



## All Around Heating Products Ltd.

Unit A60A, Sanderson Centre, Lees Lane,

Gosport, Hampshire, PO12 3UL.

Email: [info@aahproducts.com](mailto:info@aahproducts.com) Tel: 0844 8008857

Mobile: 07920 874393

Fax 02392 501978

# INSTALLATION AND TROUBLESHOOTING

## **INSTALLATION**

Once you receive your AAH heater please check inside box for any extras you may have purchased. The airflow switch hose kit will always come as standard with controls.

Ensure that heaters are installed into the duct so that the terminal box can be easily accessed and the digital display can be readily seen. Do not fit the heater so that the terminal box is facing downwards.

All heaters must be wired according to current IEE regulations and carried out by a competent person.

AAH may upsize cable for production purposes.

The controller has two options on the fan terminal Fan 1/2: Constant run and temperature controlled. By pressing the UP button, then the DOWN button for 5 seconds you can switch between the two by pressing up or down again F1 or F2 will appear on the LED display. If you are using for temperature controlled then F1, if for ventilation F2. Both will have fan run on. Once you have set it, restart system.

AAH labels all units and recommends the customer takes note of the recommended airflow direction, as this should pass over the elements then over the manual overheat cut out. (OHC5). Also on the label is the power rating, wired for either 1 or 3 phase supply and how many element steps.

The AAH 3 phase controller will require a neutral supply even though the elements will have a star point.

All AAH units with controls will come with terminals for customer to wire to.

Our 3 phase duct heaters without controls will be star point and no neutral connection is needed. Customers may only connect a neutral to the bus bar for test purposes. AAH can supply a neutral connection for this purpose if the customer so wishes. Over heat cut-out is 16amps 400v 125°C Max

If the customer needs to drill a hole in the unit they should remove controller to be able to see and to avoid cutting through wiring.

As the nature of the controller is not waterproof they must not be installed where it will get wet or be splashed by water.

The airflow pressure switch (604X) will perform better when fitted vertically, if the customer needs to fit the heater in a horizontal position it is advisable to refit the switch on the wider side plate of heater avoiding any internal wiring when screwing the switch into place.

The airflow hose kit which comes with the AAH unit this will need one hose to be put on the + side of the airflow switch, if pushing air, then run up stream of the heater. Fit the hose to the - side of the airflow switch if pulling the air over the heater. You can fit to + and - side of the fan on low air flow situations Try to avoid placing the plastic hose too close to heater, but as it is up stream this is not usually a problem.

## **TROUBLESHOOTING**

In the event of controller not working, check power is on from the local isolator.

The controller comes with a link wire in the run terminals this must stay unless the customer wants to use an on/off switch or time clock from here. See our website for the many different ways the controller can be used.

Note: Unless isolated, the unit will remain LIVE even when using an on/off switch, this will be indicated by the green LED flashing to show mains power is on but the unit is not running.

Once the unit starts to run by timeclock, switch or if the link is left in, the Green LED will stay on continually.

The Red LED will light in the event of an error and the error code will be displayed on the digital display. A flashing Red LED indicates that the fan 'run on' timer is operating.

The customer should always allow the fan to 'run on' to dissipate the radiant heat before turning off at isolator.

The controller can display the following error codes. Once an error has occurred the system will need to be turned OFF then ON again at the main isolator. Only E4 will not need resetting. If airflow restarts the heater will come back ON. We highly recommend fan run on (high power heaters), then no E4 error will appear.

- E1... Heater 1 failed (AAH/2 and AAH/4 models only)
- E2... Heater 2 failed (AAH/4 has two stages but only requires one customer supply)
- E3... Over heat trip (OHC5)
- E4... Airflow fault (604X) See website under wiring and spec for low flow sensor AFSFRBMS
- E5... Duct sensor fault (DS1)

The AAH Heater with controller is supplied pre-wired and set, if for any reason the unit has been wired different from how AAH supplied the unit, an error code may appear if it has been wired incorrectly.

The AAH/6 controller is a 3 phase model and will not show error codes E1 or E2 as it controls a Solid State Relay and this cannot be monitored.

The duct sensor (DS1) will need to be installed between 1 and 2 meters down stream of heater, this will depend on the size and air volume. (The larger the heater the further you can move the sensor down stream). The installer will need to drill a 16mm hole to suit the IP66 grommet.

AAH controllers are programmed to raise the duct temperature up to 60 Degrees when used with room sensor and will then find the room temperature. In tests we found this will warm the room quicker to a comfortable temperature.

The Yellow LED will stay on while on full load and will start to pulse as the controller reaches the room temperature required.

The controller will go into standby if the room temperature rises by 3 degrees more than the desired set point, switching back on once the temperature falls.

Wiring for heaters without controls. All heaters come c/w earth connection and overheat cut-out.

