If there is no network connection or valid time, the thermostat cannot retrieve schedule information from the Cloud. It will operate in the **Comfort** mode.
6	Tap to select a fan mode (AUTO/ON).
7	Tap or slide to change the room temperature setpoint.

Idle display

Icon	Description
1	Measured relative humidity
2	Shows room air quality: ● If the icon is green, the air quality is good. ● If the icon is orange, the air quality is average. ● If the icon is red, the air quality is poor. In order to ensure that the room air quality is measured accurately when the room is closed for a long time, it is recommended to force air circulation such as opening a window.
3	Displays whether the system is in an energy-optimized mode. If the leaf is red, predefined settings were changed. Tap the red leaf to restore the energy-saving mode. The leaf turns green.
4	Measured room temperature.

NOTE: The icons displayed under the idle mode may differ for different scenarios. For example, the outside air temperature icon ⌂ᵢ may also be displayed on the screen if you've connected an external outside air temperature sensor and configured it correctly.

2.2 Home screen icon overview

Icon	Description
🗨	The device is connected to the cloud server but not associated with an account.
⚘	The fan icon. Fan status could be ON or AUTO. It is indicated by the text under the icon.
⌂	**At home** mode is on.
⌂ᵢ	**AWAY** mode is active.
🍃	Displays when the system works in an energy-optimized mode. If the leaf is red, it means that some pre-defined settings have been changed. Tap the red leaf to restore to the energy-saving mode. The leaf turns green.
🌡	Temperature setpoint slider. Icon color changes as setpoint is changed: ● Slider changes to orange when setpoint is moved to a point that is higher than the current room temperature and the system enters heating mode to warm up the room. ● Slider changes to blue when setpoint is moved to a point that is lower than the current room temperature and the system enters cooling mode to cool down the room. ● If the system has reached setpoint and is idle, the slider color stays white. **NOTE**: The condition of switching between heating and cooling modes is that the thermostat has been configured accordingly and then the thermostat responds based on the background logical processing of the comparison between the current room temperature and the heating and cooling setpoint for the current mode.
💧	Relative room humidity
AUTO	The thermostat operates under a schedule. If a schedule has not been set, the thermostat operates with the default schedule. This default schedule may be the system default or may be specific under **Advanced Settings** > **Optimization**.

Icon	Description
	When this icon is toggled on, temporary change of fan settings only takes effect during the current scheduled mode and will be overridden to the scheduled settings when the next scheduled mode starts, however, temporary temperature setpoint changes may be effective across scheduled modes. See more information about temporary temperature setpoint changes in Thermostat display overview [→ 7].
	NOTE: If the thermostat has not been connected to a WLAN network, it cannot read the real time from the network and thus cannot follow a schedule. In this case, it always works under the **Comfort** mode.
	User overridden. Temporary setpoint changes or fan settings are effective if this icon is toggled on.
	Tap to display options, such as **Operating mode**, **Settings** and **Advanced Settings**.
	Indicates the room air quality is good.
	Indicates the room air quality is average.
	Indicates the room air quality is poor.
	Indicates the outside air temperature. The temperature value is displayed beside this icon. Note that this value is valid only if you've connected an external outside air temperature sensor, configured it correctly and the sensor itself can provide valid values.

3 Presence detection

3.1 Presence detection using the built-in PIR sensor

By using a built-in presence detection sensor (also called PIR (Passive infrared detector) sensor), the thermostat detects occupancy and then does the following:

● Activates idle display. When no operations are performed, the thermostat detects presence in room. Upon presence, it displays information such as room temperature, room air quality and relative room humidity. If unoccupied, it turns off the screen.

● Changes the operating mode from **Unoccupied** to **Comfort**. If presence is detected in a formerly unoccupied room during a scheduled **Unoccupied** period, the thermostat switches to **Comfort** automatically until the next scheduled mode starts. However, this function is disabled by default and must be enabled manually if so desired.

Sensor location
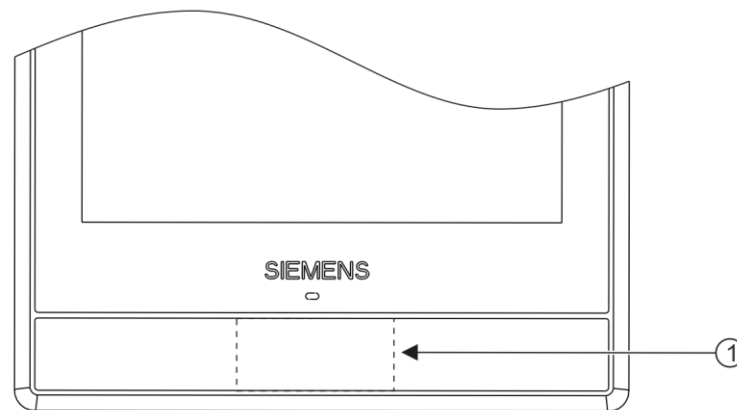
1	The location of the PIR sensor. It is a black area if seen from the front of the front module.

Sensor detection range
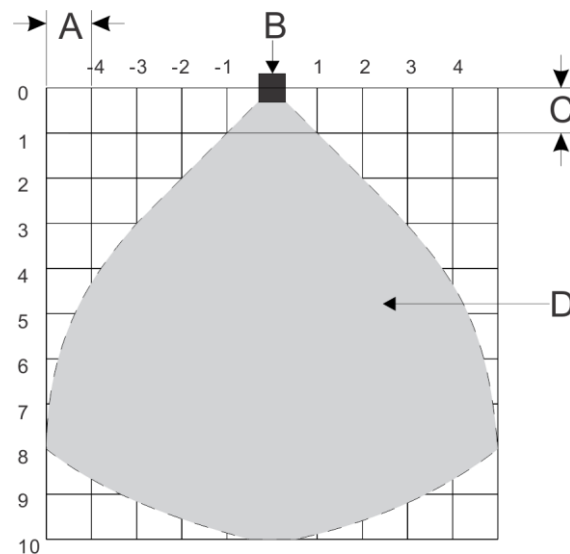
A	The width of each cell. It is 80 cm (31 in).
B	The thermostat.
C	The height of each cell. It is 80 cm (31 in).
D	The area that the PIR sensor can detect.

Change from Unoccupied to Comfort when an unoccupied room becomes occupied

1. On the Home screen, tap ⠿, tap ‹ and then tap ⚙.

2. If prompted, enter the administrator password.

3. Tap ▶, tap ⣿, and then tap ▼. Scroll down and tap **Room presence detector**.

4. Drag the slider to the right.

3.2 Approach detection

The thermostat has a built-in approach sensor. It can detect someone approaching the thermostat. If activity is sensed within 10 cm, it will switch from its idle screen to the main home screen with full temperature and setpoint display.

Sensor position
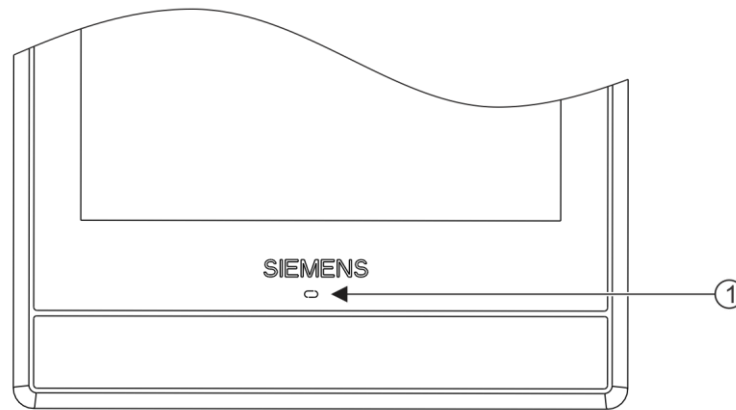
1	The location of the approach sensor.

4 Operating the thermostat from the thermostat main unit

4.1 Temperature control

The thermostat acquires the room temperature using the built-in sensor and/or the external room temperature sensor, and maintains the setpoint by delivering control commands to heating and/or cooling equipment. If no external room temperature sensor is connected or if the input value of the external sensor is invalid, only the built-in sensor is used to provide values for the thermostat. If the external sensor is connected and can provide valid values with the built-in sensor, the thermostat displays the average value of the built-in and external sensors.

On the home screen, the current room temperature is displayed and the temperature setpoint can be changed as desired. The units can be selected between °C and °F (the default unit).

NOTICE
After the initial setup of the thermostat, the displayed room temperature may not be correct because the temperature sensors need time for the calibration. Wait for at least one hour for the calibration.

Adjust the temperature setpoint on the home screen

● From the Home screen, drag the temperature slider to the right to increase the temperature setpoint, or to the left to decrease the temperature setpoint.

Change the temperature unit

1. From the Home screen, tap ⦂⦂⦂, and then tap 〉.
2. Tap ✿ and then tap °F to change from Fahrenheit to Celsius, or tap °C to change from Celsius to Fahrenheit.

4.2 Operating modes

4.2.1 Operating modes overview

Operating mode	Description
At home	This mode lets the thermostat know the space is now occupied. Within this mode, you can choose (AUTO) where the thermostat follows a schedule, or toggle to (A) and have the thermostat operate at a specified setpoint indefinitely. See Thermostat display overview [→ 7] for more detailed information about how the thermostat operates in (AUTO) or (A).
AWAY	This mode lets the thermostat know that space is no longer occupied and switches to the energy saving mode; the same as set up in **Unoccupied** mode using the mobile app.
AUTO	This commands the thermostat and the controlled HVAC system to switch between heating and cooling. This is the default setting. **NOTE:** it is different from (AUTO) on the Home screen. For more information about the functions of (AUTO), see Operating modes in a schedule [→ 16].
HEAT (〰)	Puts thermostat and the controlled HVAC system into Heating only operation.
COOL (❄)	Puts the thermostat and the controlled HVAC system into Cooling only operation.
OFF	Depending on thermostat setup, this mode results in: ● Controlled HVAC system turns off completely. ● The thermostat is set to maintain the space within preset limits to avoid frost or heat damage or excessively low or high humidity. For more information about the protection setpoint, see [Commissioning](#).

NOTE: If the heating or cooling stage is set to zero during the initial setup, **OFF** mode is the only available option from the **Operating mode** page.

Switch to OFF mode

● From the Home screen, tap ▦, and then tap **OFF** on the Operating mode page.
NOTE: To awake the thermostat from the **OFF** mode, tap the screen.

Change thermostat behavior in OFF mode

1. From the Home screen, tap ▦, tap ‹ and then tap ⚙.

2. If prompted, enter the administrator password.

3. Tap ▶, tap ▮▮, and then tap **Off/protection configuration**.

4. Tap either **Off** or **Off/protection configuration**.

Switch between At home and AWAY modes

● From the Home screen, tap 🏠 to switch from **At home** to **AWAY**.
● Tap 🏠 to switch from **AWAY** to **At home**.

Change the default AUTO mode

1. From the Home screen, tap ▦.
2. On the Operating mode page, tap either HEAT (〰), COOL (❄) or OFF.

NOTE: To modify advanced settings on the heating or cooling mode, see [Commissioning](#).

4.2.2   Operating modes in a schedule

Operating mode overview

Operating mode	Description
Comfort	Maintains comfortable settings in controlled space during occupancy and activities.
Economy	Using set back (set up) settings, maintains balance in comfort during night time or inactivity and reduces energy consumption.
Unoccupied	Saves energy when space is unoccupied for extended periods.

These operating modes have different temperature, humidification, dehumidification and air quality setpoints. These setpoints can be changed by choosing **Advanced Settings** > **Optimization**. Unlike the humidification setpoint or dehumidification setpoint, the temperature setpoint can be adjusted directly from the thermostat home screen or using the mobile app.

Time scheduling of these operating modes (Comfort, Economy and Unoccupied) can only be done on the mobile app but the schedule can be initiated on the thermostat itself. If a set point is overridden during a time schedule period, that change will revert to the scheduled setting during the next transition. Override information is visible on both the thermostat screen and the mobile app.

NOTE: See Setting schedules for more details about scheduling.

Switch the thermostat to work following a schedule

● From the Home screen, tap 🔴 if (AUTO) is not displayed on the screen.

NOTE: Unlike when a schedule is running, all the changes hold indefinitely if 🔴 is toggled on.

4.3   WLAN connection

Connecting to a WLAN network allows the thermostat to be connected to the cloud server and be controlled from a smartphone. Depending on how thermostat internet connection is set up, go to **Advanced Settings** or **Settings** to manage the WLAN connection:

● If **Private WLAN** (home use) is selected, go to **Settings**.
● If **Administrated WLAN** * (commercial use) is selected, go to **Advanced Settings**.

Connect to a network

1. If the thermostat is selected for commercial application (common wireless infrastructure), do the following:

    – From the Home screen, tap ⊞, and then tap ‹. The **Advanced Settings** page displays.
    – If required, enter the administrator password.
    – Tap ⚙, and then tap ⌆. Wait for the thermostat to discover the networks nearby.

2. If the thermostat is selected for residential application (individual wireless infrastructure), do the following:

– From the Home screen, tap ▦, and then tap 〉 until the **Settings** page displays.
– Tap ✿, and then tap 🛜. Wait for the thermostat to discover the networks nearby.

3. Tap the desired network. If necessary, tap ▼ or ▲ to scroll through the networks to select one.

4. For secured networks, enter the selected password, then tap **Connect**.

Note: For more information about the administrator password, see Creating an administrator password [→ 19].

Manually add a network

1. If the thermostat is selected for commercial application:

   – On the **Advanced Settings** page, tap ⚲, tap 🛜, and then tap ▼ to scroll down to find and tap **Add Network**.

2. If the thermostat is selected for residential application:

   – On the **Settings** page, tap ✿, tap 🛜, and then tap ▼ to scroll down to find and tap **Add Network**.

3. Enter the Network name (SSID) information.

4. To select a security type, tap the **Security** field.

5. Tap **Connect**.

6. If prompted, enter the relevant password, and then tap **Connect**.

Configure current network settings

1. If the thermostat is selected for commercial application:

   – On the **Advanced Settings** page, tap ⚲ and then tap 🛜. The current network displays on the screen.

2. If the thermostat is selected for residential application:

   – On the **Settings** page, tap ✿ and then tap 🛜. The current network displays on the screen.

3. Tap **Network Settings**. The default DHCP (Dynamic host configuration protocol) setting page displays on the screen.

   – If necessary, tap ▼ or ▲ to scroll through and view other network DHCP settings like **Preferred DNS**.
   – To customize the current network settings, tap **Manual**, select a field, or tap ▼ or ▲ to scroll to the desired field, and then enter a new setting.

Connecting to a network by button

A WPS (Wi-Fi Protected Setup) compatible router allows push button wireless network set up. Please consult its manual for location of the WPS button.

Connect to a network by push button

1. If the thermostat is selected for commercial application:

   – On the **Advanced Settings** page, tap ⚲, tap 🛜, and then tap ▼ until **Push Button Setup** appears.

2. If the thermostat is selected for residential application:

   – On the **Settings** page, tap ✿, tap 🛜, and then tap ▼ until **Push Button Setup** appears.

3. Tap **Push Button Setup**, and then press the WPS button on the WPS-supported router to start the discovery of the thermostat.

4. On the thermostat, tap ▶ and then tap **Connect**.

5. Tap **OK** once the thermostat is connected to the network successfully.

4.4 Screen lock protection

4.4.1 Locking the home screen

A numeric screen code can be set to lock the home screen to protect it from tampering.

Two lock schemas are available: screen lock and public area lock. Use the former to lock the screen from any operation. Use the latter to lock the screen in public area where it is possible to change room temperature setpoint temporarily and restore the energy-saving mode if the leaf on the screen turns red.

Apart from using the screen code to unlock the screen, the administrator password (if set) can be used to unlock the screen.

Create a screen lock code
1. From the Home screen, tap ▦, then tap ❯.
2. Tap ✿, tap 🔒 and then tap **Activate**.
3. Tap **Screen lock** or **Public area lock** as needed.
4. Enter a code consisting of at least six numbers, and then tap **OK**.
5. Tap **OK** again to confirm.

Change to another lock schema
1. If the current lock schema is **Screen lock**, tap any area on the screen, enter the screen lock code directly and then tap **OK**. If the current lock schema is **Public area lock**, tap ▦ from the screen and then enter the set code.
2. From the Home screen, tap ▦, then tap ❯.
3. On the **Settings** page, tap ✿.
4. Tap 🔒, and then change to the other lock schema as needed.
⇨ The newly-selected lock schema is highlighted with a tick mark.

ℹ	Changing lock schema doesn't change the screen lock code.

Unlock the home screen
● On the Home screen, enter the screen lock code directly and then tap **OK**.
● If an administration password has been set, tap the question mark on the screen, and then tap **Log in as administrator**.

NOTE: There is no limit of number of attempts to enter the numeric code. In case the screen lock is lost, the administrator password (if set) can be used to unlock the screen. For more information, see What should I do if I forget the screen lock code? [→ 34]

Modify a screen lock password
1. On the **Settings** page, tap ✿.
2. Tap 🔒 and then tap **Change**. Specify a new numeric lock of six numbers, and then tap **OK**.
3. Tap **OK** to confirm.

Remove a screen lock password
1. On the **Settings** page, tap ⚙.
2. Tap 🔒, tap **Deactivate**, and then tap **OK** to confirm.

4.4.2 Creating an administrator password

| *NOTICE*	
!	If an administrator password is lost, there is no way to recover it.

If the thermostat is selected for commercial application, setting an administrator password can help prevent unauthorized access to **Advanced Settings** if it is installed in a public place. The password can be set in the setup wizard when the thermostat is powered the first time. It can be modified, deleted or set again under **Advanced Settings**.

Actions protected by the administrator password are listed below as well as under **Advanced Settings**.

- Checking the basic information about the thermostat.
- Viewing/Using the activation code of the thermostat.
- Changing or deactivating the administrator password.
- Setting up WLAN connection.
- Changing date and time.
- Changing application settings.
- Changing basic/extended configurations and doing factory resets.

i | If the thermostat is selected for residential application, options related to WLAN connection is accessible from **Settings** instead of **Advanced Settings**.

Create/activate administrator password under Advanced Settings
1. From the Home screen, tap ⚙, and then tap ‹. The **Advanced Settings** page displays.
2. Tap ⚙, tap **Password** and then **Activate**.
3. View the password policy on the screen, and then tap ▶.
4. Enter a strong password required by the password policy displayed on the screen, and then tap **OK**.
5. Tap **OK**.

Manage the administrator password
1. On the **Advanced Settings** page, tap ⚙ and then tap **Password**.
2. Modify or deactivate the administrator password.

4.5 BACnet HMI access (RDS120.B only)

The RDS120.B thermostat supports the BACnet IP communication protocol and is listed as a BTL device.

The BTL certificate of the thermostat can be found at https://www.bacnetlabs.org/.

See Commissioning for all BACnet objects.

Access BACnet settings

1. If the thermostat is selected for commercial application (common wireless infrastructure), do the following:

    –   From the Home screen, tap ⦂⦂⦂, and then tap ⟨. The **Advanced Settings** page displays.
    –   If required, enter the administrator password.
    –   Tap ⚲, and then tap 📶.

2. If the thermostat is selected for residential application (individual wireless infrastructure), do the following:

    –   From the Home screen, tap ⦂⦂⦂, and then tap ⟩ until the **Settings** page displays.
    –   Tap ✿, and then tap 📶.

3. Tap **Network Settings**. The default DHCP (Dynamic host configuration protocol) setting page displays on the screen.

4. Tap ▼ to view more DHCP settings such as MAC address.

5. Tap ▼ to view or edit advanced BACnet settings.

4.6 Controlling humidifier/dehumidifier

Use the thermostat to control humidifying/dehumidifying function if corresponding external equipment is connected and configured. From either the thermostat or the mobile app, you can turn off the humidifier/dehumidifier, or let the thermostat automatically adjust whether and when to turn it on/off.

Control humidifying/dehumidifying from the thermostat

1. On the Home screen, tap ▮, then tap ⟩ > ➕💧 / ➖💧.

2. Tap either **OFF** or **AUTO**.

4.7 Fan control

The fan operates as part of the AUTO mode or the ON mode.

Under the AUTO mode, the fan runs in any of the following situations:

*   Heating is active.
*   Cooling is active.
*   The humidification function is active.
*   The dehumidification function is active.
*   Free-cooling is enabled.
*   Ventilation is activated to improve the room air quality.

When the fan is switched off and ventilation is in AUTO mode, you can switch the fan from AUTO to ON as needed. The fan is switched on by default after three minutes.

User can adjust **Fan min. ON time** via **Advanced Settings** > **Optimization** to influence the fan's minimum runtime.

Under the ON mode, the fan works regardless of whether any of the above functions is on.

Switch the fan between AUTO and ON modes

*   From the Home screen, tap ❖.

4.8   Turning on/off the touch sound

Turn on/off the touch sound
1.   From the Home screen, tap ⠿, then tap ⟩ until the **Settings** page displays.
2.   Tap ✿, and then tap 🔇 or 🔊 to turn on or off the touch sound.

4.9   Changing the display language

Change the display language
1.   On the **Settings** page, tap ✿ and then tap 💬.
2.   Tap the desired language. If necessary, tap ▼ to scroll to the desired selection.

4.10   Naming a room

A unique name can be assigned to each room that the thermostat is installed. Doing so helps identification of the room when remotely controlling the thermostat.

Name a room
1.   On the **Settings** page, tap ✿ and then tap ▢.
2.   Tap the text field, and then enter a room name as desired, or tap ▼ to select a name from the pre-set list.

3.   Tap **OK** once the room name is entered.

4.11   Changing a time zone

When there is internet connection, the thermostat automatically detects the time zone. However, it also can be changed manually.

Change the time zone
1.   From the Home screen, tap ⠿, then tap ⟨ and ⚙.

2.   If prompted, enter the administrator password.

3.   Tap ▶, tap 🕐, tap **Adapt**, and then select an area on the map.
4.   Tap ▲ or ▼ to scroll to a desired time zone, tap to select it and then tap ▶.

5.   If it is connecting to the cloud, the thermostat detects the date and time automatically based on the previously-selected time zone. If it is not connecting to the cloud, follow the on-screen instructions to set the year, month and date manually.

4.12   Checking basic information about the thermostat

To check the following information about the thermostat:
●   Model name
●   Activation code and serial number of the thermostat
●   Software and hardware version
●   MAC and IP address
●   HVAC application

Check basic information about the thermostat

1. From the Home screen, tap ⚏, tap ❮ and then tap ⚲.

2. When prompted, enter the administrator password.

3. Tap ⚲ and then tap ❶. Detailed information about the thermostat displays.

4.13 Software updates

The thermostat receives updates to get the latest functionality, enhancements and bug fixes to ensure optimal performance. Normally, updates occur automatically through WLAN connection. It works in the background and has no effect on the thermostat operations.

NOTE: During software updates, the system reboot(s) occurs automatically. All settings will be saved.

5 Green leaf

The Green leaf indicates that the system has an energy-optimized operation:

- Use Green Leaf default setpoints for heating and cooling.
- Run system automatically based on a schedule.
- Operate fan in **Auto** mode if the thermostat controls external fan equipment.
- Switch to follow a schedule with presets defined under **Advanced Settings** > **Optimization**.

If the thermostat detects one of the following, the leaf icon turns to red. Touch the red leaf to switch the setting back to an energy-optimized operation.

- The room air temperature is 4 ℉ or 2 K higher than the default heating setpoint for **Comfort** or **Economy** when the heating output is energized.
- The room air temperature is 4 ℉ or 2 K lower than the default cooling setpoint for **Comfort** or **Economy** when the cooling output is energized.
- The fan operates in **On** mode.

6 Air quality control

With its built-in and/or external VOC (Volatile Organic Compounds) sensor, the thermostat measures the room air quality and shows the air quality status symbol on the local idle screen. In the mobile app, the status is indicated by text.

If no external VOC sensor is connected or if the input value of the external sensor is invalid, only the built-in sensor is used to provide values for the thermostat. If the external sensor is connected and can provide valid values with the built-in sensor, the thermostat displays the higher value of the built-in and external sensors.

Symbol on the local idle screen	Text in the mobile app	Description	VOC level [% of the output range]
❄	Good	The room air quality is good	<50%
❄	Okay	The room air quality is average	50% ~ 80%
❄	Poor	The room air quality is poor	>80%

There is a default air quality setpoint for each operating mode in a schedule. It is adjustable under **Advanced Settings** > **Optimization**. If the actual VOC level is 10% higher than the default setpoint for the current operating mode, the ventilation function is activated to force air circulation.

> To ensure that the room air quality is measured accurately when the room is closed for a long time, it is recommended to circulate air such as opening a window.

7 Operating the thermostat from the mobile application

7.1 Downloading the application

You can download the **Siemens Smart Thermostat RDS** application from Google Play or App Store.

7.2 Account creation and pairing

Create an account and associate it with thermostat(s) for wireless control.

Create an account in the application and associate it with the thermostat(s)

▷ The thermostat is connected to a network.

1. Tap **Create account** in the **Log in** page.

2. Enter a valid email address.

3. On the local thermostat, do one of the following:
   - From the Home screen of the thermostat, tap ⚏, tap 〈, tap 🔧 and then tap ⊗. The activation code and QR code are displayed.
   - If 🗨 is available on the Home screen, tap it and then tap ▶. The activation code and QR code are displayed.

4. In the app, scan the QR code using the built-in scanner or enter the activation code manually.

5. Agree to the terms of use, then tap **Create**. A confirmation email is sent.

6. Enter the code enclosed in the confirmation email, set a password for the account, then tap **Activate**.

7. To associate additional thermostats with the account, tap ☰ > **Setup** > **Add device**, and add devices by scanning the corresponding QR codes.

⇨ The added devices are listed in the default location. See Configuring device locations [→ 31] to move them to the desired locations.

ⓘ	After initial power-up of the thermostat and initial system configuration, tap 🗨 to create an account and associate the mobile application. Refer to the quick guide for detailed information.

ⓘ	After reconfiguring the thermostat, log out and return to the app before the changes take effect. If the changes still don't take effect, try to revoke access to the device and add it again.

Account management

Once an account is created, make the following changes as needed:

● Change account user name
● Change display language
● Change temperature unit

- Change background color
- Change time format

Manage account information in the application

1. In the application, tap ☰ > ⊙.

2. Manage your account information as needed.

7.3 Exploring the app using demo mode

Before controlling the thermostat in the downloaded mobile application, check the demo mode of the mobile application to check out the application. In normal operation, tap the green triangle on the upper right corner of the screen to start the demo mode any time.

Change whatever you want in the demo mode, as none of the changes affects the local thermostats. The application restores all values after you exit the demo mode.

Start the demo mode

1. Tap **Start demo mode** in the **Log in** page.

2. Tap **Start** when prompted.

i	A small blue triangle is displayed on the upper right corner of the screen in the demo mode. To exit the demo mode, tap the blue triangle and tap **Stop**.

7.4 Viewing and controlling devices in different locations

7.4.1 Viewing and filtering devices

All devices are listed in the **Locations** page. After login, you can see them along with their connection states and account privileges as guests (if configured; 🔒 is displayed).

If configured, devices are grouped in different locations. See Configuring device locations [→ 31] for more configuration details.

You can filter devices or locations by entering one of the following keywords in the **Filter** field under **Locations** or **Setup**:

- Location name
- Location address
- Device room name
- Device model name, for example, RDS110
- Device state, for example, Online

Device connection state

Online	The thermostat is connected to the cloud server.
Offline	The thermostat is not connected to the cloud server. Several reasons may result in disconnection: ● The thermostat is powered off. ● The thermostat is not connected to the Internet. When a device is offline, you can only perform the following actions: ● Sign up, sign in or sign out. ● Change and recover a password. ● Change user account settings. ● Delete device.
Stopped	The thermostat is in setup mode.
Error	Not all data points are read.

7.4.2 Widgets

The main control screens of the thermostat consist of four widgets: temperature control widget, fan widget, trend widget, and running hours widget. Swipe to the left or right to switch between widgets.

NOTE: The running hours widget indicates the heating and/or cooling consumption during a specific period of time. It displays only if you've enabled the heating and/or cooling.

Access the widgets

1. Open the app and select a specific device if more than one is listed. An overview of the current device state is displayed. If the account is associated with only one thermostat, the application automatically opens the temperature control widget.

2. If necessary, swipe to the right or left to view all widgets.

Temperature control widget

View and change room comfort settings:

● View room/outside temperatures, room humidity, room air quality, energy-saving state and current/next scheduled operating modes (**Comfort**, **Economy** or **Unoccupied**).

● Change operating modes (Auto or Manual ()), energy-saving state and temperature setpoint.

Fan widget

View and change fan operation mode. The fan can work in Auto or ON mode. See Fan control [→ 20] for more information about how the fan works.

Trend widget

View trends of room temperature setpoints, room temperatures and humidity for the current day, week or month. The widget can be viewed vertically (portrait) and horizontally (landscape, auto-rotation function of the phone/tablet is enabled). When viewed horizontally, the widget also allows you to scroll among available pages.

NOTE: You can show/hide the trend in the chart by tapping the specific legend atop.

Operating hours widget

View heating and/or cooling operating hours of the current week, month or year. The widget can be viewed vertically (portrait) and horizontally (landscape, auto-rotation function of the phone/tablet is enabled). When viewed horizontally, the widget also allows you to scroll among available pages.

NOTE: You can show/hide the trend in the chart by tapping the specific legend atop.

7.4.3 Switching between Away and At home

You can set your thermostat to **Away** mode to avoid wasting energy, or to **At home** mode for a comfortable room temperature.

Switch between Away and At home

● Tap **At home** or **Away** at the bottom of any widget.

7.4.4 Setting schedules

This is the default schedule:

Days	Time periods when Comfort mode is on	Time periods when Unoccupied mode is on
Monday to Friday	6 AM – 8 AM 5 PM – 10 PM	8 AM – 5 PM 10 PM – 6 AM
Saturday to Sunday	7 AM – 10 PM	10 PM – 7 AM

To program a different schedule, set up different time periods for the following operating modes: **Comfort**, **Economy** and **Unoccupied**. For more information about these operating modes, see Operating modes in a schedule [→ 16].

When the schedule for one day is set, it can be copied to other days. In addition, preset setpoints for different modes can be customized.

Initiate schedule operation

● From the Home screen of either the local hardware unit or the mobile application, tap 🔲 if ⬭AUTO is not displayed on the screen.

ℹ️ Operating mode may change if the built-in PIR sensor function is enabled and presence is detected. See Presence detection using the built-in PIR sensor [→ 11] for more information.

To run the schedule without influence of the built-in PIR sensor, disable **Room presence detector** under **Advanced Settings** > **Optimization** in the thermostat.

Set time periods for different operating modes

1. On the temperature control widget screen, tap ⚙ > **Thermostat schedule**, and then tap **Edit**.

2. Select the day of the week for which you want to set a schedule. By default, the system uses the current day.

3. On the vertical time line, tap a specific time to set a switching point. A switching point marker displays next to the time. To fine-tune the switching point, drag the switching point marker to the desired time.

4. Tap the switching point marker and select **Comfort**, **Economy** or **Unoccupied** from the drop down list.

5. Repeat steps 3 and 4 to set other switching points.

6. Tap **Save**.

7. To copy the current day's schedule to other days, tap **Copy** and follow the on-screen instructions.

NOTE: Max. eight switching points per day can be set. To delete one, tap 🗑 on the switching point marker.

Change the preset setpoints for different operating modes
1. On the temperature control widget screen, tap ⚙.

2. Tap any of the modes, e.g., **Unoccupied**, to expand the preset setpoints.

3. Drag the temperature slider to the setpoint.

7.4.5 Switching between Heating and Cooling

In the app, the default **Auto** mode can be changed to **Heat** or **Cool ", or "Off** completely. For more information about switching between heating and cooling, see Operating modes overview [→ 15].

Change the default Auto mode
1. On any of the widget screen, tap ⚙, and expand the drop down list next to **Thermostat mode**.

2. Select **Heat**, **Cool ", "Off** or Auto.

7.4.6 Controlling humidifier/dehumidifier

Turn off the humidifier/dehumidifier or allow the thermostat to automatically adjust if and when to turn it on/off from the mobile application.

NOTE: If no humidifier/dehumidifier is connected to the thermostat or if the thermostat output is not configured as humidifier/dehumidifier, humidifying/dehumidifying is not available in the app.

Control humidifying/dehumidifying from the mobile app
1. On any widget screen, tap ⚙, and then tap **Humidify** or **Dehumidify**.

2. Select **OFF** or **AUTO**.

7.5 Checking device notifications

The mobile application notifies you of air filter service (replacement or cleanup), condensation risks and universal contact state changes. If there are notifications, a red indication is displayed on the upper right corner of the menu icon, ≡. Expanding ≡ > **Notifications** displays notification details.

By default, the mobile application can receive air filter reminders, condensation notifications and universal contact notifications. You can turn off the notifications as needed.

If air filter is replaced or cleaned and air filter operating hours are reset under **Notifications**, air filter notifications are gone.

7.5.1 Turning on/off universal contact monitoring

When a universal contact is configured as input in the local thermostat, use the mobile application to see if it is switched on or off when the universal contact monitoring function is on.

For more information on how to configure a universal contact input, see Changing system setup.

Turn on/off universal contact monitoring

1. Tap ≡ > **Setup**.

2. Select the device for which you want to turn on or off universal contact monitoring.

3. Drag the slider next to **Universal contact monitor** to the right or left to turn it on or off. The function is on by default.

7.5.2   Turning on/off condensation monitoring

When a condensation monitor is configured as input in the local thermostat, the condensation monitor detects condensation on chilled ceilings or at critical spots in heating or ventilating plants. When there is a risk of condensation, the thermostat sends a warning signal. The same signal is sent to the mobile application, provided condensation monitoring is activated in the mobile application.

For more information on how to configure a condensation monitor input, see Changing system setup.

Turn on/off condensation monitoring

1. Tap ≡ > **Setup**.

2. Select the device for which you want to turn on or off condensation monitoring.

3. Drag the slider next to **Condensation monitor** to the right or left to turn it on or off. The function is on by default.

7.5.3   Turning on/off air filter reminder

If a fan operation condition is set during equipment type selection, you can set a specified time interval of replacing/cleaning the filter from the device or mobile app. Pre-warning countdown information will remind you of replacing/cleaning the filter before the time is due. You can disable the air filter reminder function if you don't want to be reminded.

See Commissioning for more information about equipment type selection.

Turn on/off air filter reminder

1. Tap ≡ > **Devices**.

2. Select the device for which you want to turn on or off air filter reminder.

3. Drag the slider next to **Air filter service reminder** to the right or left to turn it on or off. The function is on by default.

Set air filter service interval from the mobile app

1. Tap ≡ > **Devices**.

2. Select the device for which you want to set air filter service interval.

3. Make sure air filter reminder turns on.

4. Tap **Air filter service interval**, then enter a specified time interval (hours).

7.6 Device setup

7.6.1 Configuring device locations

If multiple devices are added to an account, all devices are grouped in the default location. Move some of them to a different location for better device management.

Move newly added devices to a different location

1. From the **Setup** page, tap the default location.

2. Tap the **Name** field and enter a new name for the new location. Note that this field is editable only if more than one device is added to the default location.

3. Tap **Address**.

4. Search by address or tap on the map to set your location.

   ⇨ The new location with a different address is created.

5. Return to the **Setup** page and tap the device to be moved.

6. Tap **Room** to mark where the device is installed, and tap **Location** to change the device location.

| i |

To move devices that are not in the default location, perform steps 5 and 6 only. If all devices in a created location are moved out, the location is deleted automatically.

Change name and address for created locations

1. From the **Setup** page, tap the location to be modified.

2. Tap **Name** and **Address** to change location name and address respectively.

7.6.2 Multiple user management

One thermostat can be associated with multiple user accounts. Invite your family members or colleagues as device owner or guest to operate the thermostat remotely. Owners have full access to the thermostat. Guests can only view information in the app and make limited temporary changes such as setpoint adjustment, energy-saving mode restoration and device removal. If your role is a guest, a lock appears together with the device.

Invite a user as a device owner or guest
1. Tap ☰ > **Setup**.

2. Select the device to which you want to invite another user for remote operation.

3. Tap **Users** > **Invite user**.

4. Enter a valid email address and specify the user role.

5. Tap **Invite user** again.

⇨ An access confirmation email is sent to the entered email address.

⇨ If invitees are already signed up in the mobile app, they can see the corresponding device directly in the location list in the mobile app. If not, an additional account activation email is sent with a code.

Activate account

▷ Users are invited and an account activation email is sent with a code within an hour.

▷ The mobile app is downloaded and installed.

1. In the login page, tap **Activate account**.

2. Enter the email address (invitee) and the code, set a password for the account, and agree to the terms of use.

3. Tap **Activate**.

7.6.3 Restarting devices

No restart function is available in the thermostat main unit. However, thermostats can be restarted remotely from the mobile app.

Restart thermostat

1. Tap ≡ > **Setup**.

2. Select the device to be restarted.

3. Tap **Restart device** > **Yes**.

7.6.4 Revoking devices

Revoke user access to the thermostat to disconnect the current user account from the thermostat.

Revoke user access to a thermostat

1. Tap ≡ > **Setup**.

2. Select the thermostat to be removed from the user account.

3. Tap **Revoke access** > **Yes**.

| i | After disconnecting from the current account, the thermostat continues to be connected to the cloud and is ready to be linked to new users. |

7.6.5 Viewing device information

1. Tap ≡ > **Setup**.

2. Select the thermostat for which you want to view device information.

3. Tap **Info**.

⇨ Device information such as firmware version and device IP address is displayed on the screen.

7.7 Viewing mobile app info

◈ Tap ≡ > **Info**.

⇨ Mobile app information such as open source licenses is displayed on the screen.

Support for the thermostat and mobile app

Use the Support feature in the mobile app to read the user documentation of the thermostat and mobile app and find additional support.

Access Support

◈ Tap ≡ > **Info** > **Support**.

8 Appendices

8.1 Frequently asked questions

8.1.1 What should I do if I forget the screen lock code?

Try using the administrator password to unlock the screen.

To unlock the screen using the administrator password

1. On the thermostat screen indicating that the screen lock code is incorrect, tap the question mark and then tap **Log in**.

2. Input the administrator password, and then tap **OK**.

8.1.2 What if two users change the same setting at the same time?

The last command received by the server takes effect.

8.1.3 Will the thermostat work if the connection to the cloud is lost?

Yes, the thermostat works with or without the network connection:

● If there is network connection to the cloud and you have also set the schedule, the thermostat operates per the schedule. Temporary change of the temperature setpoint is effective for at least one hour. See more information about temporary temperature setpoint changes in Thermostat display overview [→ 7].

● If there is network connection but you have not set the schedule, the thermostat operates per the system default schedule. For more information about the default schedule, see Setting schedules.

● If there is no network connection or valid time, the thermostat cannot get schedule information from the cloud. It always then operates in **Comfort** mode.

8.1.4 Why does the scheduled Eco mode change to Comfort?

This is probably because the thermostat detects that someone enters into the room when a scheduled **Unoccupied** mode is running. In this case, the thermostat switches from **Unoccupied** to **Comfort** automatically until the next scheduled mode starts. However, you can turn off the auto-switch by disabling the **Room presence detection** parameter under **Advanced Settings**.

Disable the switch from Unoccupied to Comfort even if the room is occupied

1. On the Home screen, tap ▦, tap ⟨ and then tap ⚙.

2. If prompted, enter the administrator password.

3. Tap ▶, tap ▥, and then tap ▼. Scroll down and tap **Room presence detection**.

4. Drag the slider to the left.

8.1.5 What is the difference between Administrated WLAN and Private WLAN?

Administrated WLAN * is supposed to connect to an infrastructure network managed by facility managers; **Private WLAN** fits for owner cases and is supposed to connect to a home network. Selecting the WLAN connection type differently only affects the entry to WLAN management:

● If you've selected **Administrated WLAN ***, you can only manage WLAN under **Advanced Settings**.

● If you've selected **Private WLAN**, you can manage WLAN under either **Settings** or **Advanced Settings**.

NOTE: To differentiate institutional use from home use, this document recommends only **Settings** for home users to manage the WLAN connection.

8.1.6 What if the WLAN network is down during software updates?

Reconnecting to the network resumes the updating process. However, if the network can't be reconnected within a short time and you want the thermostat to work normally during the disconnection period, tap and hold down the warning icon ⚠ displayed on the screen for at least ten seconds. You are then directed to the **Setup** page where you can check the previous settings, perform factory resetting or do nothing but return to the normal home screen.

8.1.7 Can I change the Green leaf settings?

No, you can't. The Green leaf settings are defined by the system and are not changeable from user side.

For more information about Green leaf, see Green leaf [→ 23].

8.1.8 Can I change the air quality measurement standard?

No, you can't. The thermostat decides the air quality status using the VOC levels that are defined by the system and not changeable from user side. However, you can change the air quality setpoint for each operating mode so that the thermostat can force air circulation once the VOC level is detected to be 10% higher than your customized setpoint.

For more information about air quality, see Air quality control [→ 24].

8.1.9 Where can I check the current time on the thermostat?

You can check the time under **Advanced Settings** > **Time**.

● If the thermostat has WLAN connection now and hasn't been powered off for more than three minutes, the time is displayed validly and correctly.

● If the thermostat has WLAN connection now but has been powered off for more than three minutes, the time may be displayed invalidly temporarily but will be synchronized with the server within 24 hours. Once the synchronization is done, the time will be displayed correctly again.

● If the thermostat doesn't have WLAN connection now, see more information in this section: Can the thermostat display the time correctly if there is no WLAN connection? [→ 36]

NOTE: To display the time correctly, it is important to set the time zone correctly. See Changing a time zone [→ 21] for more information.

8.1.10 Can the thermostat display the time correctly if there is no WLAN connection?

If there is no WLAN connection, the thermostat displays the time correctly only when:

● The thermostat connected to a WLAN network once and could display time correctly.
● The thermostat hasn't been powered off for more than three minutes.

Lacking either of the above conditions may result in incorrect time display.

8.1.11 Can I set the time manually?

No, you can't. The thermostat gets the time automatically after you've added the thermostat to a WLAN network and set a correct time zone.

8.1.12 Why is the time displayed incorrectly even though the thermostat is added to a WLAN network?

Maybe it is because the synchronization with the server hasn't started yet, or because the time zone is not selected correctly. Normally the server synchronizes the time at a fixed time of each day.

8.1.13 How does the built-in PIR sensor work?

See Presence detection using the built-in PIR sensor [→ 11].

8.1.14 What should I do if I forget my account's password?

Reset the password following the on-screen instructions in the app.

8.1.15 I have registered an account but cannot log in.

Check the email and ensure that you received an activation email. Follow the instructions to activate the account and then log in to the mobile app.

8.1.16 I have signed up but have not received a confirmation email.

Check for the email in the Spam or Deleted folder. If there is no email in these folders, request the confirmation email again.

8.1.17 Can I create more than one user account in the mobile app?

Yes, you can, but you cannot log into different accounts at the same time. Besides, it is normally unnecessary to do so if you want to manage more than one thermostat using the app. One user account can associate with multiple thermostats.

See Account creation and pairing [→ 25] for more information about account creation.

8.1.18 How long are date and time valid, if power fails and the thermostat has no connection to the cloud?

If the power fails and thermostat powers up within five minutes, date and time are correct. Following power failure and thermostat restarts after five or more minutes,

time is displayed only after synchronization is completed. The date is displayed as normal.

The date and time will be synchronized automatically once power is resumed and internet is connected.

8.1.19 How long are settings saved in the thermostat if power fails?

User settings on the thermostat are not affected by power failure and remain until users change the original settings.

8.1.20 How does Free cooling work?

Before the thermostat starts **Free cooling**, change the following extended configuration:

● Set terminal input X1 or X2 to **Outside air temperature**.

● Set input **Aux Out W3/UNIV** to **Outside air damper**.

● Select **Advanced Settings** > **Optimization**, select **Yes** and set **Min.diff.room temp./outs.air temp.f.cool** for **Free cooling** to the desired value.

See system setup in [Commissioning](#) for more information on configuration changes.

When the temperature differential value (outside temperature minus room temperature) is higher than or equal to **Min.diff.room temp./outs.air temp.f.cool**, the thermostat starts cooling. When the temperature differential value is below **Min.diff.room temp./outs.air temp.f.cool**, the thermostat stops cooling.

You can adjust **Min.diff.room temp./outs.air temp.f.cool** to influence **Free cooling**.

8.2 Technical specifications

Please refer to the [datasheet of this product](#) for technical specification details.

8.3 Regulatory information

8.3.1 ISED Regulations (Canada)

This device complies with Industry Canada license-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) this device may not cause interference,

and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le present appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio

exempts de licence. L'exploitation est autorisee aux deux conditions suivantes : (1) l'appareil ne

doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage

radioelectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement.

8.3.2   FCC Regulations (USA)

⚠ WARNING	
⚠	**Modification of this device to receive cellular radio telephone service signals is prohibited under FCC rules and federal law.** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving antenna. Increase the separation between the equipment and receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help. This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20cm between the radiator & your body. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Statement

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

8.4   EULA

The software included in this product is licensed for use subject to the Siemens end-user license agreement (EULA) posted at www.siemens.com/smart-thermostat or this software identified by product model or part number on the website. The open source software (OSS) information about the software can also be found from the same website.

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