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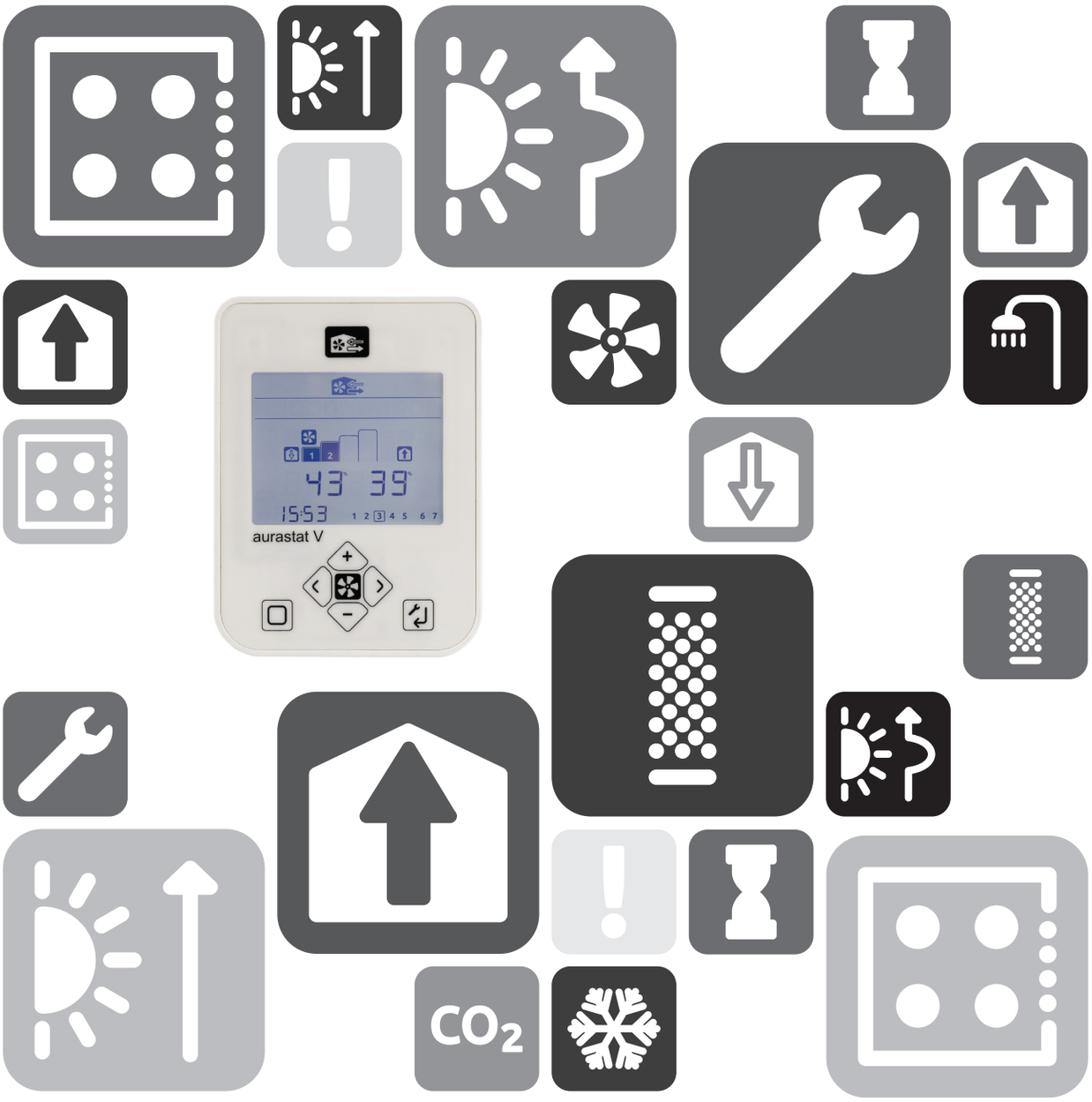


aurastat® V
TP526

Product Manual

HRV Controller

Titon®
ventilation systems

Contents

When this document is viewed as a PDF the headings & sub headings on this page are hyperlinks to the content. Additionally the page numbers in this document are hyperlinks back to this contents page.

Important Information

Important: read these instructions fully before the installation of this appliance

1. This manual covers the operation of the HRV control system only, it must therefore be read in conjunction with the relevant heat recovery unit Product Manual.
2. Installation of the appliance and accessories must be carried out by a qualified and suitable competent person and be carried out in clean, dry conditions where dust and humidity are at minimal levels.
3. All wiring must conform to current I.E.E. Wiring Regulations and all applicable standards and Building Regulations.
4. aurastat®, control & communication cable access to the HRV is via the fitted cable gland(s) which are suitable for Ø3- 6mm cable.
5. aurastat® control & communication cable - Unshielded 4 Core 18-24AWG Stranded, Tinned Copper.
6. Control & communication cables should not be placed within 50mm or on the same metal cable tray as any 230V lighting or power cables.
7. Ensure all cable glands are fully tightened.
8. The unit must be stored in a clean and dry environment. Do not install the appliance in areas where the following may be present or occur;

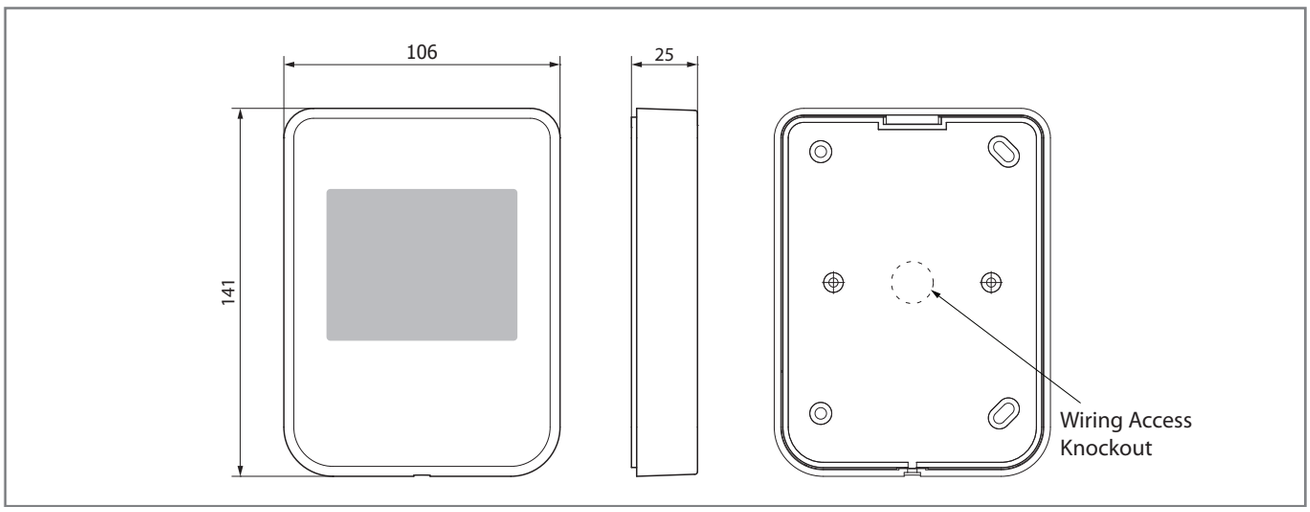
- Excessive oil or a grease laden atmosphere,
- Corrosive or flammable gases, liquids or vapours,
- Ambient temperatures above 40°C or below -5°C,
- Humidity levels above 90% or is a wet environment.

9. The appliance is not suitable for installation to the exterior of the dwelling.
10. This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
11. Children should be supervised to ensure that they do not play with the appliance.


aurastat V

Product Description

The aurastat® V is a programmable controller and display for commissioning and monitoring a Titon HRV. The aurastat® V is connected to the HRV via a wired connection.
Dimensions



aurastat® V

Packaging Contents

Inspect the unit when taking delivery. Check the unit for damage and that all accessories have been supplied. Package supplied with:-

- 1 x aurastat® V controller.
- 1 x cable tie.
- 1 x Product Manual.

Any shortages or damage must be immediately reported to the supplier.

Feature Descriptions

The following gives an outline description for each of the product features.

24 Hour Clock

The aurastat® V has a twenty four hour clock with a battery backup.

Day of Week Display

The aurastat® V displays the days of the week as numbers.

Backlight Brightness

The aurastat® V display backlight brightness can be adjusted or turned off.

Boost Overrun Timer

A programmable timer that controls the time the HRV remains at Boost Speed after all boost switches have been released.

Boost Delay Timer

A programmable timer which can be used to delay the HRV running at Boost Speed after a boost switch has been activated.

Boost Inhibit

A programmed time period that prevents the HRV switching into Boost Speed or SUMMERboost®. Fan speed controlled by proportional inputs are not effected by Boost Inhibit.

Internal Humidity Sensor

The HRV has a relative humidity (RH) sensor, the RH can be displayed on the aurastat® V LCD screen. The RH sensor can be programmed to switch the HRV into Boost Speed.

Filter Change Alert

The aurastat® V will display an alert after a specified time when the HRV filters require changing.

4 x Fan Speeds

The units have 4 programmable speed settings, all speeds are variable between 14-100% and allow independent speed setting of both supply and extract ventilation rates

1. Setback Speed.
   Reduced ventilation.
2. Continuous Speed.
   Normal ventilation.
3. Boost Speed.
   Increased ventilation
4. SUMMERboost® Speed.
   Very high ventilation, only available during Summer By Pass operation.

Fan Speed Display

The aurastat® V screen displays the selected fan speed using the 1-4 stepped icons.

Boost Alert

A programmable timer which displays a warning message on the aurastat® V LCD screen after the HRV has been left in Boost Speed for the specified time.

Summer Mode

Summer Mode operates by slowing or stopping the supply fan. This reduces the supply of From Atmosphere air to the dwelling. Summer Mode is triggered automatically or via a Volt Free input. Summer Mode must not be enabled or installed in dwellings where open flue combustion appliances are used.

SUMMERboost®

SUMMERboost® allows both the supply and extract fans to run at full speed whenever the Summer Bypass is activated. By default SUMMERboost® is enabled. When SUMMERboost® is triggered by Summer Bypass the increased fan speed can be prevented either Manually or Automatically.
Manual - This is by means of a volt-free switch wired directly into the controller PCB.
Automatic - This is by means of a dedicated wall mounted room thermostat. SUMMERboost® will only operate when the temperature has exceeded the thermostat setting. Should the room temperature fall below the thermostat setting, then SUMMERboost® will not operate.

Summer By Pass

Summer Bypass is designed to operate during hot periods where fresh air can be vented straight into the property without being preheated by the extracted stale air. Summer Bypass operation is automatically controlled. The Summer Bypass mechanism diverts the stale air being extracted from the dwelling around the heat cell so that its heat energy is not transferred to the fresh air being supplied to the dwelling.

Duct Heater Control

To maintain ventilation flow rates where prolonged periods of very low temperatures occur, the facility for the control of an electrically powered Duct Heater is provided, MAX 1800W. The Duct Heater is placed in-line between the outside supply vent and the From Atmosphere terminal on the HRV. In these applications, the heater is used to pre-warm the outside fresh air supply before it enters the HRV.

2 x Proportional Sensor Inputs

Enables connection of environmental sensors to the HRV which can be used to proportionally control HRV fan speeds.

3 x Volt Free Inputs

Enables the connection of single pole momentary switches, latching switches or normally open relay contacts to the HRV. These can be used to switch between fan speeds or control SUMMERboost® and Summer Mode.

2 x Live Switch Inputs

These inputs are used to switch the HRV to Boost Speed via a switched live input.

Frost Protection Program

During very cold weather, the Frost Protection Program will detect temperatures that could cause ice to form inside the unit. It will reduce or stop the supply ventilation rate, thus allowing the warmer stale air to raise the temperature within the unit cell to such a level that prevents the formation of ice. As temperatures rise the Frost Protection Program will increase the supply ventilation flow rate back to the commissioned settings.

HRV Run Timer

The aurastat® V displays the total run time of the unit in hours.

Holiday Mode

The aurastat® V can set the HRV to Holiday Mode. Holiday Mode sets the HRV to speed 1 Setback Speed, Boost Inhibit is enabled.

Multiple Internal Temperature Sensors

The aurastat® V LCD can display the From Atmosphere and To Atmosphere air temperatures in real-time. Additionally the temperature of the heat cell is monitored.

Fitting

aurastat® V

The unit is designed to be wall mounted or fitted over a UK standard single gang recessed metal box. It should be sited in a place that is visible and convenient for the householder. To fit the unit, first remove the front of the unit; The front of the unit is removed by loosening a single screw on the bottom face to the unit, lifting the bottom of the front away from the base and unhooking the top of the front from the base. Fix base to the wall (always use a fixing suited to the wall type) or if using a metal box using M3.5 raised countersunk machine screws.

Wiring Connections Access

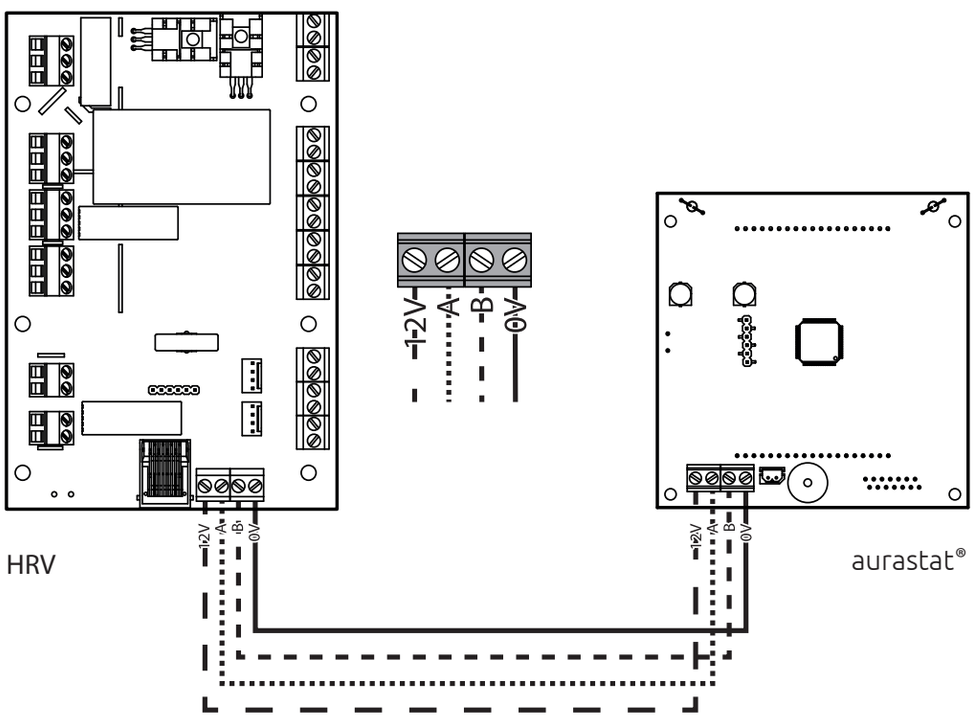
aurastat® V

The front of the unit is removed by loosening a single screw on the bottom face to the unit, lifting the bottom of the front away from the base and unhooking the top of the front from the base. The base has a cable access knockout. Communication Cable - Unshielded 4 Core 18-24AWG Stranded, Tinned Copper must be zip tied to the loop provided on the front cover. The wiring connections are mounted on the circuit board in the front of the unit.

HRV

Refer to the Product Manual for the specific unit for information.

Wiring Diagram



aurastat® V **to HRV connection wiring**

User Interface

The aurastat® V provides the user interface for commissioning and monitoring of a Titon HRV.

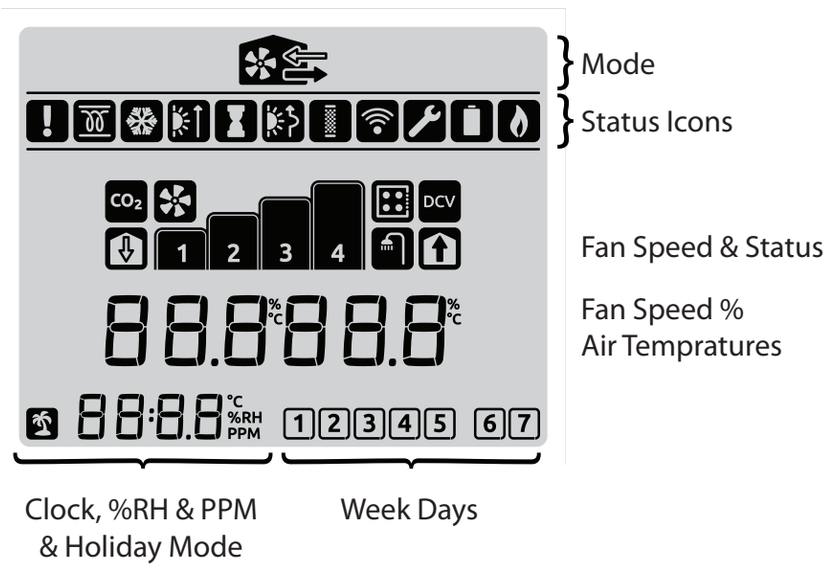
Buttons

The aurastat® V has seven buttons which control, configure and monitor the HRV. The Buttons on the units have different function depending on which menu is active.

RUN Menu		SETUP Menus
Enter setup	**SETUP key**	Enter menu item Enter parameter setting
Switch between Fan Speed % display & Temprature monitoring	**ARROW keys**	Previous / Next menu item Navigation
	+/- keys	Increase / Decrease parameter
Cycle though Clock, RH% & Room Sensor(s) Long Press engage Holiday Mode	**HOME key**	Back to Setup Menu
Switch HRV into Speed 3 Boost Speed	**FAN key**	

Display

The display is a 90mm liquid crystal display (LCD) screen. The display has a back light. The display uses a mixture of icons text and figures grouped into regions to communicate information to the user.



Display Icons

Icon definitions

Status

 Alert

 Duct Heater

 Frost Program active

 Summer Mode active

 Boost Timer

 Summer By Pass active

 Holiday Mode active

 Filter Alert

 Set Up

 CO_2 Sensor

 Demand Control Ventilation

 Kitchen

 Wet Room

 Fan

 Supply

 Extract

Menu System

The aurastat® V menu system is divided into five sections. This is to make the display user friendly for both the end user (householder) and the service / installation engineer.

Menu	Monitor & Control RUN Menu	User setup	Service & Setup	Commissioning & Installation	Reset
Name displayed		SETUP 1	SETUP 2	SETUP 3	RESET 4
Description	Gives access to the control and monitoring functions.	Gives access to settings likely to be routinely used by the householder.	Gives access to settings likely to be used by Maintenance or Service Engineers.	Gives access to advanced settings required during installation and commissioning. Pass code protected.	Gives access to the reset function. Pass code protected.

Menu Sections

The table below gives an overview of which item and settings are in which menu section.

Menu item	User setup	Service & Setup	Commissioning & Installation	Reset
	SETUP 1	SETUP 2	SETUP 3	RESET 4
Time	o			
Day of Week	o			
Backlight Brightness	o			
Boost Overrun Timer	o	o	o	
Boost Delay Timer	o	o	o	
Boost Inhibit On/Off	o			
Boost Inhibit Times	o			
Internal Humidity Boost (Set Point)	o			
Run Timer		o		
Filter Change Reset		o		
Filter Change Interval		o		
Speed 4 SUMMERboost®		o	o	
Boost Alert On/Off		o		
Boost Alert Timer		o		
Summer Mode Enable/Disable		o		
Summer Mode		o		
Summer By Pass Enable/Disable		o		
Summer By Pass		o		
Duct Heater Enable/Disable		o		
Duct Heater		o		
Room Sensor 1 - Set Points		o		
Room Sensor 2 - Set Points		o		
Internal Humidity Boost On/Off		o		
Internal Humidity Boost (Full)		o		
Contious SPEED2			o	
Boost SPEED3			o	
Setback SPEED4			o	
Frost Protection			o	
Room Sensor 1 Enable/Disable			o	
Room Senor 1 - Configuration			o	
Room Sensor 2 Enable/Disable			o	
Room Senor 2 - Configuration			o	
Switch input 1			o	
Switch input 2			o	
Switch input 3			o	
Live Switch 1 (LS1)			o	
Live Switch 2 (LS2)			o	
Reset				o

Quick Start Guide

Titon recommend that every installer start with the with the Quick Start Guide as a menu familiarization exercise. Using the Quick Start Guide installers can setup the HRV quickly. With the minimum of configuration changes the system will be up and running. All other settings are set at the default settings, fine tuning can be carried out at any time.

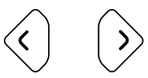
The Quick Start Guide explains step by step how to set up.

1. Time.
2. Day.
3. Continuous Speed 1.
4. Boost Speed 3.

SETUP Menus

SETUP key

Enter menu item
Enter parameter setting



ARROW keys

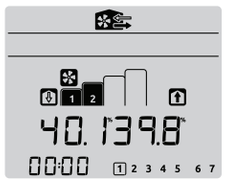
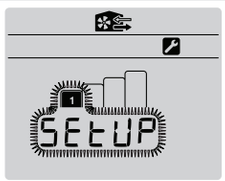
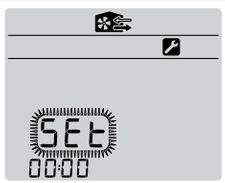
Previous / Next menu item
Navigation

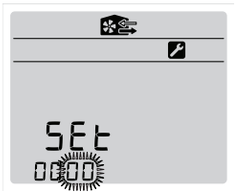
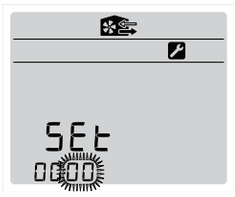
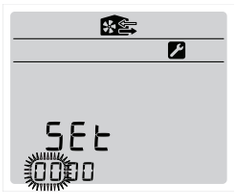
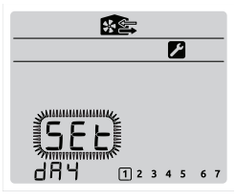
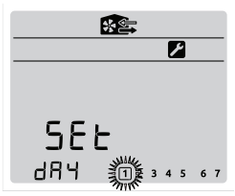
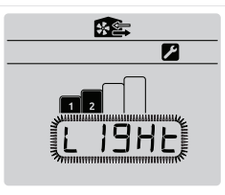
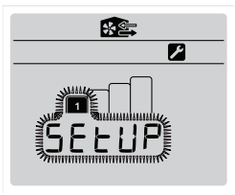
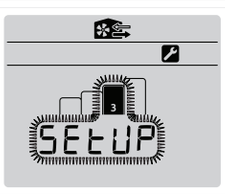
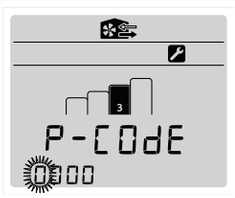
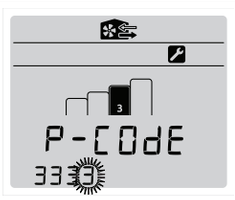
+/- keys

Increase / Decrease parameter

HOME key

Back to Setup Menu

Step	Action	Button Press(es)	Screen(s)
1	Power up the HRV Run Mode		
2	Enter SETUP	Press key	
3	Enter SETUP1 menu	Press key	

Step	Action	Button Press(es)	Screen(s)
4	Enter Clock setup	Press ↵ key, to enter clock edit	
5	Edit minutes	Using + / − keys to edit mins value Press ↵ key, to enter mins and move to next menu item	
6	Edit Hours	Using + / − edit hours value Press ↵ key, to enter hours and move to next menu item	
7	Enter Day setup	Press ↵ key, to enter day setup	
8	Change Day	Using + / − edit day Press ↵ key, to enter Day and move to next menu item	
9	Exit SETUP1 menu	Press ▢ key, to return to SETUP1 menu	 
10	Enter SETUP3 menu	Move to SETUP3 menu by pressing › key twice Press ↵ key to enter SETUP3 menu	 
11	Enter Pass Code	Using + / − edit the individual digits. Use ‹ / › to move digits. Press ↵ key, Enter Pass Code 3333	

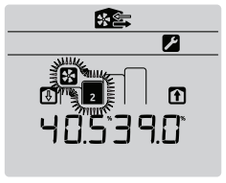
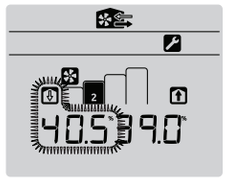
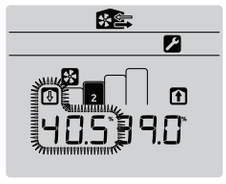
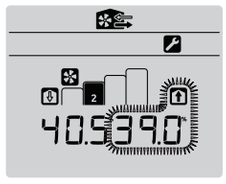
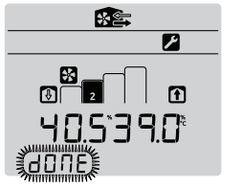
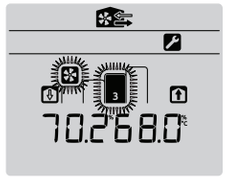
SETUP Menus

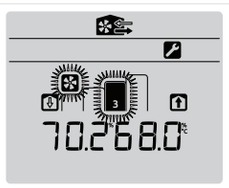
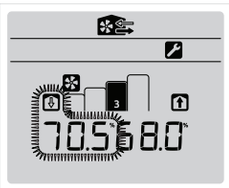
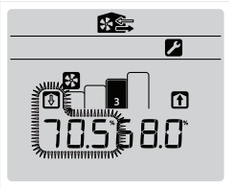
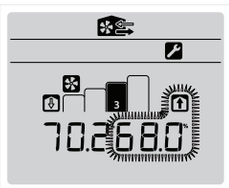
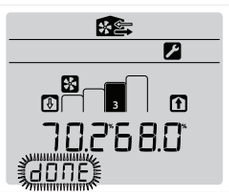
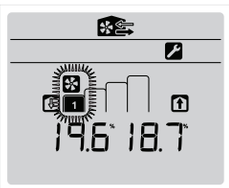
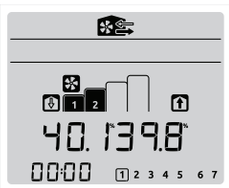
SETUP key — Enter menu item
Enter parameter setting

ARROW keys — Previous / Next menu item
Navigation

+/- keys — Increase / Decrease parameter

HOME key — Back to Setup Menu

Step	Action	Button Press(es)	Screen(s)	
12	Enter Continous SPEED2 setup	Press key to enter edit		
13	Edit Continous Supply Rate	Using + / − edit supply rate Press and release to modify the decimal Press and hold to modify the integer Press key, to enter value and move to next menu item		
14	Edit Continous Extract Rate	Using + / − edit extract rate Press and release to modify the decimal Press and hold to modify the integer Press key, to enter value and move to DONE		
15	Finish Continous SPEED2 setup	Press key to enter values and move to the next menu item		

Step	Action	Button Press(es)	Screen(s)
16	Enter Boost SPEED3 setup	Press key to enter edit	 
17	Edit Boost Supply Rate	Using / edit supply rate Press and release to modify the decimal Press and hold to modify the integer Press key, to enter value and move to next menu item	
18	Edit Boost Extract Rate	Using / edit extract rate Press and release to modify the decimal Press and hold to modify the integer Press key, to enter value and move to DONE	
19	Exit SETUP3	Press key to enter values and move to the next menu item. Press key twice to exit SETUP3 menu and return to Run Mode	 
20	Run Mode		

Menu Defaults

The tables below detail the default values and the range of available settings, plus any additional information about the unit's configuable settings.

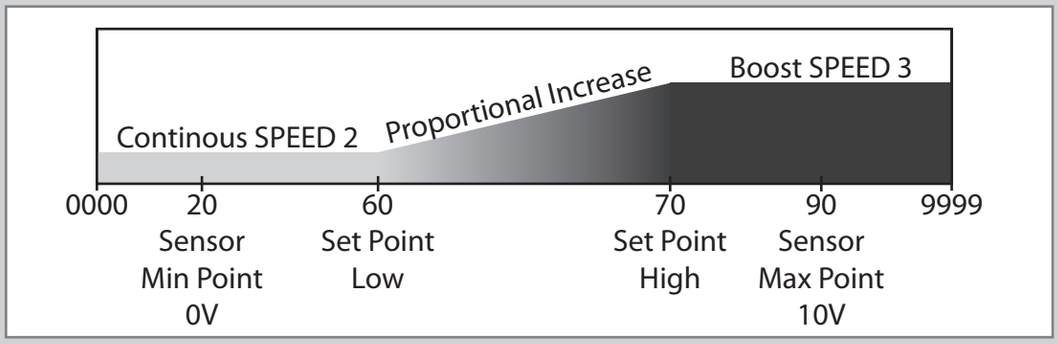
SETUP1

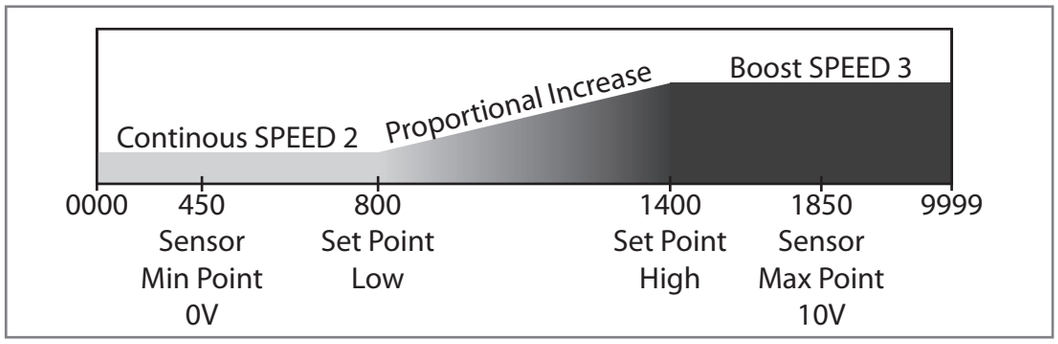
Configurable Item		Range		Default	Additional information
		Min	Max		
Time		Any Time		00:00	24 hour clock.
Day of Week		1	7	1	Two groups, five week days & two weekend days.
Backlight Brightness		Off	4	1	Off, 25%, 50%, 75% & 100%
Boost Overrun	Kitchen	0 mins	60 mins	15 mins	
	Wet Room	0 mins	60 mins	15 mins	
Boost Overrun timers are set independently for Kitchen and Wet Room inputs. Boost Overrun timers must be set greater than zero for any momentary switch or the aurastat's fan button to trigger boost. The aurastat's fan button uses the Kitchen Boost Overrun timer. When using latching switches to initiate Boost SPEED 3 the Overrun timer will start when the latching switch is disengaged.					
Boost Delay Timer		0 mins	60 mins	0 mins	
If the Boost Delay Timer is set greater than zero momentary switches or the aurastat's fan button will not switch the HRV into Boost SPEED 3. When using latching switches, if the Boost switch is turned of before the Boost Delay Timer has elapsed the HRV will not Boost.					
Boost Inhibit On/Off		On	Off	Off	
Boost Inhibit Times	Start	00:00	23:59	23:00	
	End	00:00	23:59	05:00	
Internal Humidity Boost (Setpoint)		30%	89%	70%	

SETUP2

Configurable Item		Range		Default	Additional information
		Min	Max		
Filter Change Interval		3 months	24 months	12 months	
Boost Overrun Timer	Kitchen	0 mins	60 mins	15 mins	
	Wet Room	0 mins	60 mins	15 mins	
Boost Overrun timers are set independently for Kitchen and Wet Room inputs. Boost Overrun timers must be set greater than zero for any momentary switch or the aurastat's fan button to trigger boost. The aurastat's fan button uses the Kitchen Boost Overrun timer. When using latching switches to initiate Boost SPEED 3 the Overrun timer will start when the latching switch is disengaged.					
Boost Delay Timer		0 mins	60 mins	0 mins	
If the Boost Delay Timer is set greater than zero momentary switches or the aurastat's fan button will not switch the HRV into Boost SPEED 3. When using latching switches, if the Boost switch is turned of before the Boost Delay Timer has elapsed the HRV will not Boost.					
Speed 4 SUMMERboost®		14%	100%	100%	SUMMERboost® is only available on models with Summer. SUMMERboost® is disabled by default.
Press and release the + / - key to modify the mantissa(decimal). Press and hold the + / - key to modify the characteristic (interger). HRV fan speed will change to reflect the displayed setting when the button is released. Changes in fan speed will take time to be reflected as changes to the ventilation system airflow rates. Fan speed will not change while in this configuration menu.					
Boost Alert On/Off		On	Off	On	
Boost Alert Timer		1 hour	10 hours	2 hours	

Configurable Item		Range		Default	Additional information
		Min	Max		
Summer Mode Enable/ Disable		Enabled	Disabled	Enabled	Disabled in By Pass unit.
Summer Mode	Extract from dwelling	17°C	35°C	22°C	
	Supply to dwelling	15°C	20°C	18°C	
	Supply Fan Speed	0%	100%	0%	
The Summer Mode fan speed is a % of Continuous SPEED 2. Therefore care must be taken to set the Summer Mode fan speed at a value that makes the actual fan speed greater than 14%. e.g. Continuous SPEED 2 x Summer Mode fan speed = Actual fan speed. 50% x 50% = 25%, 50%x28%=14%. If the actual fan speed between 1% & 14% the fan may not run and an Error will be shown.					
Summer By Pass Enable/ Disable		Enabled	Disabled	Enabled	Enabled in By Pass unit
Summer By Pass	Extract from dwelling	17°C	35°C	25°C	In order for the Summer By Pass to operate the temperatures of both the air being extracted from and supplied to the property must be above their individual thresholds. If the temperature of the Supply air exceeds that of the Extracted air the Summer By Pass switches off to prevent the warmer air being supplied directly to the property.
	Supply to dwelling	10°C	20°C	18°C	
SUMMERboost®		Enabled	Disabled	Enabled	
Duct Heater Enable/ Disable		Enabled	Disabled	Disabled	
Duct Heater		Frost	User	Frost	Selects sensor that controls Duct Heater activity. Frost (FRST) = Uses sensor on the to atmosphere side of the heat cell and the Frost Protection Threshold temperature configured in SETUP3. User = Uses sensor in the From Atmosphere (OUTSIDE) airstream and user configured Duct Heater threshold temperature.
Hyst		1°C	10°C	1°C	Hysteresis value used during rising temperature scenarios to prevent rapid switching of the Duct Heater.
Duct Heater threshold		-4°C	16°C	4°C	Temperature at which duct heater will turn on. This setting is only used in User mode.
Frost mode: During falling temperature scenarios duct heater will switch on at Frost threshold + 2°C switch off at the Frost Threshold. During rising temperature scenarios duct heater will remain switched on between Frost threshold and Frost threshold + 2°C + Hysteresis °C. User mode: During falling temperature scenarios duct heater will switch on below Duct Heater threshold. During rising temperature scenarios duct heater will switch off above Duct Heater threshold + Hysteresis°C. If the supply fan is set to run at a speed less than 25% Duct Heater will not turn on. This can be either by a configured speed eg Setback SPEED1, holiday mode or Frost protection being active).					

<table>
<tr><th rowspan="2">Configurable Item</th><th rowspan="2"></th><th colspan="2">Range</th><th rowspan="2">Default</th><th rowspan="2">Additional information</th></tr>
<tr><th>Min</th><th>Max</th></tr>
<tr><td>Room Sensor 1</td><td></td><td>na</td><td>na</td><td>%RH</td><td>These settings are only available when Room Sensor1 is enabled in SETUP3 menu.
Room Sensor 1 is setup by default for use with an %RH sensor.
Room sensor can be configured to also operate with;
o Air Quality (AQ) Sensor - PPM,
o CO2 Sensor - PPM CO_2,
o Temperature Sensor - °C.</td></tr>
<tr><td colspan="6"> 
</td></tr>
<tr><td>Set point Low</td><td></td><td>Dynamic</td><td>Dynamic</td><td>60%</td><td rowspan="2">Sensor Min & Max values are setup in SETUP3 menu

Recommended Default High & Low Values for sensors
<table><tr><th>Sensor Type</th><th>Titon Part №</th><th>SP Low</th><th>SP high</th></tr><tr><td>°C</td><td>TP543</td><td>0017</td><td>0027</td></tr><tr><td>CO_2 PPM</td><td>TP541</td><td>0800</td><td>1400</td></tr><tr><td>AQ PPM</td><td>TP540</td><td>0800</td><td>1400</td></tr><tr><td>%RH</td><td>TP542</td><td>0060</td><td>0070</td></tr></table></td></tr>
<tr><td>Set point High</td><td></td><td>Dynamic</td><td>Dynamic</td><td>70%</td></tr>
<tr><td>Room Sensor 2</td><td></td><td>na</td><td>na</td><td>CO_2</td><td>These settings are only available when Room Sensor2 is enabled in SETUP3 menu.
Room Sensor 2 is setup by default for use with an CO_2 sensor.
Room sensor can be configured to also operate with;
o Temperature Sensor - °C.
o Air Quality (AQ) Sensor - PPM,
o Humidity Sensor - %RH</td></tr>
<tr><td colspan="6"> 
</td></tr>
</table>

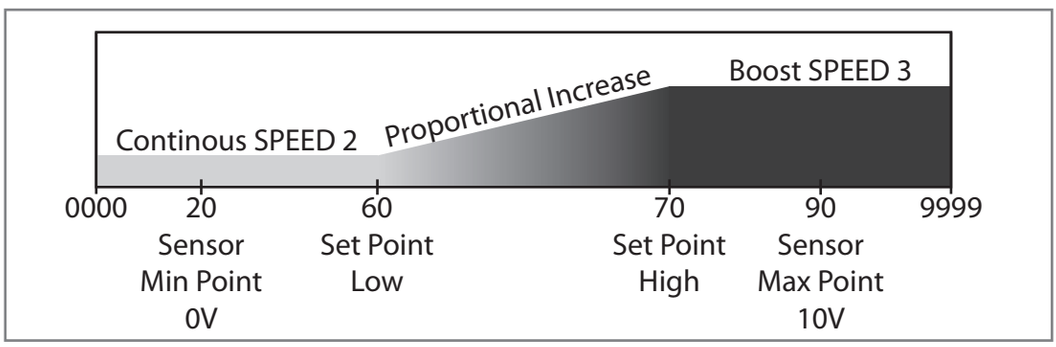
<table>
<tr><th rowspan="2">Configurable Item</th><th rowspan="2"></th><th colspan="2">Range</th><th rowspan="2">Default</th><th rowspan="2">Additional information</th></tr>
<tr><th>Min</th><th>Max</th></tr>
<tr><td>Set point Low</td><td></td><td>Dynamic</td><td>Dynamic</td><td>800PPM</td><td rowspan="2">Sensor Min & Max values are setup in SETUP3 menu

Recommended Default High & Low Values for sensors
<table><tr><th>Sensor Type</th><th>Titon Part №</th><th>SP Low</th><th>SP high</th></tr><tr><td>°C</td><td>TP543</td><td>0017</td><td>0027</td></tr><tr><td>CO_2 PPM</td><td>TP541</td><td>0800</td><td>1400</td></tr><tr><td>AQ PPM</td><td>TP540</td><td>0800</td><td>1400</td></tr><tr><td>%RH</td><td>TP542</td><td>0060</td><td>0070</td></tr></table></td></tr>
<tr><td>Set point High</td><td></td><td>Dynamic</td><td>Dynamic</td><td>1400PPM</td></tr>
<tr><td>Internal Humidity Boost</td><td></td><td>On</td><td>Off</td><td>Off</td><td></td></tr>
<tr><td>Internal Humidity %RH Boost FULL</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>%RH Boost Set point</td><td></td><td>30%</td><td>89%</td><td>70%</td><td>HRV will switch to Boost SPEED 3 when %RH is greater than set point value.</td></tr>
<tr><td>%RH Boost Overrun timer</td><td></td><td>1 min</td><td>60 mins</td><td>15 mins</td><td>The timer is engaged when the %RH has decreased to the %RH set point less the %RH Boost Hysteresis.</td></tr>
<tr><td>%RH Boost Hysteresis</td><td></td><td>1%</td><td>10%</td><td>1%</td><td></td></tr>
<tr><td colspan="6">During falling humidity scenarios the HRV will remain in Boost SPEED 3 until the %RH has decreased to below %RH set point less %RH Boost Hysteresis and the % RH Boost Overrun timer has elapsed.
When the timer is in operation the hour glass symbol is displayed.</td></tr>
</table>

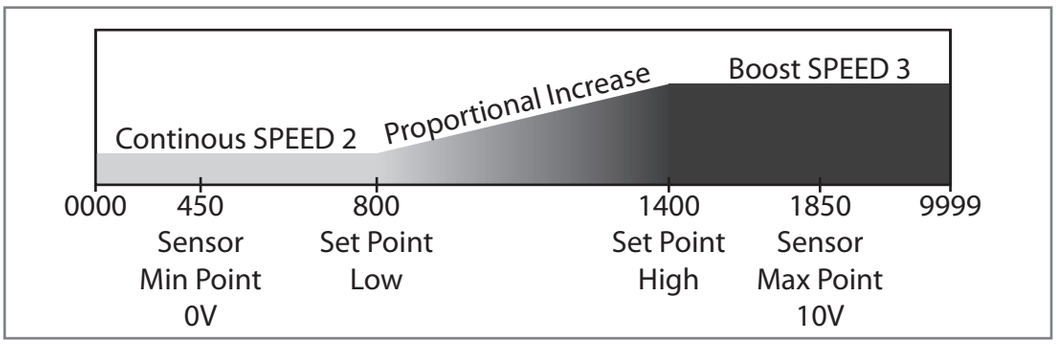
SETUP3

Configurable Item		Range		Default	Additional information
		Min	Max		
SETUP3 pass code		na	na	3333	Pass code needs to be entered to configure settings in the SETUP3 menu
Continuous SPEED2	Supply	14%	100%	40%	
	Extract	14%	100%	40%	
Boost SPEED3	Supply	14%	100%	70%	
	Extract	14%	100%	70%	
Setback SPEED1	Supply	14%	100%	18%	
	Extract	14%	100%	18%	
Press and release the + / - key to modify the mantissa (decimal). Press and hold the + / - key to modify the characteristic (integer) HRV fan speed will change to reflect the displayed setting when the button is released. Changes in fan speed will take time to be reflected as changes to the ventilation system airflow rates.					
Boost Overrun	Kitchen	0 mins	60 mins	15 mins	
	Wet Room	0 mins	60 mins	15 mins	
Boost Overrun timers are set independently for Kitchen and Wet Room inputs. Boost Overrun timers must be set greater than zero for any momentary switch or the aurastat fan button to trigger boost. The aurastat's fan button uses the Kitchen Boost Overrun timer. When using latching switches to initiate Boost SPEED 3 the Overrun timer will start when the latching switch is disengaged.					
Boost Delay Timer		0 mins	60 mins	0 mins	
If the Boost Delay Timer is set greater than zero momentary switches of the aurastat's fan button will not switch the HRV into Boost SPEED 3. When using latching switches, if the Boost switch is turned of before the Boost Delay Timer has elapsed the HRV will not Boost.					

<table>
<tr><td rowspan="2">Configurable Item</td><td rowspan="2"></td><td colspan="2">Range</td><td rowspan="2">Default</td><td rowspan="2">Additional information</td></tr>
<tr><td>Min</td><td>Max</td></tr>
<tr><td>SPEED4 SUMMERboost®</td><td></td><td>14%</td><td>100%</td><td>100%</td><td>SUMMERboost® is only available on models with Summer By Pass. SUMMERboost® is enabled by default.</td></tr>
<tr><td colspan="6">Press and release the + / - key to modify the mantissa. Press and hold the + / - key to modify the characteristic (integer). HRV fan speed will change to reflect the displayed setting when the button is released. Changes in fan speed will take time to be reflected as changes to the ventilation system airflow rates.</td></tr>
<tr><td>Frost set point</td><td></td><td>-2°C</td><td>11.5°C</td><td>2°C</td><td></td></tr>
<tr><td colspan="6">Press and release the + / - key to modify the mantissa. Press and hold the + / - key to modify the characteristic (integer)</td></tr>
<tr><td>Frost Protection Mode</td><td></td><td>Off</td><td>Reduce</td><td>Off</td><td></td></tr>
<tr><td colspan="6">Off = When temperature detected is below Frost set point Frost Protection activates turning off the Supply fan.
Reduce = When temperature detected is below Frost set point Frost Protection activates, progressively reducing the speed of the Supply fan until the temperature reaches 4°C below Frost set point at which point the Supply fan is stopped.</td></tr>
<tr><td>Room Sensor 1 Enable/ Disable</td><td></td><td>Enable</td><td>Disable</td><td>Disable</td><td>Activates Setup Room Sensor 1 in SETUP2 menu.</td></tr>
<tr><td>Room Sensor Type</td><td></td><td></td><td></td><td>%RH</td><td rowspan="3">Options are;
Temperature Sensor - °C,
CO_2 Sensor - PPM,
Air Quality Sensor - PPM,
Humidity Sensor - %RH.

Settings required for Titon supplied sensors:
<table><tr><td>Sensor Type</td><td>Titon Part №</td><td>Min 0V</td><td>Max 10V</td></tr><tr><td>°C</td><td>TP543</td><td>0000</td><td>0040</td></tr><tr><td>CO_2 PPM</td><td>TP541</td><td>0450</td><td>1850</td></tr><tr><td>AQ PPM</td><td>TP540</td><td>0450</td><td>1850</td></tr><tr><td>%RH</td><td>TP542</td><td>0020</td><td>0090</td></tr></table>Consult manufactures data sheets for details.</td></tr>
<tr><td>Sensor Min Point 0V</td><td></td><td>0</td><td>9999</td><td>20%</td></tr>
<tr><td>Sensor Max Point 10V</td><td></td><td>0</td><td>9999</td><td>90%</td></tr>
<tr><td colspan="6"> 
</td></tr>
</table>

<table>
<tr><th rowspan="2">Configurable Item</th><th rowspan="2"></th><th colspan="2">Range</th><th rowspan="2">Default</th><th rowspan="2">Additional information</th></tr>
<tr><th>Min</th><th>Max</th></tr>
<tr><td>Room Sensor 2 Enable/ Disable</td><td></td><td>Enable</td><td>Disable</td><td>Disable</td><td>Activates Setup Room Sensor 1 in SETUP2 menu.</td></tr>
<tr><td>Room Sensor Type</td><td></td><td></td><td></td><td>CO_2</td><td rowspan="3">Options are;
Temperature Sensor - °C,
CO_2 Sensor - PPM,
Air Quality Sensor - PPM,
Humidity Sensor - %RH.

Settings required for Titon supplied sensors:
<table><tr><th>Sensor Type</th><th>Titon Part №</th><th>Min 0V</th><th>Max 10V</th></tr><tr><td>°C</td><td>TP543</td><td>0000</td><td>0040</td></tr><tr><td>CO_2 PPM</td><td>TP541</td><td>0450</td><td>1850</td></tr><tr><td>AQ PPM</td><td>TP540</td><td>0450</td><td>1850</td></tr><tr><td>%RH</td><td>TP542</td><td>0020</td><td>0090</td></tr></table>Consult manufactures data sheets for details.</td></tr>
<tr><td>Sensor Min Point 0V</td><td></td><td>0</td><td>9999</td><td>450PPM</td></tr>
<tr><td>Sensor Max Point 10V</td><td></td><td>0</td><td>9999</td><td>1850PPM</td></tr>
<tr><td colspan="6"> 
</td></tr>
<tr><td>Switch Input 1</td><td></td><td></td><td></td><td>Boost from Kitchen</td><td rowspan="3">Options are;
Boost from Kitchen,
Boost from Wet Room,
Setback,
Summer Mode Engage / SUMMERboost®
Disable.</td></tr>
<tr><td>Switch Input 2</td><td></td><td></td><td></td><td>Boost from Wet Room</td></tr>
<tr><td>Switch Input 3</td><td></td><td></td><td></td><td>Summer Mode Engage / SUMMERboost® Disable.</td></tr>
<tr><td>Live Switch 1 (LS1)</td><td></td><td></td><td></td><td>Boost from Kitchen</td><td rowspan="2">Options are;
Boost from Kitchen,
Boost from Wet Room.</td></tr>
<tr><td>Live Switch 2 (LS2)</td><td></td><td></td><td></td><td>Boost from Wet Room</td></tr>
</table>

RESET4

Configurable Item		Range		Default	Additional information
		Min	Max		
Passcode				6840	
Reset		Yes	No	No	Selecting Yes returns ALL configuable values except commissioned fan speeds to the preceding default values and returns to SETUP1 menu.

Installed Configuration.

The Table below MUST be completed by the installer with all configured setting that deviate from the defaults.
Default values shown greyed out.

SETUP1

Configurable Item		Setting
Backlight Brightness		One
Boost Overrun	Kitchen	15 mins
	Wet Room	15 mins
Boost Delay Timer	Kitchen	0 mins
	Wet Room	0 mins
Boost Inhibit On/Off		Off
Boost Inhibit Times	Start	23 : 00
	End	05 : 00
Internal Humidity Boost Set Point (Partial)		70 %

Configurable Item		Default
Room Sensor 1		
Set point Low		0060
Set point High		0070
Room Sensor 2		
Set point Low		0800
Set point High		1400
Internal Humidity Boost		Off
%RH Boost Set point		70 %
%RH Boost Overrun timer		15 %
%RH Boost Hysterisis		1 %

SETUP2

Configurable Item		Default
Filter Change Interval		12 months
Boost Overrun Timer	Kitchen	15 mins
	Wet Room	15 mins
Boost Delay Timer		0 mins
Speed 4 SUMMERboost®	Supply	100 %
	Extract	100 %
Boost Alert On/Off		On
Boost Alert Timer		2 hours
Summer Mode Enable/ Disable		Disable
Summer Mode	Extract	22 °C
	Supply	18 °C
	Supply Fan Speed	0 %
Summer By Pass Enable/ Disable		Enable
Summer By Pass	Extract	25 °C
	Supply	18 °C
SUMMERboost®		Enable
Duct Heater Enable/ Disable		Disable
Duct Heater		Frost
Hyst		1 °C
Duct Heater threshold		4 °C

SETUP3

Configurable Item		Default
Continous SPEED2	Supply	40 %
	Extract	40 %
Boost SPEED3	Supply	70 %
	Extract	70 %
Setback SPEED1	Supply	18 %
	Extract	18 %
SPEED4 SUMMERboost®	Supply	100 %
	Extract	100 %
Frost set point		2 °C
Frost Protection Mode		Off
Room Sensor 1 Enable/ Disable		Disable
Room Sensor Type		%RH
Sensor Min Point 0V		0020
Sensor Max Point 10V		0090
Room Sensor 2 Enable/ Disable		Disable
Room Sensor Type		CO_2
Sensor Min Point 0V		0450
Sensor Max Ponit 10V		1850
Switch Input 1		Kitchen
Switch Input 2		Wet Room
Switch Input 3		SUMMERboost®
Live Switch 1 (LS1)		Kitchen
Live Switch 2 (LS2)		Wet Room

Menu Maps

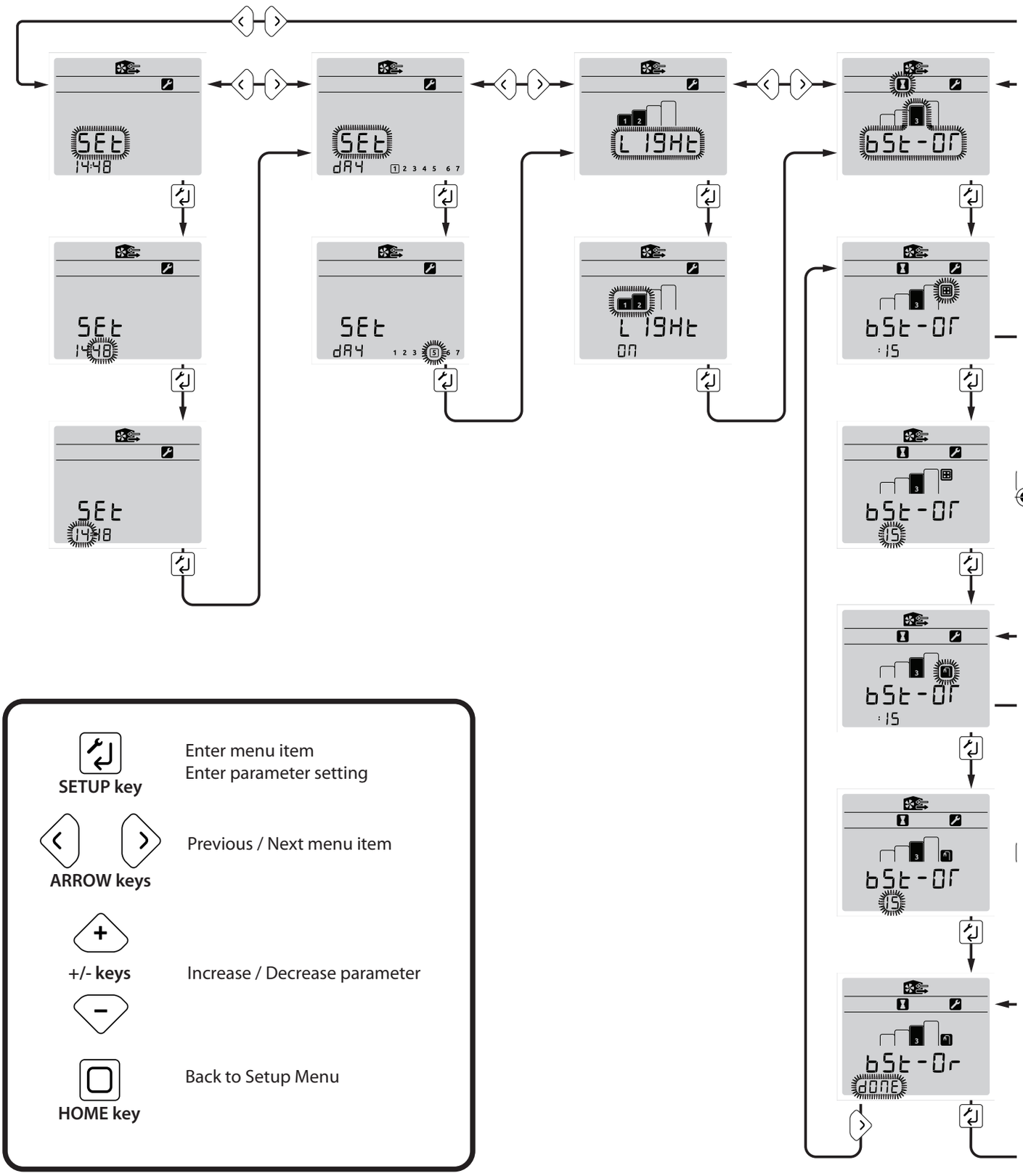
SETUP1 1 of 2

Setup
Time

Setup
Day of week

Setup
Backlight

Setup
Boost Overrun
Timer



SETUP key — Enter menu item / Enter parameter setting

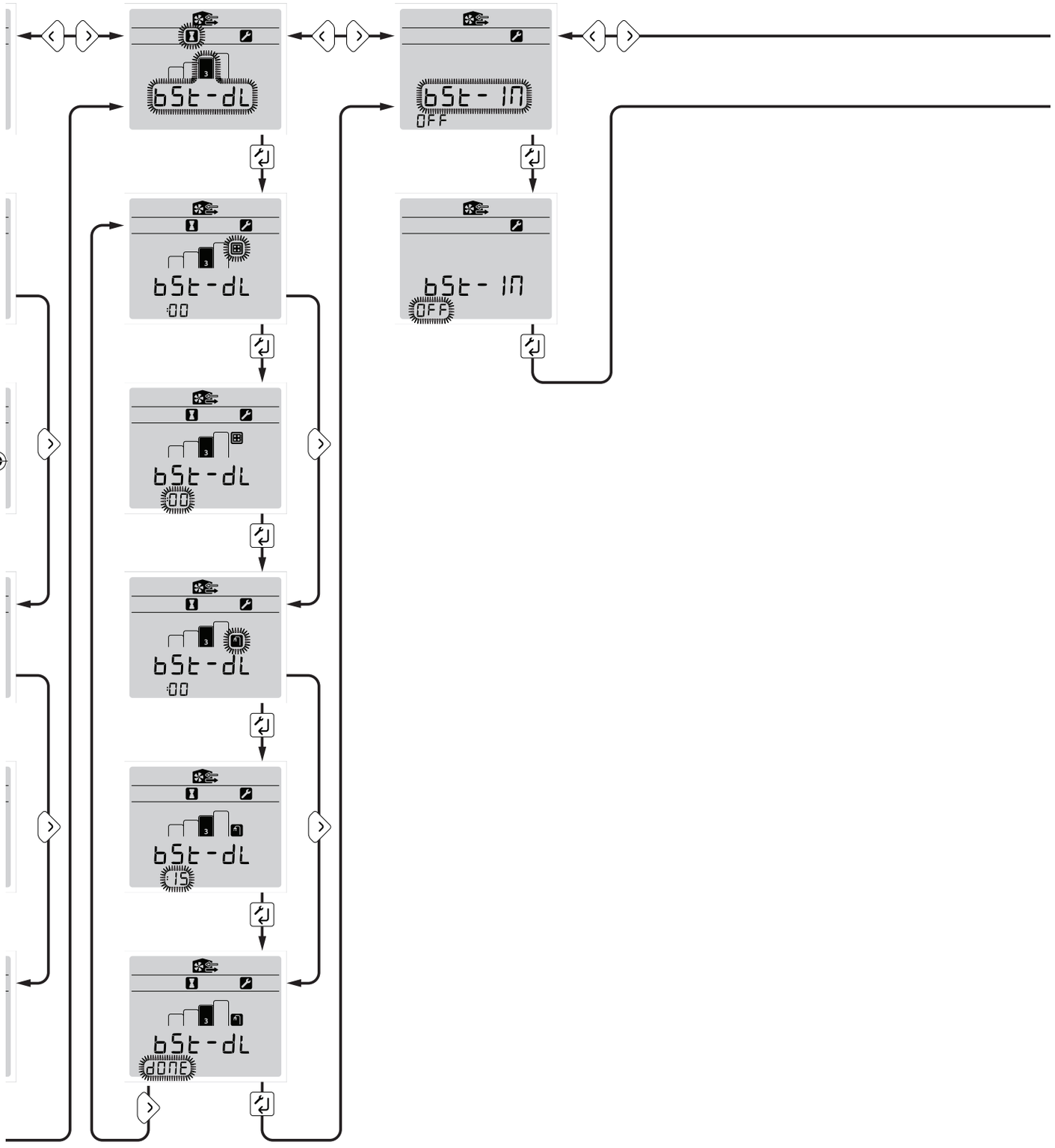
ARROW keys — Previous / Next menu item

+/- keys — Increase / Decrease parameter

HOME key — Back to Setup Menu

Setup
Boost Delay
Timer

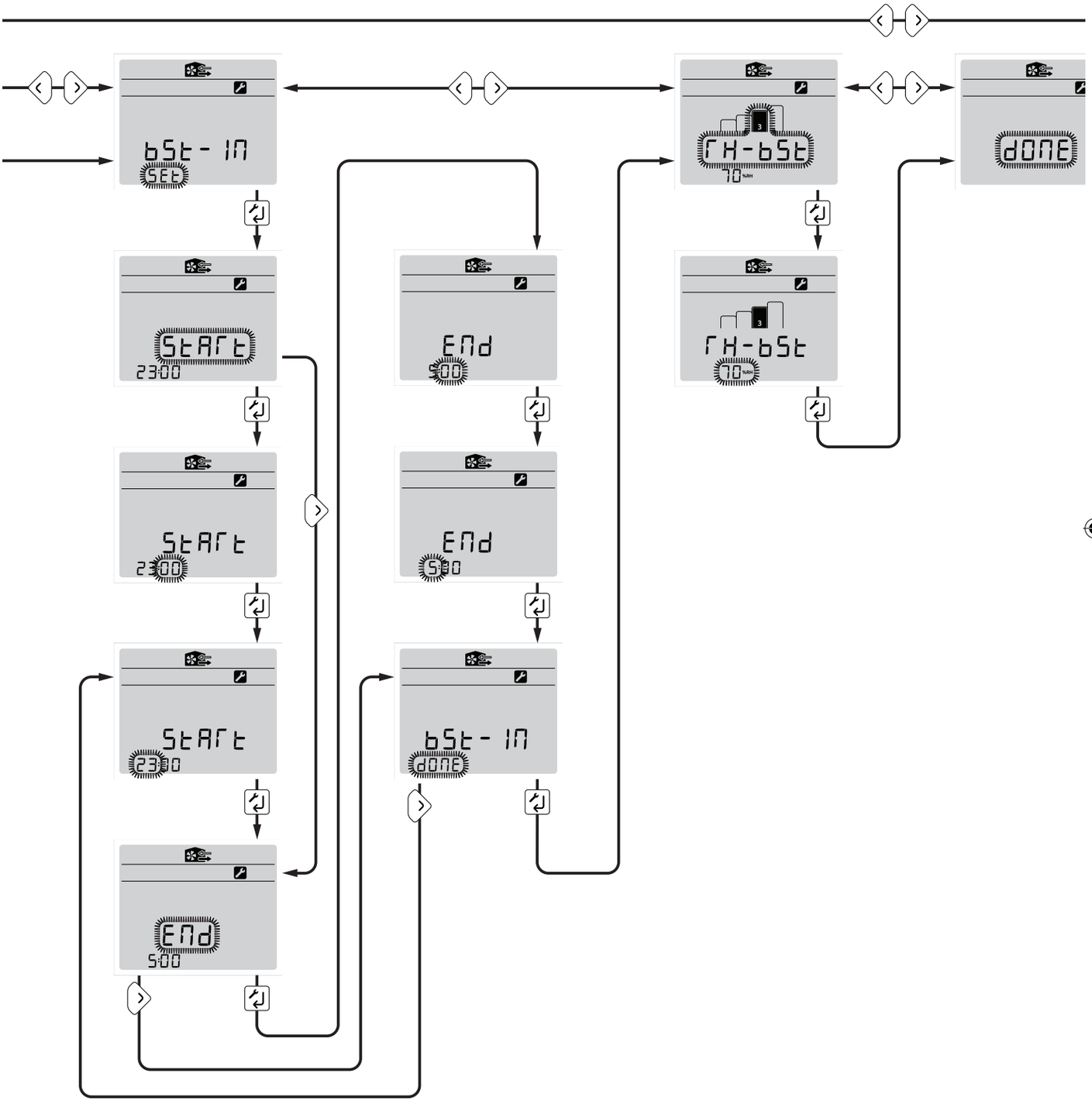
Boost Inhibit
On/Off

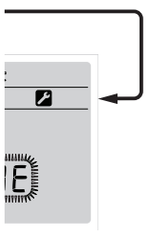


Setup Boost
Inhibit Times

Setup
Internal
Humidity Boost
Partial

Done





SETUP key — Enter menu item
Enter parameter setting

ARROW keys — Previous / Next menu item

+/- keys — Increase / Decrease parameter

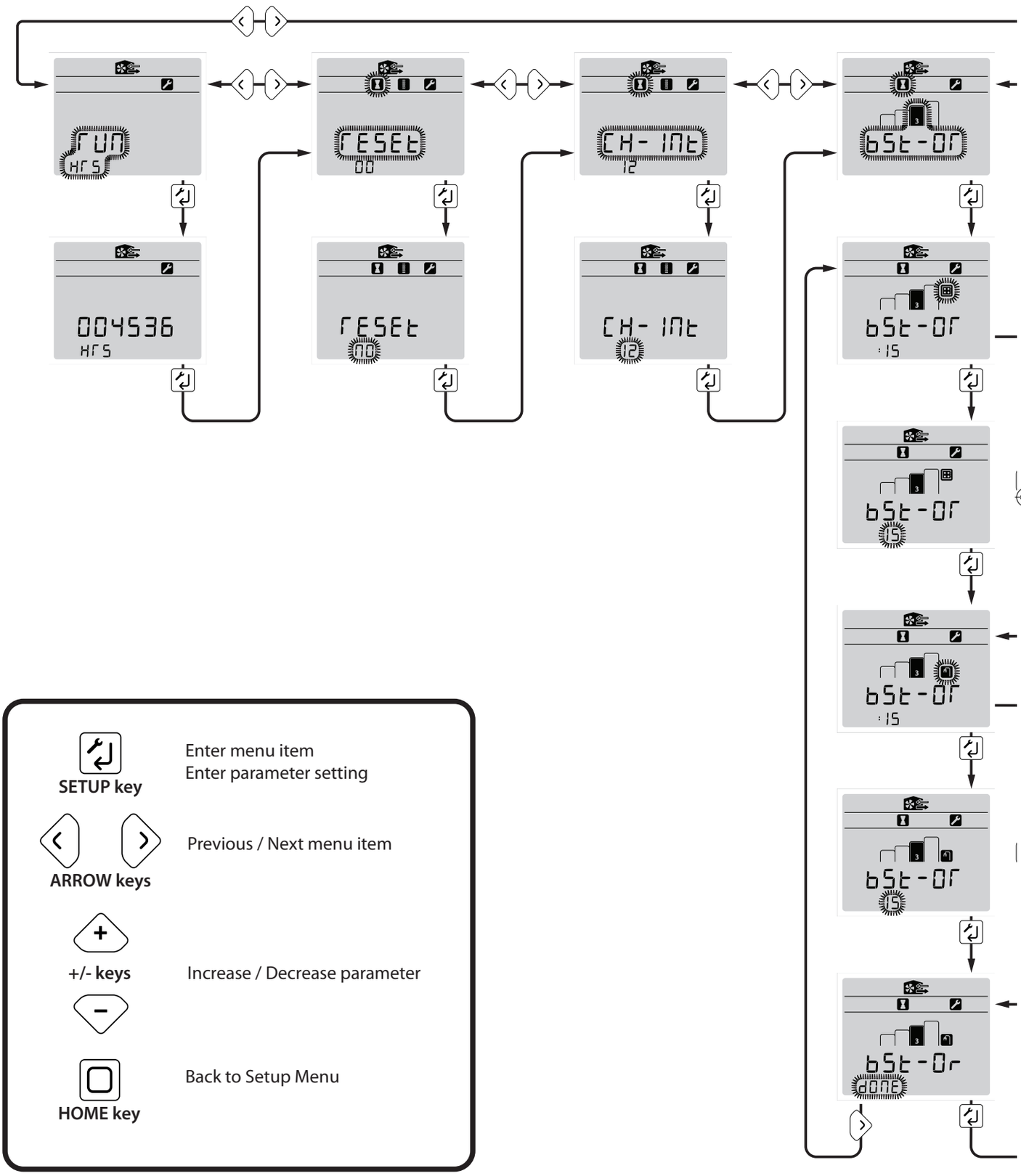
HOME key — Back to Setup Menu

Run Timer

Filter Change
Reset

Setup
Filter Change
Interval

Setup
Boost Overrun
Timer



SETUP key — Enter menu item
Enter parameter setting

ARROW keys — Previous / Next menu item

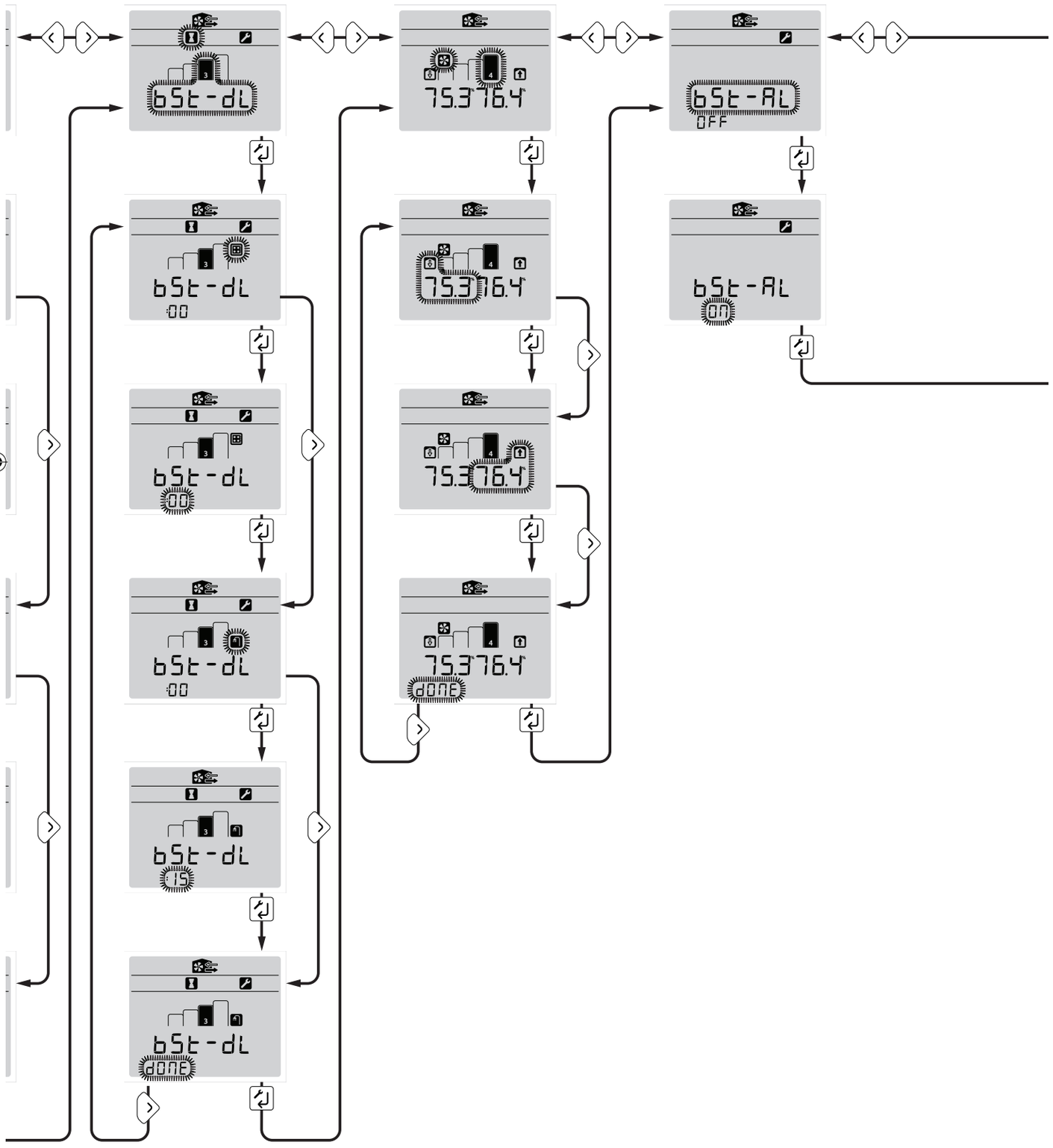
+/- keys — Increase / Decrease parameter

HOME key — Back to Setup Menu

Setup
Boost Delay
Timer

Setup
Speed 4
SUMMERBoost®

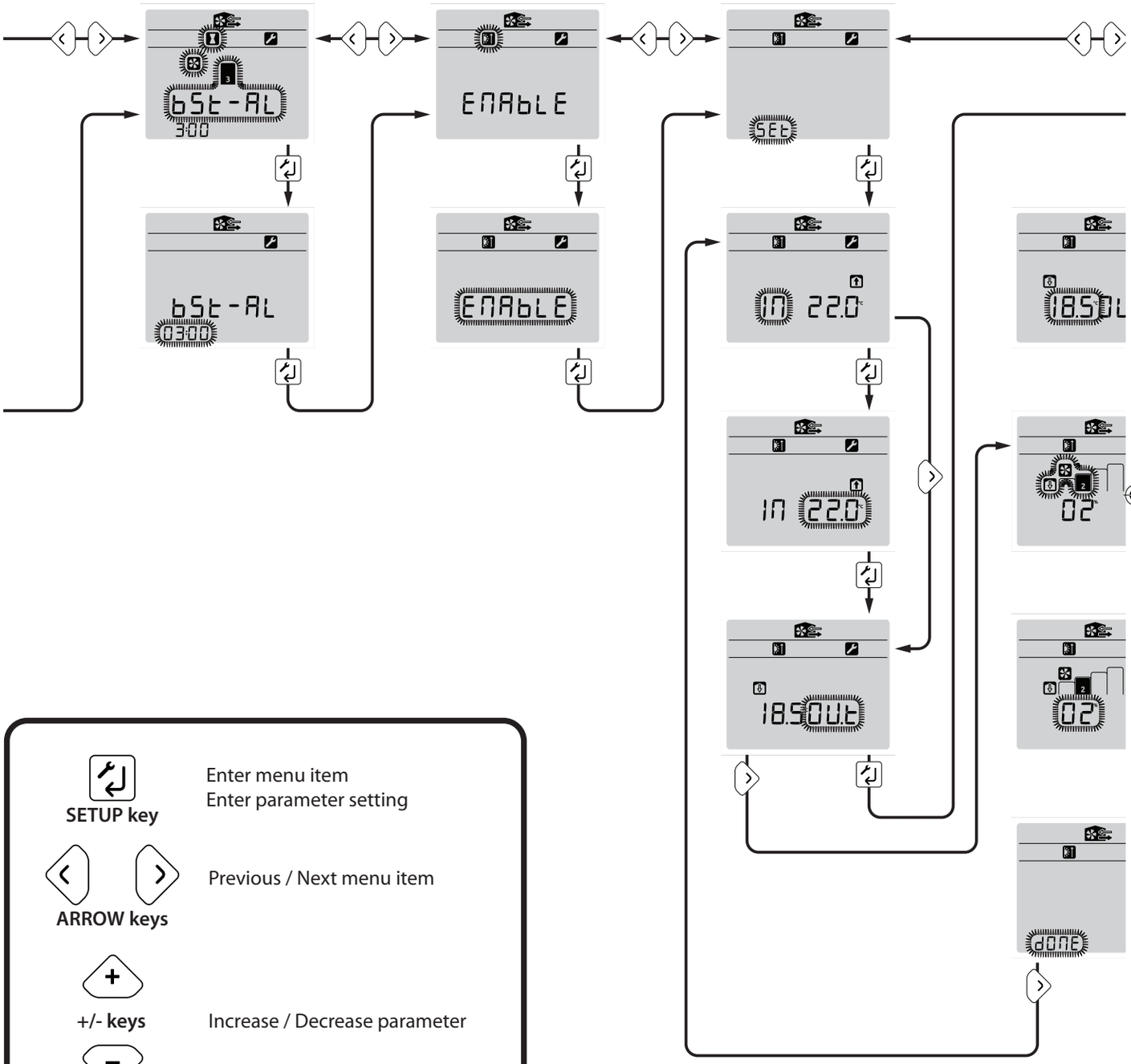
Boost
Alert On/Off



Setup
Boost Alert
Timer

Summer
Mode
Enable/
Disable

Setup
Summer Mode



SETUP key — Enter menu item / Enter parameter setting

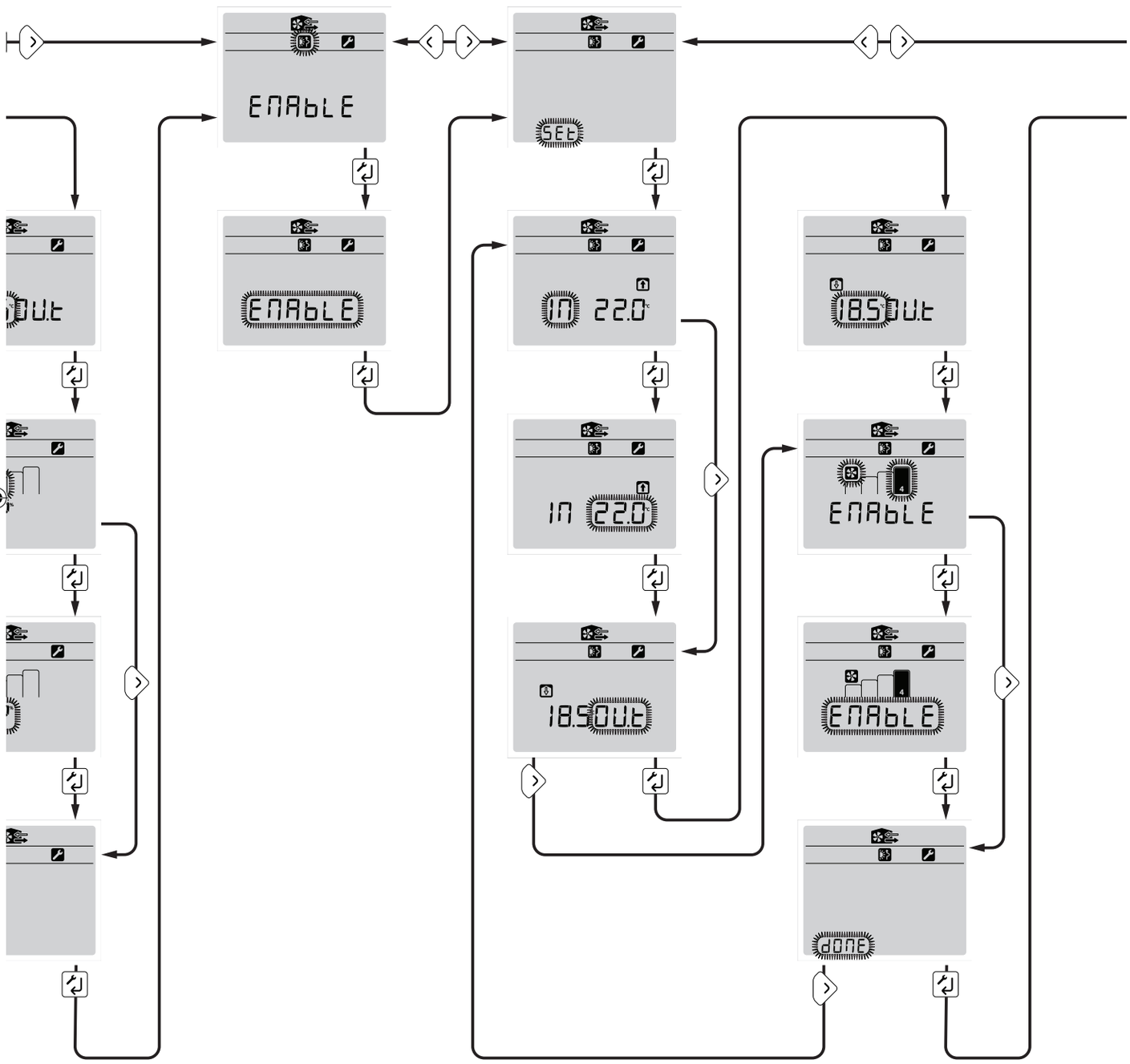
ARROW keys — Previous / Next menu item

+/- keys — Increase / Decrease parameter

HOME key — Back to Setup Menu

Summer By-Pass
Enable/Disable

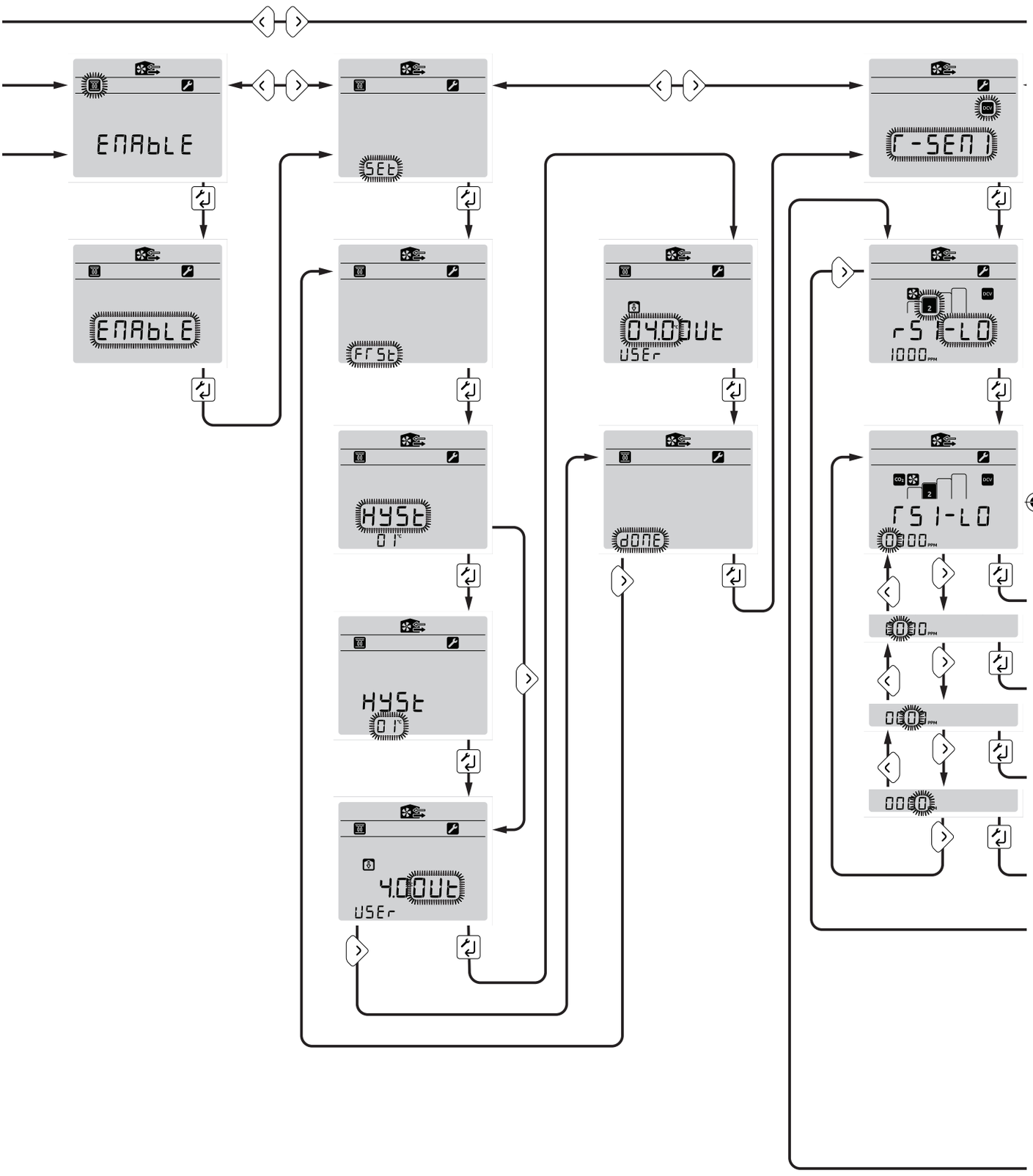
Setup
Summer By-Pass



Duct Heater
Enable/Disable

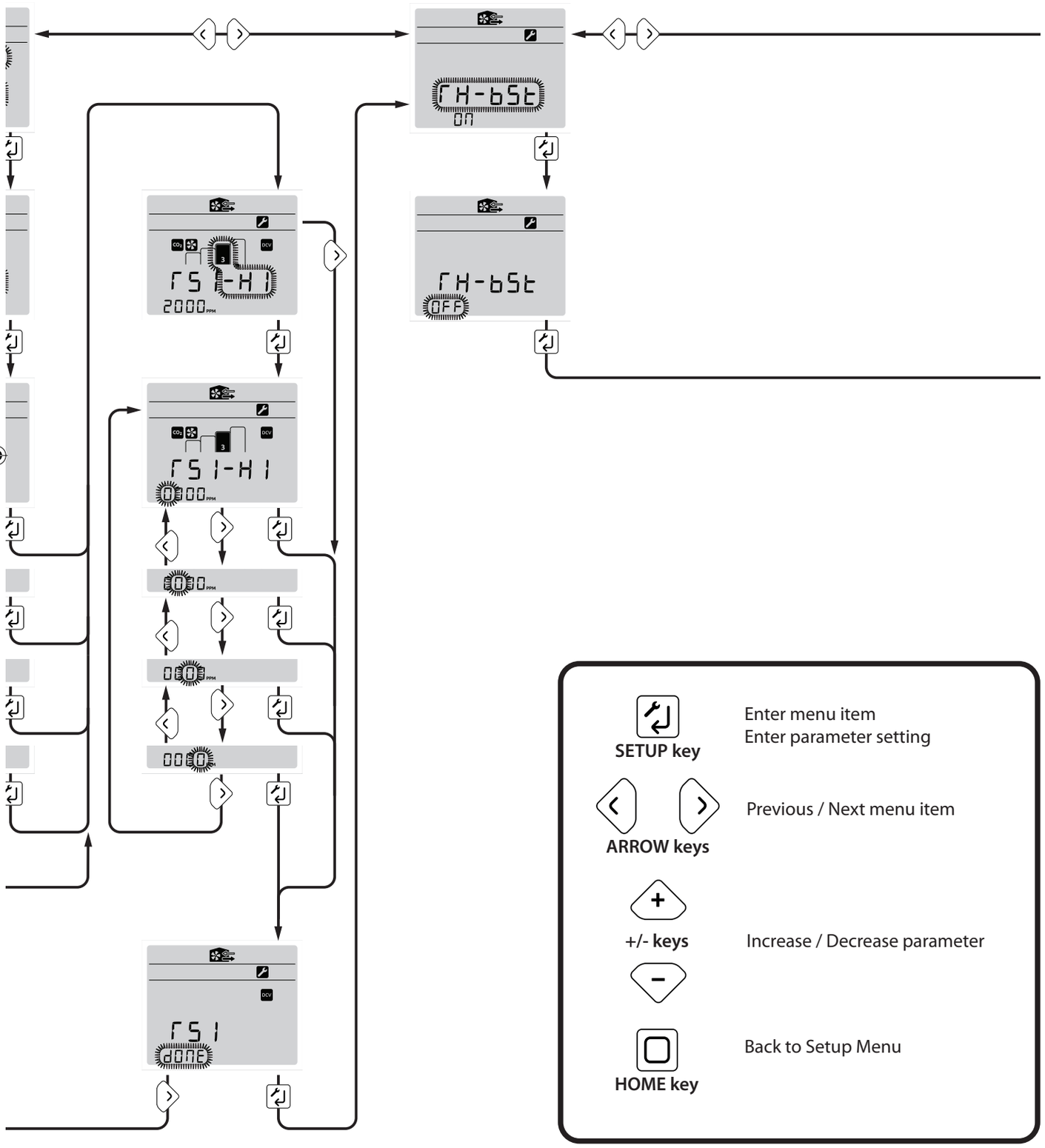
Setup
Duct
Heater

Setup
Room Sensor 1
repeat for
Room Sensor 2



1 NOTE:
Room Sensor settings are only available in this menu when enabled in SETUP3.

2 Internal Humidity Boost On/Off

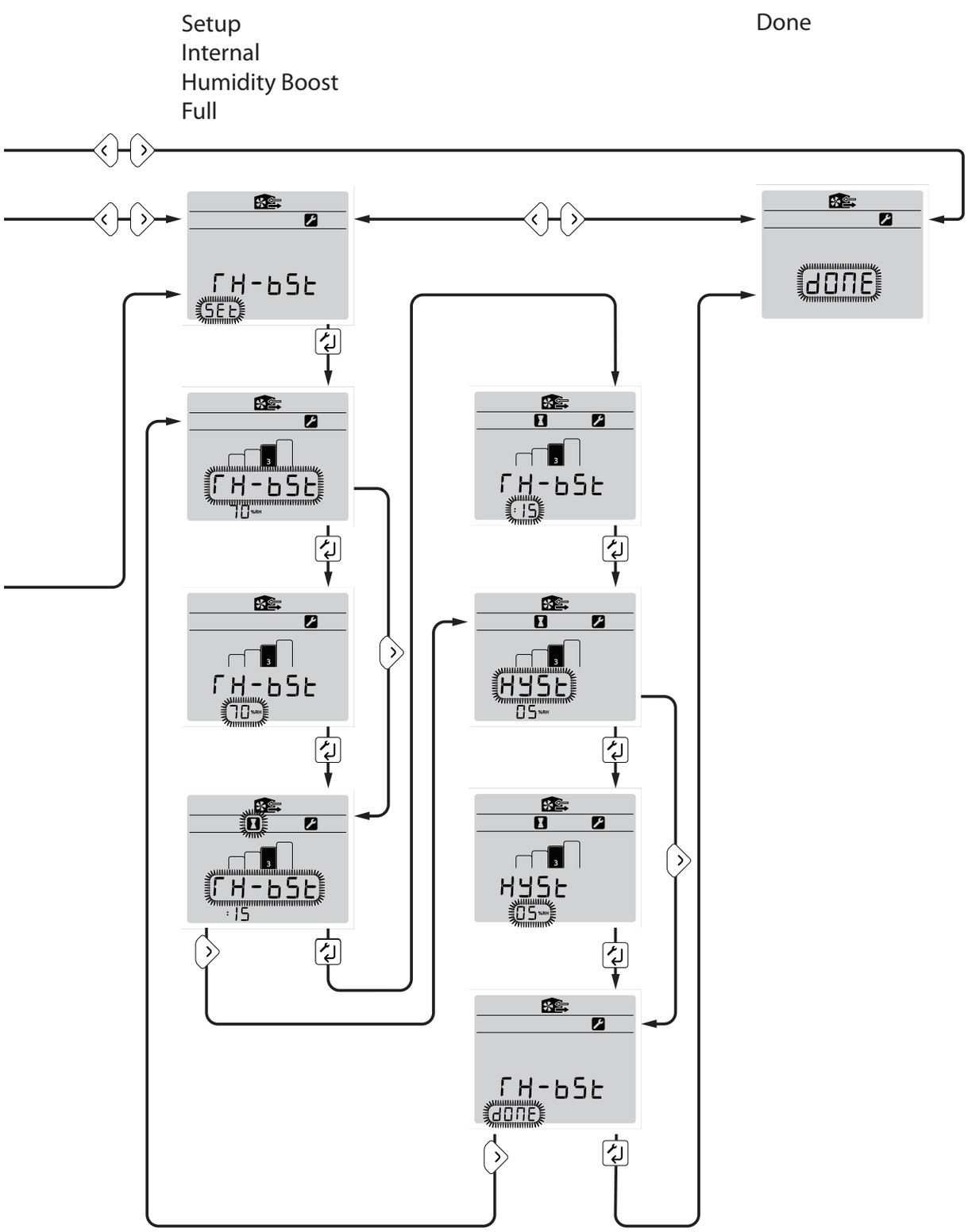


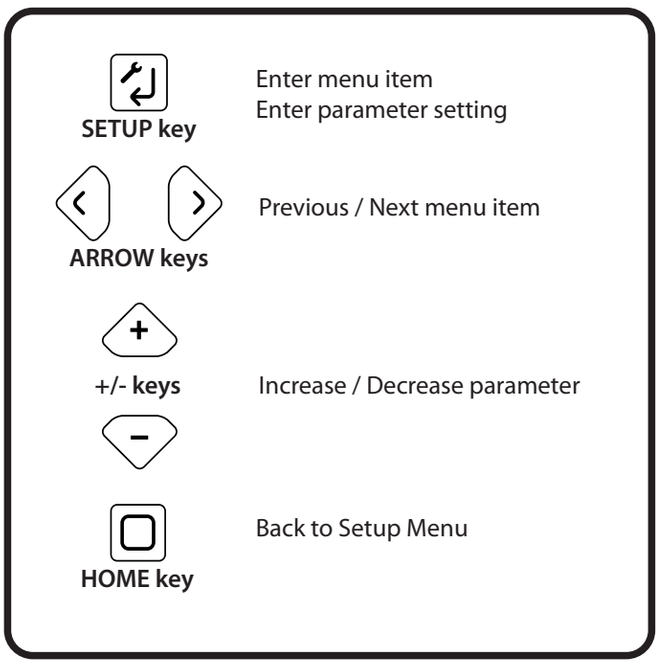
SETUP key — Enter menu item / Enter parameter setting

ARROW keys — Previous / Next menu item

+/- keys — Increase / Decrease parameter

HOME key — Back to Setup Menu


Setup
Internal
Humidity Boost
Full
Done
rH-bSt
SEt
dONE
rH-bSt
70
rH-bSt
:15
rH-bSt
00
HYSt
05
rH-bSt
:15
HYSt
05
rH-bSt
dONE


SETUP key
Enter menu item
Enter parameter setting
ARROW keys
Previous / Next menu item
+/- keys
Increase / Decrease parameter
HOME key
Back to Setup Menu

SETUP3 1 of 2

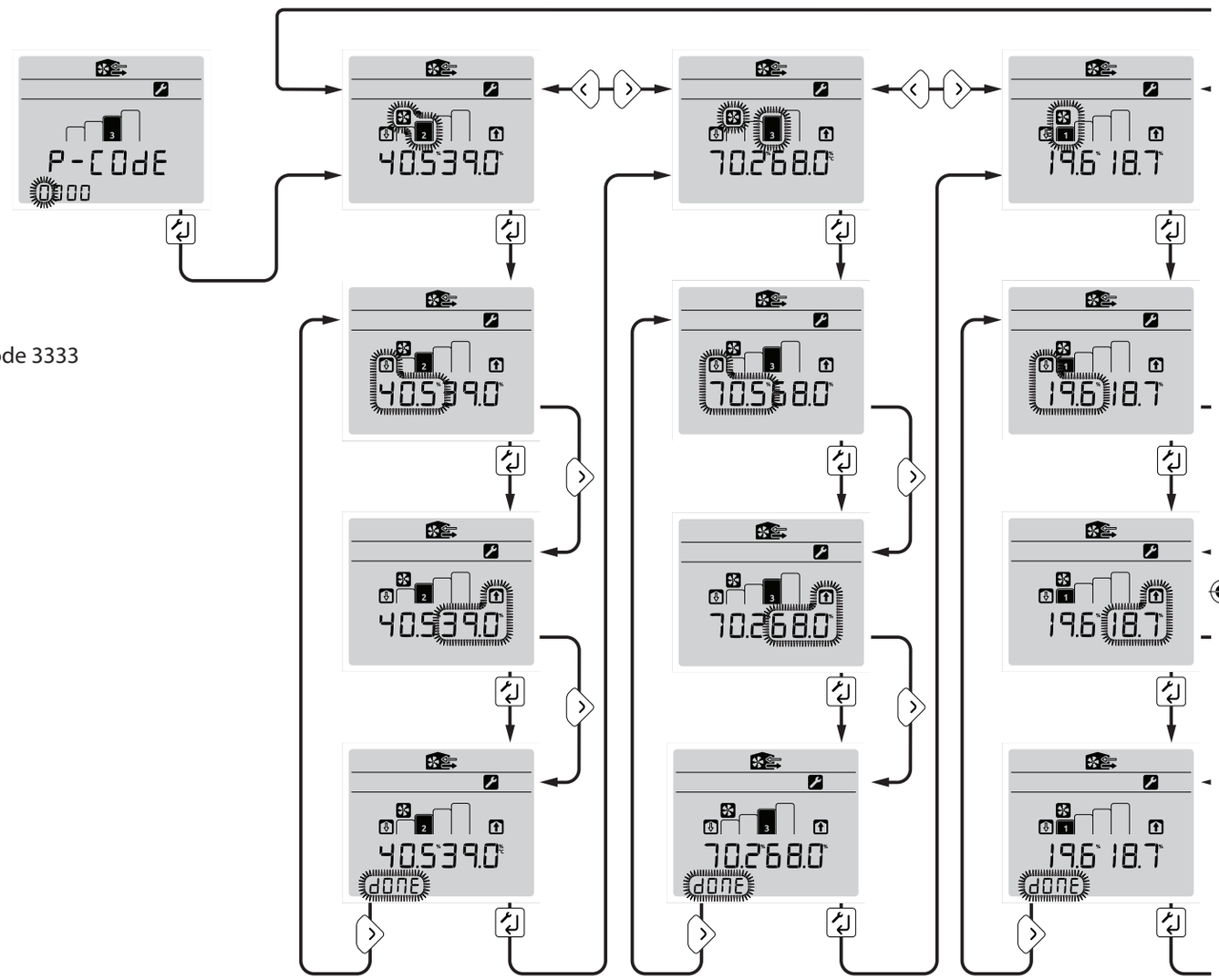
Passcode

Setup Continous
SPEED2

Setup Boost
SPEED3

Setup Setback
SPEED1

Passcode 3333



SETUP key
Enter menu item
Enter parameter setting

ARROW keys
Previous / Next menu item

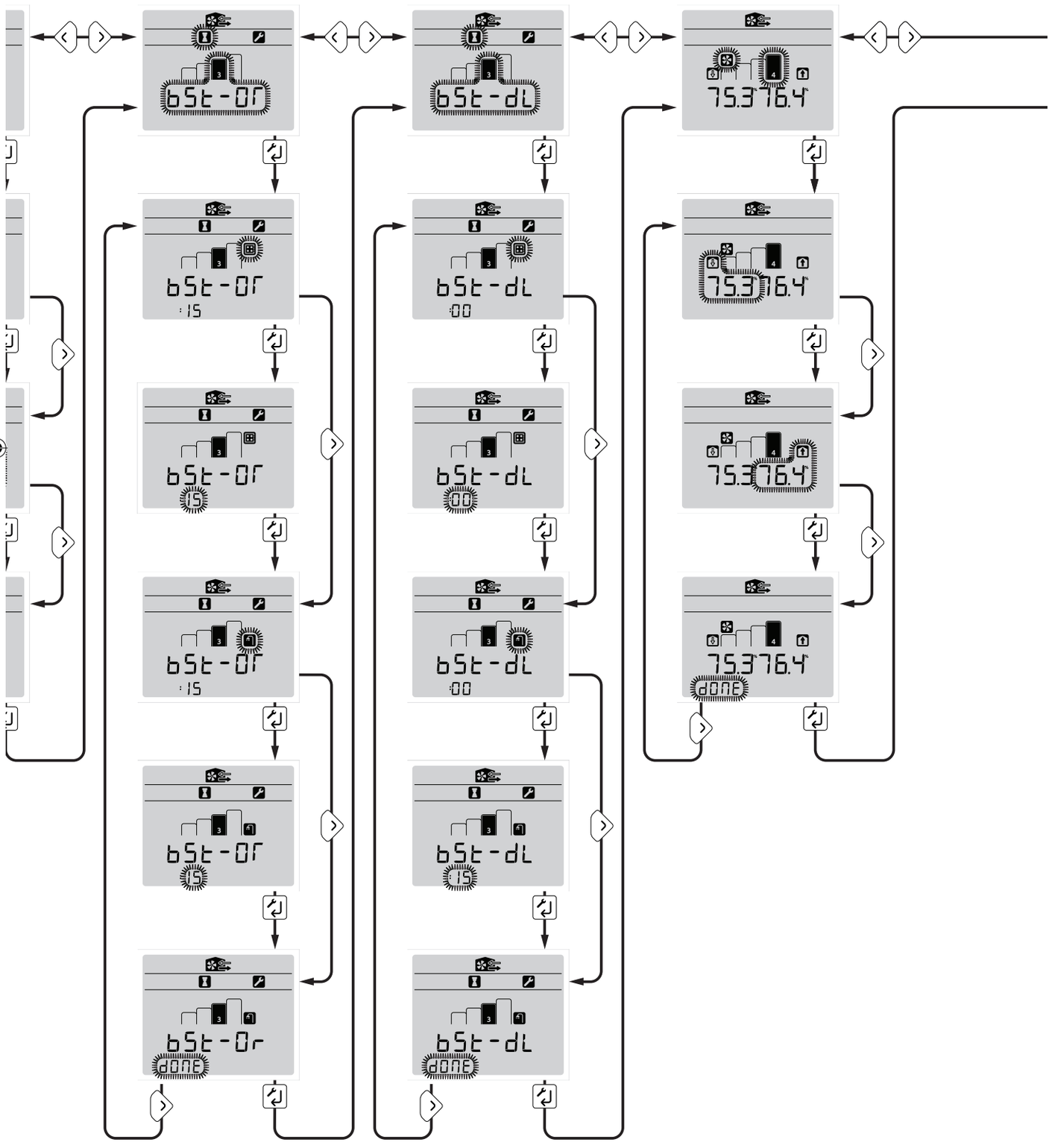
+/- keys
Increase / Decrease parameter

HOME key
Back to Setup Menu

Setup
Boost Overrun
Timer

Setup
Boost Delay
Timer

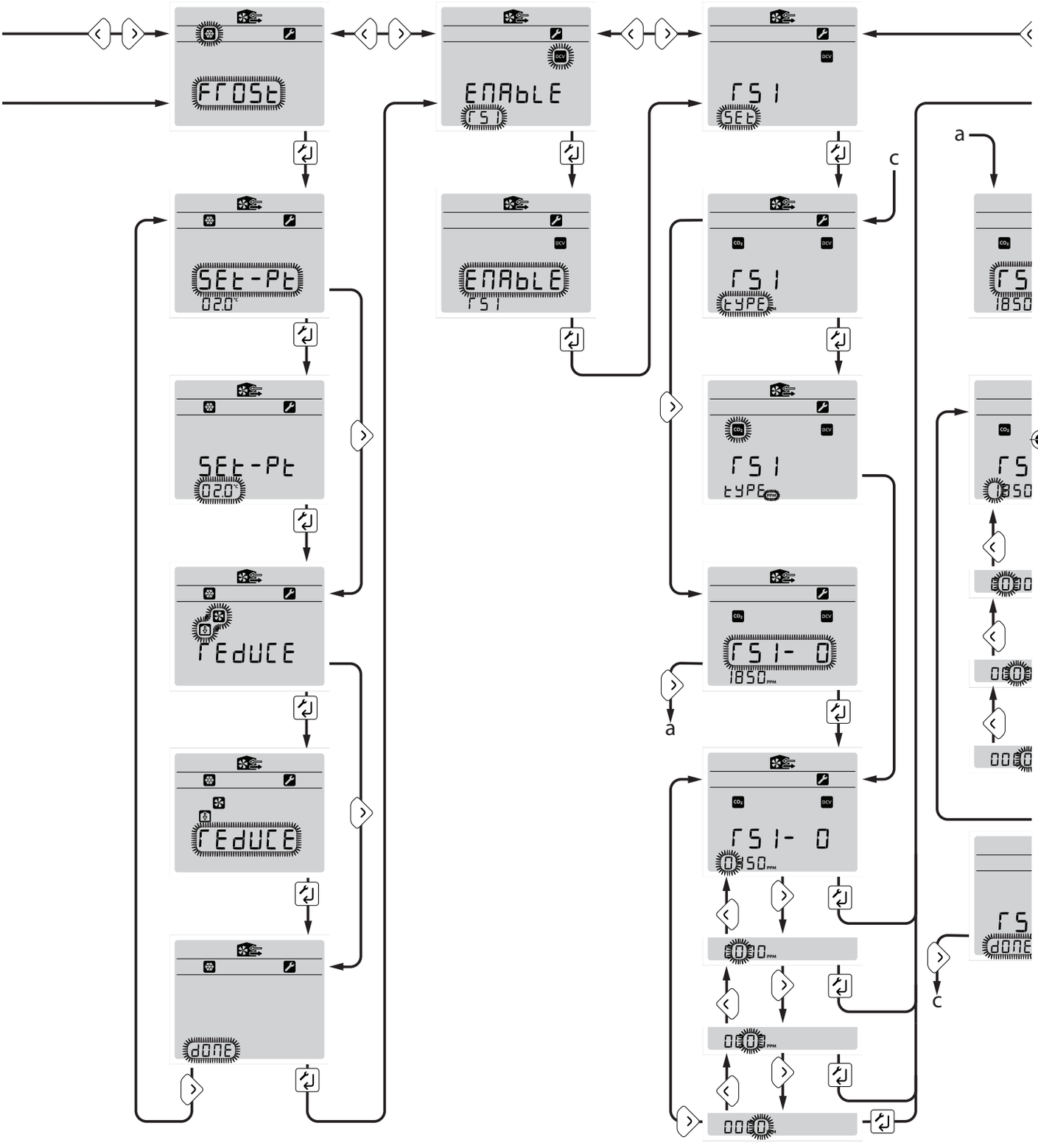
Setup
SUMMERBoost®
SPEED4



Setup
Frost Protection

Room Sensor 1
Enable/Disable
repeat for Room
Sensor 2

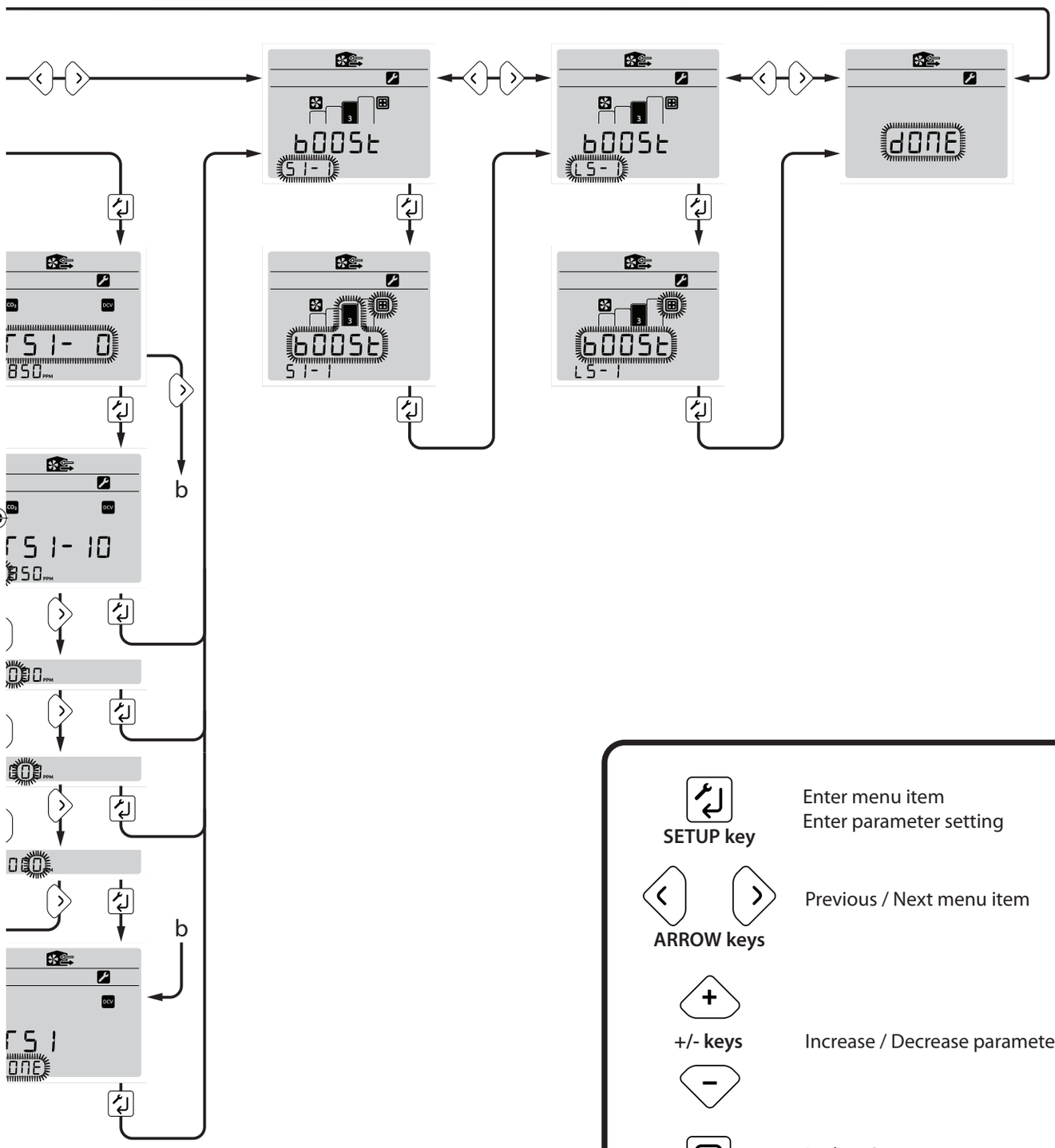
Setup
Room Sensor 1
repeat for Room
Sensor 2



Setup
Switch Input 1
repeat for
Switch Input 2 & 3

Setup
Live Switch 1
repeat for
Live Switch 2

Done



SETUP key — Enter menu item / Enter parameter setting

ARROW keys — Previous / Next menu item

+/- keys — Increase / Decrease parameter

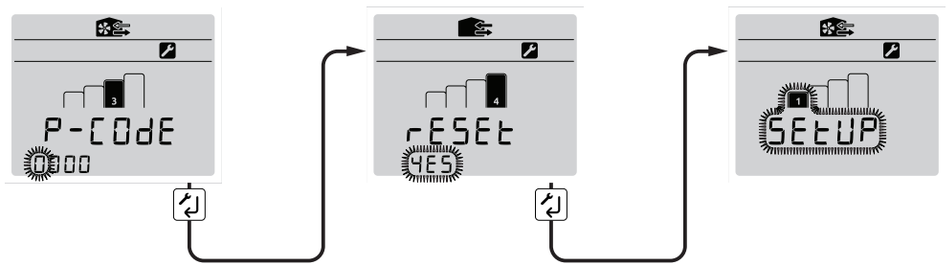
HOME key — Back to Setup Menu

RESET4 1 of 1

Passcode

Reset

Returned to SETUP1



Passcode 6840

Selecting Yes returns ALL configuable values, except commissioned fan speeds to the default values and returns to SETUP1 menu.

SETUP key — Enter menu item
Enter parameter setting

ARROW keys — Previous / Next menu item

+/- keys — Increase / Decrease parameter

HOME key — Back to Setup Menu

The aurastat® V is maintenance free.

Cleaning Exterior

For best results use a clean damp cloth. Do not use abrasive cleaners, solvents or any other fluids.

Error Codes

Find below the error codes that the aurastat may display.

- 6 RS485 Timeout
- 7 RS485 Invalid response
- 8 RS485 Invalid address
- 9 RS485 Invalid data
- 10 RS485 Invalid operation
- 11 RS485 Not ready
- 12 RS485 Error response

RS485 is the standard communication protocol that is used between the aurastat and the HRV unit. The above 7 error codes indicate a comms error between the aurastat and the HRV unit, check the wiring and connections.

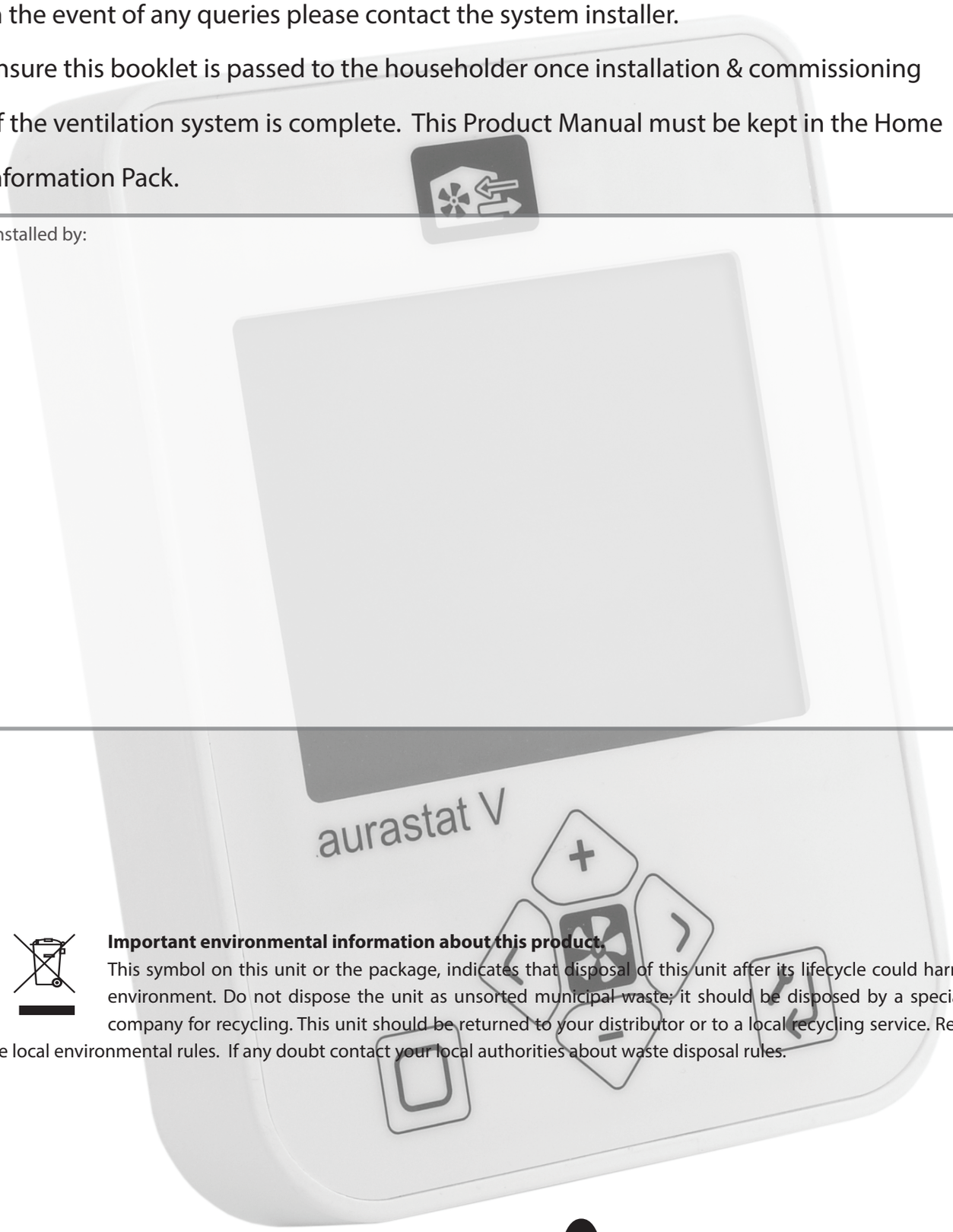
- 13 Thermistor 1 error — Problem with thermistor in Extract from dwelling airstream.
- 14 Thermistor 2 error — Problem with thermistor in To Atmosphere airstream.
- 15 Thermistor 3 error — Problem with thermistor in From Atmosphere airstream.
- 17 Fan1 error — The software has not received a signal from the Supply to Dwelling fan.
- 18 Fan2 error — The software has not received a signal from the Extract from Dwelling fan.

In the event of any queries please contact the system installer.

In the event of any queries please contact the system installer.

Ensure this booklet is passed to the householder once installation & commissioning of the ventilation system is complete. This Product Manual must be kept in the Home Information Pack.

Installed by:



Important environmental information about this product.

This symbol on this unit or the package, indicates that disposal of this unit after its lifecycle could harm the environment. Do not dispose the unit as unsorted municipal waste; it should be disposed by a specialized company for recycling. This unit should be returned to your distributor or to a local recycling service. Respect the local environmental rules. If any doubt contact your local authorities about waste disposal rules.

Titon®

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