

Modulo Thermostat

Installation and operating instructions

Read carefully before installation, commissioning and operation



Contents

Page

1	Safety Instructions	3
1.1	EG-Conformity	3
1.2	General Instructions	3
1.3	Changes to the Unit	4
1.4	Warranty and Liability	4
1.5	Disposal and Pollutants	4
2	Description SPC Modulo Thermostat	5
2.1	Specifications	5
2.2	Scope of Supply	6
3	Installation	7
3.1	SPC Modulo Installation	7
3.2	Sample Wiring	9
4	Setup	9
4.1	Setup Procedure	9
5	Operation	10
5.1	Overview of Temperatures & Humidity	10
5.2	Operating Mode	10
5.3	Menu	11
5.4	Set Operation Hours	11
5.5	Expert Menu	13
5.6	Expert Menu Settings	13
5.7	Settings Functions	14
6	Fault Finding	15
6.1	Factory Reset	15
6.2	Hard Reset	15
7	Appendix 1	16
7.1	Setting Up Menu Lock	16
7.2	Setting Up Interface Lock	17

1. Safety instructions

1.1 EC-Conformity

By affixing the CE mark to the unit the manufacturer declares that SPC Modulo Thermostat conforms to the following relevant safety regulations:

- EU low voltage directive 2014/35/EU
- EU electromagnetic compatibility directive 2014/30/EU

Conformity has been verified and the corresponding documentation and the EU declaration of conformity are kept on file by the manufacturer.

1.2 General Instructions

Please read carefully!

These installation and operating instructions contain basic instructions and important information regarding safety, installation, commissioning, maintenance and the optimal use of the unit. Therefore these instructions must be read and understood completely by the installation technician/specialist and by the system user before installation, commissioning and operation of the unit.

This unit is an automatic, electronic room thermostat. Install the device only in dry rooms and under environmental conditions as described under "Technical Data".

In addition, observe the applicable accident prevention regulations, the regulations of the

Institute of Electrical Engineering, the local power supply utility, the applicable BS-EN standards and the installation and operating instructions for the additional system components. Installation, electrical connection, commissioning and maintenance of the unit may only be carried out by specialists who possess the appropriate training.

Users: Make sure that the specialist gives you detailed information on the function and operation of the unit. Always keep these instructions in the vicinity of the unit.

The manufacturer does not take over any liability for damage caused through improper usage or non-compliance of this manual!

1.3 Changes to the Unit

- Changes, additions to or conversion of the unit are not permitted without written permission from the manufacturer.
- It is likewise forbidden to install additional components that have not been tested together with the unit.
- If it becomes clear that safe operation of the unit is no longer possible, for example because of damage to the housing, turn the unit off immediately.
- Any parts of the unit or accessories that are not in perfect condition must be exchanged immediately.
- Use only original spare parts and accessories from the manufacturer.
- Markings made on the unit at the factory must not be altered, removed or made illegible.
- Only the settings described in these instructions may be set using the Unit.



Changes to the unit can compromise the safety and function of the unit or the entire system.

1.4 Warranty and Liability

The Unit has been manufactured and tested with regard to high quality and safety requirements. The warranty and liability shall not include, however, any injury to persons or material damage that is attributable to one or more of the following causes:

- Failure to observe these installation and operating instructions.
- Use of the device for other than its intended purpose.
- Improper installation, commissioning, maintenance and operation.
- Operation above or below the limit values listed in the 'Specifications' section.
- Improperly executed repairs.
- Force majeure.
- Unauthorised structural changes to the unit.

1.5 Disposal and Pollutants

The unit conforms to the European RoHS 2011/65/EU the restriction of the use of certain hazardous substances in electrical and electronic equipment.



Under no circumstances may the device be disposed of with the normal household waste. Dispose of the unit only at appropriate collection points or ship it back to the seller or manufacturer system.

2. Description SPC Modulo Thermostat

2.1 Specifications



Housing

2-part, ABS plastic
75 mm x 95 mm x 30 mm
Glass front



Display

Capacitive touch panel
Colour display with 240x320 dots
2.8 inches (7 cm) diagonal



Operation

Intuitive user guidance

Electrical specifications:

Power supply	24VAC or 24VDC +/- 10% SELV
Power consumption	max. 2,5 W
Degree of protection	IP20
Protection class	III

Max. cable length

0-10V Signal	< 30m
--------------	-------

Permissible Ambient Conditions

during operation	0 °C - 50 °C, no moisture condensation permitted
for transport/storage	0 °C - 60 °C, no moisture condensation permitted

Measuring range

Internal temperature sensor	0 °C - 60 °C Accuracy +/- 1 °C
Resolution	0,1 °C
Internal sensor for rel. humidity	0 % - 100 % Accuracy +/- 6 %
Resolution	0,1 %

Other Specifications

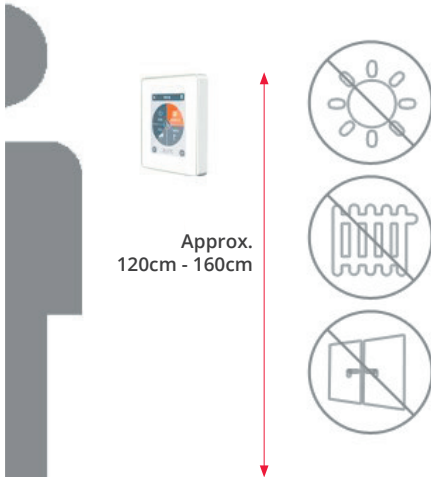
Installation methods	Wall installation, with/without wall socket
Real Time Clock	RTC with 24 hour power reserve

2.2 Scope of Supply

- SPC Modulo room thermostat
- 2 screws 3,5 x 35 mm and 2 plugs 6 mm for wall installation
- SPC Modulo installation guide

3. Installation

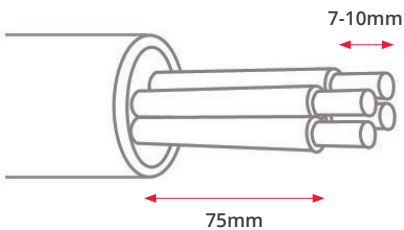
3.1 SPC Modulo Installation



Mount the unit at a suitable location.

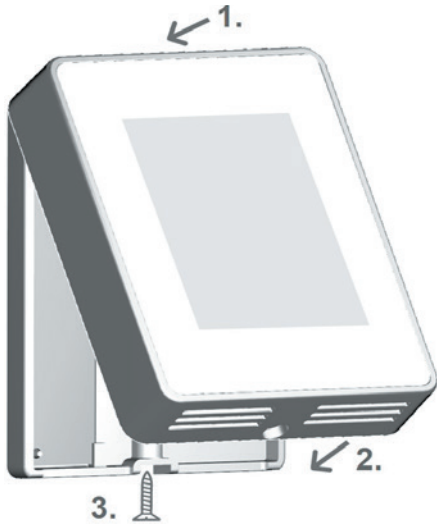
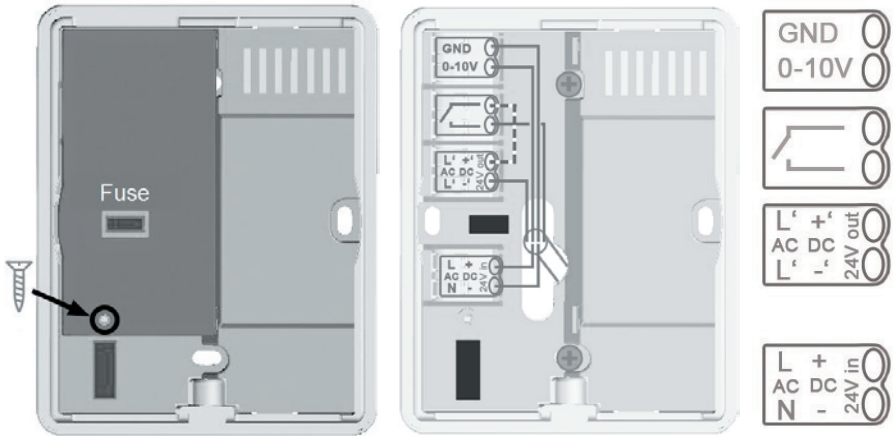


Pay attention to suitable environmental conditions. Direct sunlight, sources of heat and cold, e.g. radiators and windows must be avoided.



Strip cables by 75 mm max. and strip the last 7-10 mm of the wires.

Unscrew the screw, remove the cable cover and connect the electric as described.

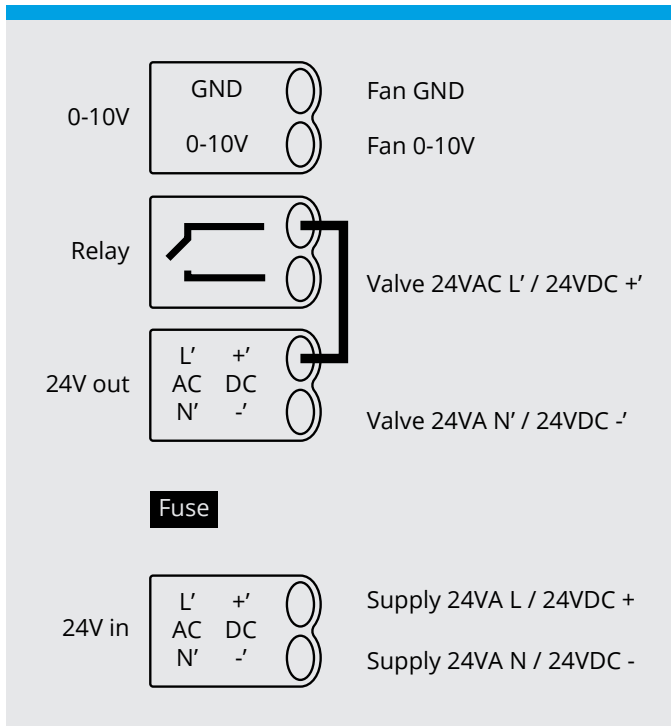


Refit the base and fasten with screw.
Switch on mains voltage and place
SPC Modulo in operation.



Never remove front cover while
Modulo is connected to power.
This will result in damage
to the thermostat.

3.2 Sample Wiring



4. Setup

4.1 Setup Procedure

Install device

Install the device as described (See "Sample wiring").

A wiring diagram will be supplied with the heating unit that the Modulo is intended to control. This shows the wiring required between the Modulo and the heater.

Set Functions

Assign a switching output to the respective function via the "Expert" menu in the "Settings" menu item under "Functions" and parameterize it (See "Settings Functions").

5. Operation

5.1 Overview of Temperatures & Humidity

It displays room temperature and humidity, If there is no activity for 60 sec, the device is automatically switched to the overview.



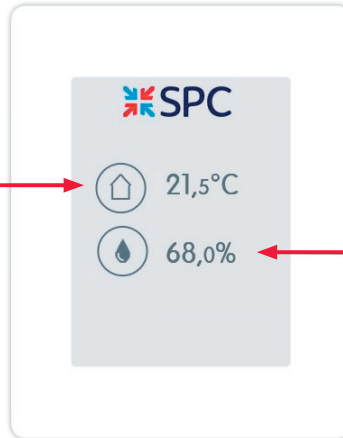
Room Icon

By selecting the room icon you will be directed to the room temperature settings.



Room Humidity

Relative humidity.



5.2 Operating Mode

Overview > Operating Mode



Back / Forward

Navigation back to the overview.



Menu

Navigation to the main menu.



Room

Display of the selected room.



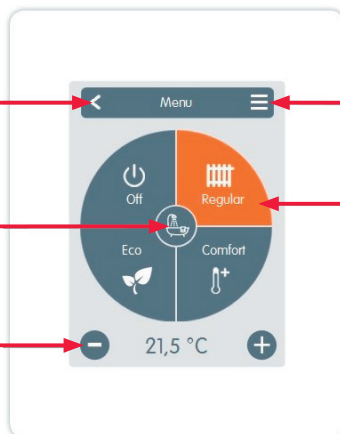
Reference Temperature

Setting the reference temperature for the active operating mode in the displayed room.



Operating Modes

The operating mode shown in colour is currently active and can be changed by selecting a different mode. Manually selected modes remain active until the next change of mode by the timer program. A background frost protection function remains active in the "off" mode.



5.3 Menu

Overview > Operating Mode > Menu



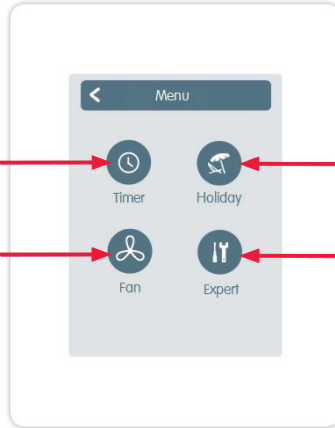
Timer

Setting of individual heating and cooling times for each day of the week including a copy function for following days.



Fan

Settings of the fan operating mode.



Holiday

Sets the duration and temperature for a longer absence.



Expert

Advanced settings for technicians.

5.4 Set Operation Hours

Overview > Operating Mode > Main Menu > Timer



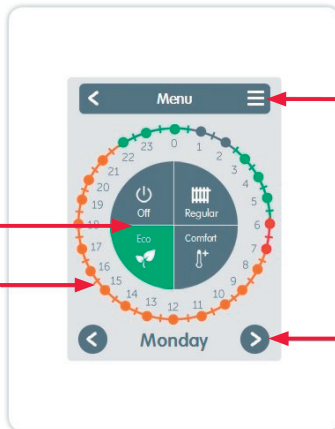
Operating Modes

Selection of the operating mode to select individual heating or cooling sections.



Clock

Time table for selecting the time intervals in 30-minute steps. Touch individual segments, or drag your finger over complete time intervals to colour them according to the selected operation mode.



Menu

Opens the copy function. The function allows you to copy the heating and cooling times to the following day, to Monday - Friday or to Monday - Sunday.

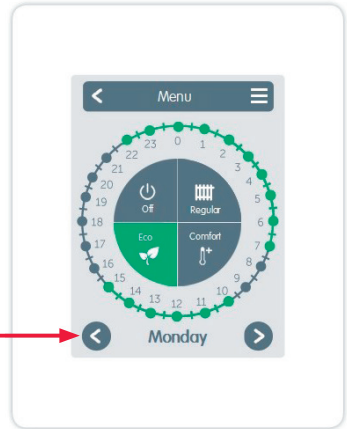
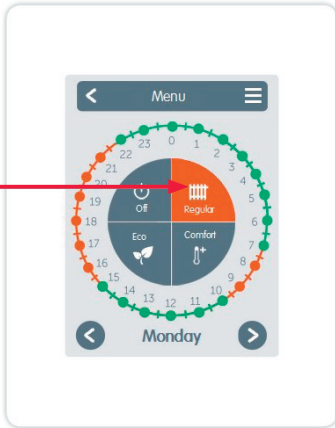


Back/Next Weekday:

Selection of the day of week which is to be set.

Step 1

Use the arrow keys to select the desired day.

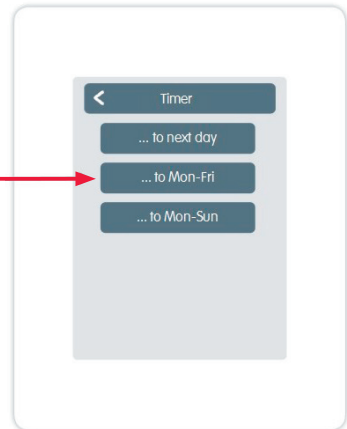


Step 2

Select the first heating mode (normal) - move the index finger over the desired length of time. The selected period will be coloured after selecting the colour of the operating mode (normal = orange). Set the times of the other operating modes in the same way.

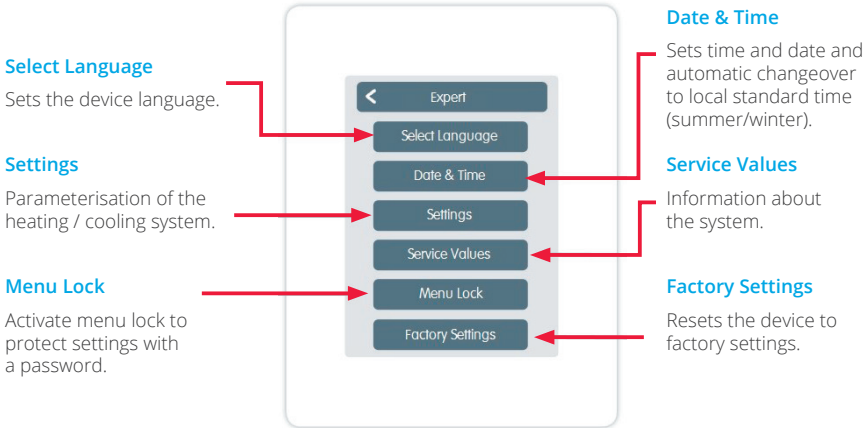
Step 3

After completing the setting of the individual heating and cooling times, you have the option of copying the times via the main menu to the following day, to Monday - Friday or to Monday-Sunday or individually for each weekday.



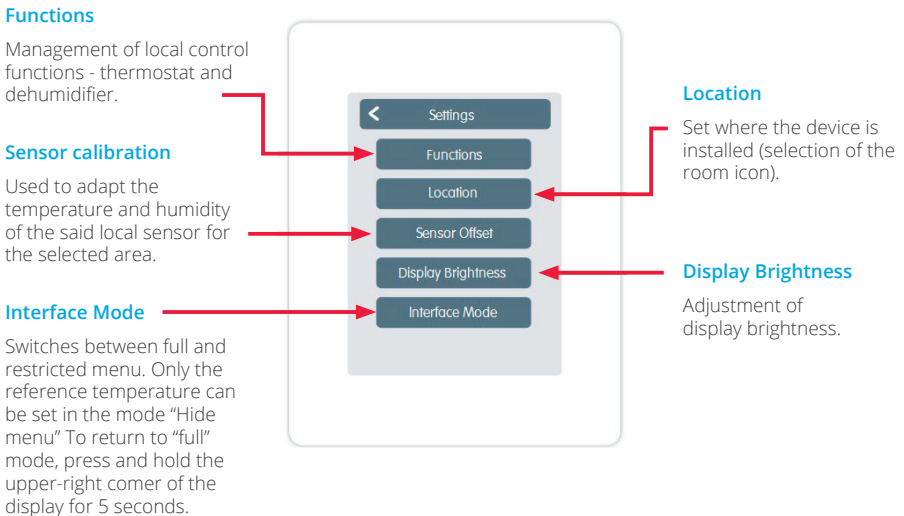
5.5 Expert Menu

Overview > Operating Mode > Main Menu > Expert



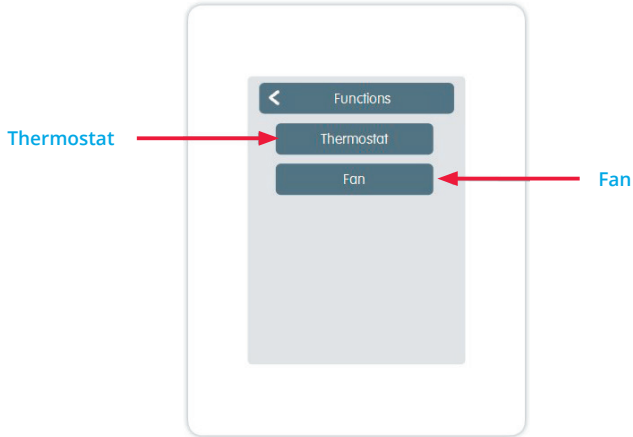
5.6 Expert Menu Settings

Overview > Operating Mode > Main Menu > Expert > Settings

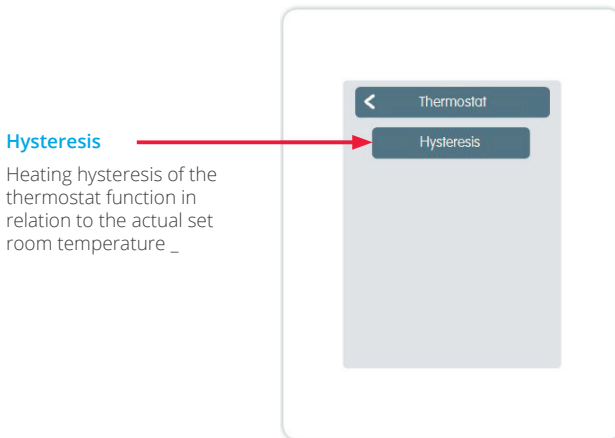


5.7 Settings Functions

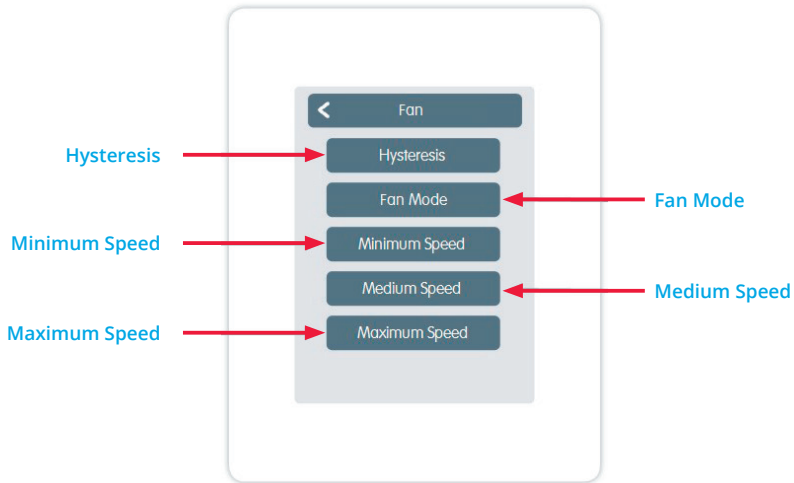
Overview > Operating Mode > Main Menu > Expert > Settings > Functions



Overview > Operating mode > Menu > Expert > Settings > Functions > Thermostat



Overview > Operating mode > Main menu > Expert > Settings > Functions > Fan



6. Fault Finding

Under certain circumstances the thermostat may need to be reset. This may be as a result of external issues with equipment that the thermostat is connected to.

6.1 Factory Reset

If the screen remains illuminated but is displaying odd or unexpected data this can be resolved by performing a factory reset. Enter expert mode and select 'Factory Settings' as described earlier.

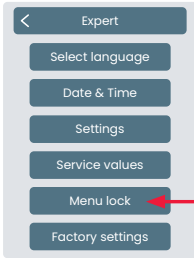
6.2 Hard Reset

If the thermostat screen is blank and will not illuminate then a hard reset may resolve the issue. Firstly, isolate the thermostat by isolating the heating unit which is powering it. Reconnect the power and check if the thermostat is still blank, if it is proceed as below. Isolate the power again and then remove the front from the Modulo thermostat, replace the front and then reconnect the power.

Under no circumstances remove the front cover while the thermostat is powered - this may cause irrecoverable damage.

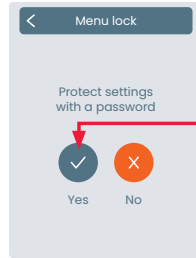
7. Appendix 1

7.1 Setting Up Menu Lock



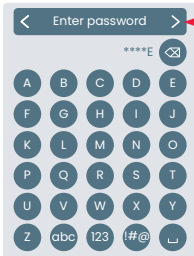
Step 1

To set up the menu lock, go into the expert section. Click on the 'menu lock'.



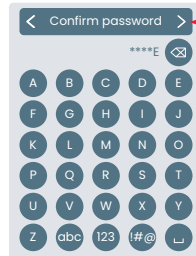
Step 2

Click on the 'yes' icon.



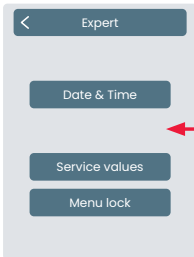
Step 3

Enter password. Then click on the arrow.



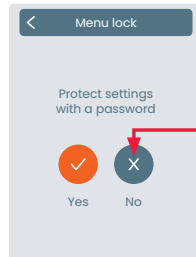
Step 4

Re-enter password to confirm. Then click on the arrow.



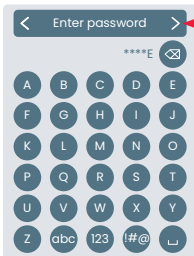
Step 5

After the password has been set via menu lock. All options for settings will be removed/locked besides these three options.



Step 6

To edit the settings or remove the menu lock. Go into 'menu lock', click on the 'no' icon.

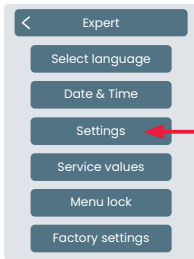


Step 7

Enter the password to remove menu lock, click on the arrow.

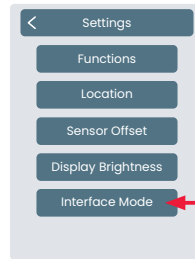
The password can be reset via use of the master password: **[CALEON]** (square brackets and capitals required).

7.2 Setting Up Interface Lock



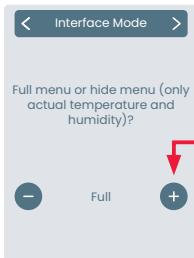
Step 1

To set up the interface lock, go into the expert section. Click on 'settings'.



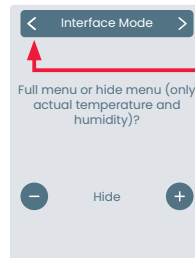
Step 2

Click on 'interface mode'.



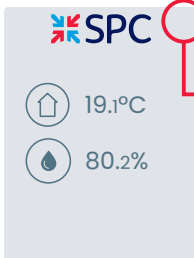
Step 3

Default setting is on full menu. Click on either the 'positive' or 'negative' icon to change mode.



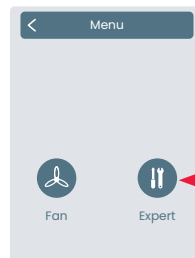
Step 4

Once in hide mode. Click on the arrow to activate.



Step 5

To deactivate 'hide mode', hold the upper-right corner of the display for around 5 seconds.



Step 6

To return to 'full mode', click on expert mode, go back to interface mode and select 'full' menu.

Final Declaration

Although these instructions have been created with the greatest possible care, the possibility of incorrect or incomplete information cannot be excluded. Subject as a basic principle to errors and technical changes.

Date and time of installation:

Name of installation company:

Space for notes:



SPC House
Evington Valley Road
Leicester
LE5 5LU

T: 0116 249 0044

E: spc@spc-hvac.co.uk

spc-hvac.co.uk

IOM 81, Issue 2 - Modulo Thermostat

