

# All Around Heating Products Ltd

To set up control 'BMS open loop' or 'closed loop BMS'

To do this

1. Press and hold '+' then press and hold '-'.
2. After 5 seconds the display changes to show the fan option; release '+' and '-':
  - a. F1: Fan on with the heater, or
  - b. F2: Fan on with the run signal. (default)
3. You can change the fan option using '+' and '-'
4. If no buttons are pressed for 10 seconds the display changes to show the control mode:
  - a. c1: local operation, (default)
  - b. c2: BMS closed loop, or
  - c. c3: BMS open loop.
5. You can change the control mode using '+' and '-'
6. If no buttons are pressed for 10 seconds the display changes. The next screen depends on the control mode:
  - a. In mode c2:
    - i. The display now shows the BMS maximum set-point (i.e. the temperature set-point when the BMS input is 10v)
    - ii. You can change the BMS maximum set-point using '+' and '-'
    - iii. If no buttons are pressed for 10 seconds the display goes back to normal.
  - b. In modes c1 and c2 the display goes straight back to normal.

Here is a summary of the three control modes:

Mode	Title	Temperature Set-point	AAHP output power	Display shows
c1	Local Operation	Set on the AAHP controller using the display and buttons.	Calculated by the AAHP controller from the set-point and duct/room temperatures.	Set-point (as selected using '+' and '-')
c2	BMS Closed Loop	Specified by the BMS using the 0-10v input. 0v means a set-point of 0°C 10v means a set-point of 'BMS maximum' (see step 6.a above).	Calculated by the AAHP controller from the set-point and duct/room temperatures.	Set-point (derived from the 0-10v input and 'BMS maximum')
c3	BMS Open Loop	Not applicable.	Specified by the BMS 0-10v input. 0v means 0% output power 10v means 100% output power	Heater power (derived from the 0-10v input)

If the customer requested 'Open loop BMS' the heater batteries will not come with duct sensors.