aurastat® Features (including parameters and default settings)

24 hour clock with battery back up, defaults to 00:00.

Day of week display shown as numbers 1-7, defaults to 1.

Backlight brightness defaults to '25%'. Can be adjusted to 25%, 50%, 75%, 100% or switched off.

Boost overrun timer – a programmable timer set to 15 minutes as default, controls how long (between 0-60 minutes) the HRV remains in boost speed after all boost switches have been released.

- Two independent timers, one for the kitchen one for wet rooms.
- Timers must be set greater than 0 for any momentary switch or the aurastat® fan button to trigger boost.
- The aurastat® 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 – a programmable timer set to 0 minutes as default, used to delay (between 0-60 minutes) the HRV running at boost speed after a boost switch has been activated.

- If boost delay timer is greater than 0, momentary switches or the aurastat® fan button will not switch the HRV into Boost SPEED 3.
- When using latching switches, if the boost switch is turned off before the boost delay timer has elapsed the HRV will not boost.

Boost inhibit, off as default, can be turned on to enable a programmed time period that prevents the HRV switching into boost speed or SUMMERboost®. When on it defaults to start at 23:00 and end at 05:00, these can be set between 00:00 and 23:59. Fan speed controlled by proportional inputs are not affected by boost inhibit.

Internal humidity sensor – the HRV has an integral relative humidity (RH) sensor, the RH can be displayed on screen and programmed to switch the HRV into boost speed. 70% RH default, can be set between 30% and 89% RH.

Filter change alert set to notify every 12 months, can be set between 3 and 24 months.

4 x fan speeds - The HRV has four 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 (default – 18%)
2. Continuous speed - normal ventilation (default – 40%)
3. Boost speed - increased ventilation (default – 70%)
4. SUMMERboost® speed - very high ventilation, only available during Summer Bypass operation (default - 100%).

Fan speed display shown using the 1-4 stepped icons.

Boost alert - A programmable timer which displays a warning message after the HRV has been left in boost speed for 2 hours. Can be changed to alert between 1 and 10 hours or switched off.

Summer Mode is enabled as default (where a bypass is not fitted), but can be switched off. It 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.

- Extract from dwelling is set to 22°C; can be set between 17°C and 35°C.
- Supply to dwelling is set to 18°C; can be set between 15°C and 20°C.
- Supply fan speed is set to 0%; can be set between 0% and 100%.
- 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. Continous SPEED 2 x Summer Mode fan speed = actual fan speed. 50% x 50% = 25%, 50% x 36% = 14%.
- If the actual fan speed is between 1% and 14% the fan may not run and an error will be shown.

Summer Bypass is enabled as default (where a bypass is fitted), but can be switched off. 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. Stale air being extracted from the dwelling is diverted around the heat cell so its heat energy is not transferred to the fresh air supplied to the dwelling.

- Extract from dwelling is set to 25°C; can be set between 17°C and 35°C.
- Supply to dwelling is set to 18°C; can be set between 15°C and 20°C.

SUMMERboost® allows both the supply and extract fans to run at full speed whenever Summer Bypass is activated. Default 100%, fan speed can be set between 14% and 100%. By default SUMMERboost® is enabled. When SUMMERboost® is triggered by Summer Bypass the increased fan speed can be prevented either manually or automatically. Manually; via a volt-free switch wired directly into the controller PCB. Automatically; via 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, SUMMERboost® will not operate.

Duct heater control can be turned on to maintain ventilation flow rates where prolonged periods of very low temperatures occur to control an electrically powered duct heater, MAX 1000W. The duct heater is placed in-line between the outside supply vent and the 'From Atmosphere' terminal on the HRV. The heater is used to pre-warm the outside fresh air supply before it enters the HRV.

- Select the sensor that controls the duct heater activity. Set to FRST as default, it can also be switched to USER.
- 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.
- Hysteresis value used during rising temperature scenarios to prevent rapid switching of the duct heater. Defaults to 1°C can be set between 1°C and 10°C.
- Duct heater threshold is set to 4°C, can be set between -4°C and 16°C.

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).

2 x proportional sensor inputs enables connection of environmental sensors to the HRV used to proportionally control HRV fan speeds. There are four sensor options ºC, CO_2, Air Quality (PPM) and % Relative Humidity.

Default Values:

Sensor Type	Min 0v	Set Point Low	Set Point High	Max 10v
ºC	0000	0017	0027	0040
CO_2 PPM	0450	0800	1400	1850
AQ PPM	0450	0800	1400	1850
%RH	0020	0060	0070	0090

Default Settings:
Room Sensor 1 is set to %RH - disabled
Room Sensor 2 is set to CO2 PPM - disabled

3 x volt free inputs enables the connection of single pole momentary switches, latching switches or normally open relay contacts to the HRV. Used to switch between fan speeds or control SUMMERboost® and Summer Mode.
Defaults:
Switch input 1 – Kitchen boost
Switch input 2 – Wet room boost
Switch Input 3 – SUMMERboost®

2 x live switch inputs used to switch the HRV to boost speed via a switched live input.
Live switch 1 – Kitchen boost
Live switch 2 – Wet room boost

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.
Frost set point – range -2 ºC to 11.5 ºC (default 2 ºC).
Frost protection mode – off (switch supply fan off) or reduce (reduce supply fan speed relative to temperature) (default off).

HRV run timer - displays the total run time of the unit in hours.

Holiday mode sets the HRV to speed 1 Setback Speed, boost inhibit is enabled.

Multiple internal temperature sensors display the 'From Atmosphere' and 'To Atmosphere' air temperatures in real time. The temperature of the heat cell is monitored.