

# SmartCom modifications for use with UPA, UDSA, UDSAV & UDSB-D E.M.C. burner lockout issues.



## INDEX

## Section

General information -----	1
Tools and parts requirement -----	2
Step by step instruction -----	3
Interconnecting wiring diagram -----	4

## Warnings

All external wiring MUST comply with the current IEE wiring regulations.

## General information.

Where Electromechanical Interference (E.M.C.) are present when either **UDSA; UDSAV; UDSB-D** or **UPA** heaters are being controlled via the SmartCom series controllers, the controller display may state a 'lockout' condition even though the heater is continuing to operate.

This condition is caused by electrical 'spiking' between control cables which causes a failure on the Brahma ignition board.

To rectify this, an additional two resistors (see fig 1 & 2) have been included on the pcb of the SmartCom to restrict this power fluctuation.

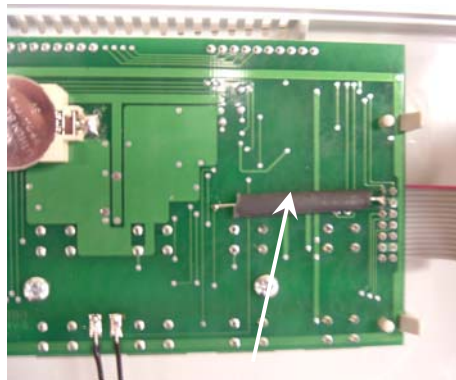


fig.1 – Additional resistor on SmartCom lid pcb

For all new and any existing installations where the heater types noted above are supplied and until further notice, **only SmartCom controllers with the suffix 'UH' or SmartCom controllers with serial number greater than 60225** are to be used.

Where a permanent lockout condition exists on current sites, both the Ignition control and SmartCom controller need to be replaced and the following instructions should be used.

This technical bulletin describes in detail the procedure required to complete this task.

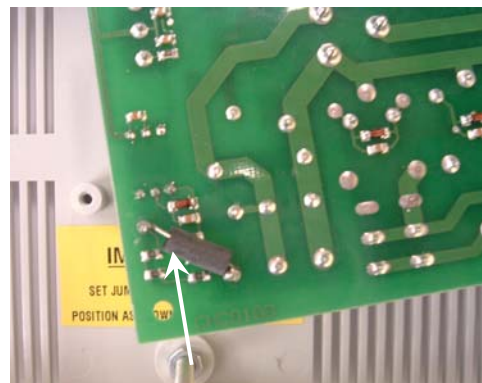


fig.2 – Additional resistor on SmartCom base pcb

## Tools required.

The following tools and equipment will be required to complete this task:

1. Ignition control pt no.UDSA0325322
2. SmartCom pt. no SC-STD-UH or ST-STD, ST-

3. ADV or SC-NET with serial number > 60225
4. Flat head screwdriver
5. Electrical screwdriver
6. Small pozi head screwdriver
7. Multi-meter.

## Step by step instructions.

**ISOLATE ALL ELECTRICAL SUPPLY TO THE HEATER AND SMARTCOM CONTROL PANEL BEFORE PROCEEDING.**

### **a. AT THE HEATER**

1. Open heater control section side panel by turning quarter turn screw anticlockwise. Allow door to hang.
2. For easier access to the control panel assembly containing the Brahma controller, the assembly is mounted on a removable bracket plate. This bracket plate can be moved by loosening a securing pin located at the back into the heater.
3. Remove the 'Molex push on' connections from the existing Brahma controller. Remove the Spark and rectification leads from the Brahma controller.
4. Using a small pozi head screwdriver, remove the

fixing screws holding the controller to the removable bracket plate.

5. Locate and position the new Brahma controller (fig.1) onto the removable bracket plate and fix using the screws from step 4.

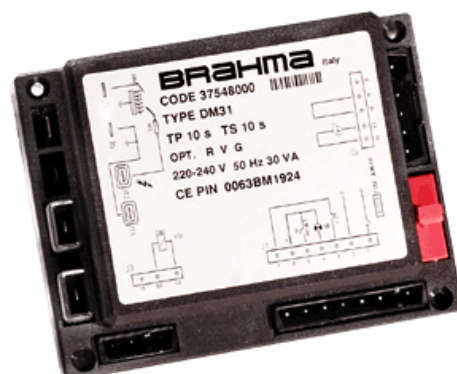


fig.3 – Brahma ignition board. Pt. no. UDSA0325322

6. Re-position the 'Molex push on' connectors to the Brahma controller ensuring correct positioning.
7. Re-position the Spark and rectification leads to the Brahma controller.
8. Relocate the removable bracket plate and re-tighten securing pin from step 2.
9. Re-position the control section side panel and close by turning quarter turn screw clockwise.

**! ENSURE ALL ELECTRICAL SUPPLY TO THE HEATER AND THE SMARTCOM CONTROL PANEL ARE ISOLATED BEFORE PROCEEDING.**

### **B. AT THE SMARTCOM CONTROLLER**

#### **Removal**

1. Using a small electrical screwdriver, carefully remove the 4 plastic fixing plugs. Retain for packaging.
2. Using a small pozi head screwdriver, remove the 4 retaining screws. Retain for packaging.
3. Carefully lift the lid and unplug the ribbon cable from the power PCB assembly in the base unit.
4. Using a small electrical screwdriver, unscrew all incoming cables from their terminals—noting their positions carefully.
5. Remove incoming conduit/cable/cable gland from base unit.
6. Remove wall screw fixings from base unit.
7. Reattach the ribbon cable from the lid to the base unit. Using a small pozi head screwdriver, re-fit the 4 fixing screws and then the 4 plastic plugs retained from steps 1 and 2.
8. **RETURN ORIGINAL SMARTCOM TO AMBIRAD FOR EVALUATION AND/OR RETURNS AUTHORIZATION.**

#### **Re-fitting**

9. Locate the new SmartCom UH controller. Remove all packaging.



*fig.4 – SmartCom SC-STD-UH.*

10. Using a small electrical screwdriver, carefully remove the 4 plastic fixing plugs. Retain for later.

11. Using a small pozi head screwdriver, remove the 4 retaining screws. Retain for later.
12. Carefully lift the lid and unplug the ribbon cable from the power PCB assembly in the base unit.
13. Remove base unit knock outs as required per original base.
14. Using the screw fixings removed from step 6, re-fit the new base unit to the wall.
15. Re-fit incoming conduit/cable/cable gland to base unit.
16. Using a small electrical screwdriver, re-fit incoming cables to their terminals as noted down in step 3 and as shown in interconnecting wiring diagram (fig.3)
17. Check wire tightness and continuity.
18. Carefully re-fit the lid by connecting the ribbon cable from the power PCB assembly in the base unit.
19. Using a small pozi head screwdriver, re-fit the 4 fixing screws retained from step 11.
20. Refit the four plastic fixing plugs retained from step 10.

### **C. GENERAL**

1. Turn the mains isolator back on.
2. Ensure controller is requesting heat and check heater operation.

# Interconnection wiring diagram & heater modifications.

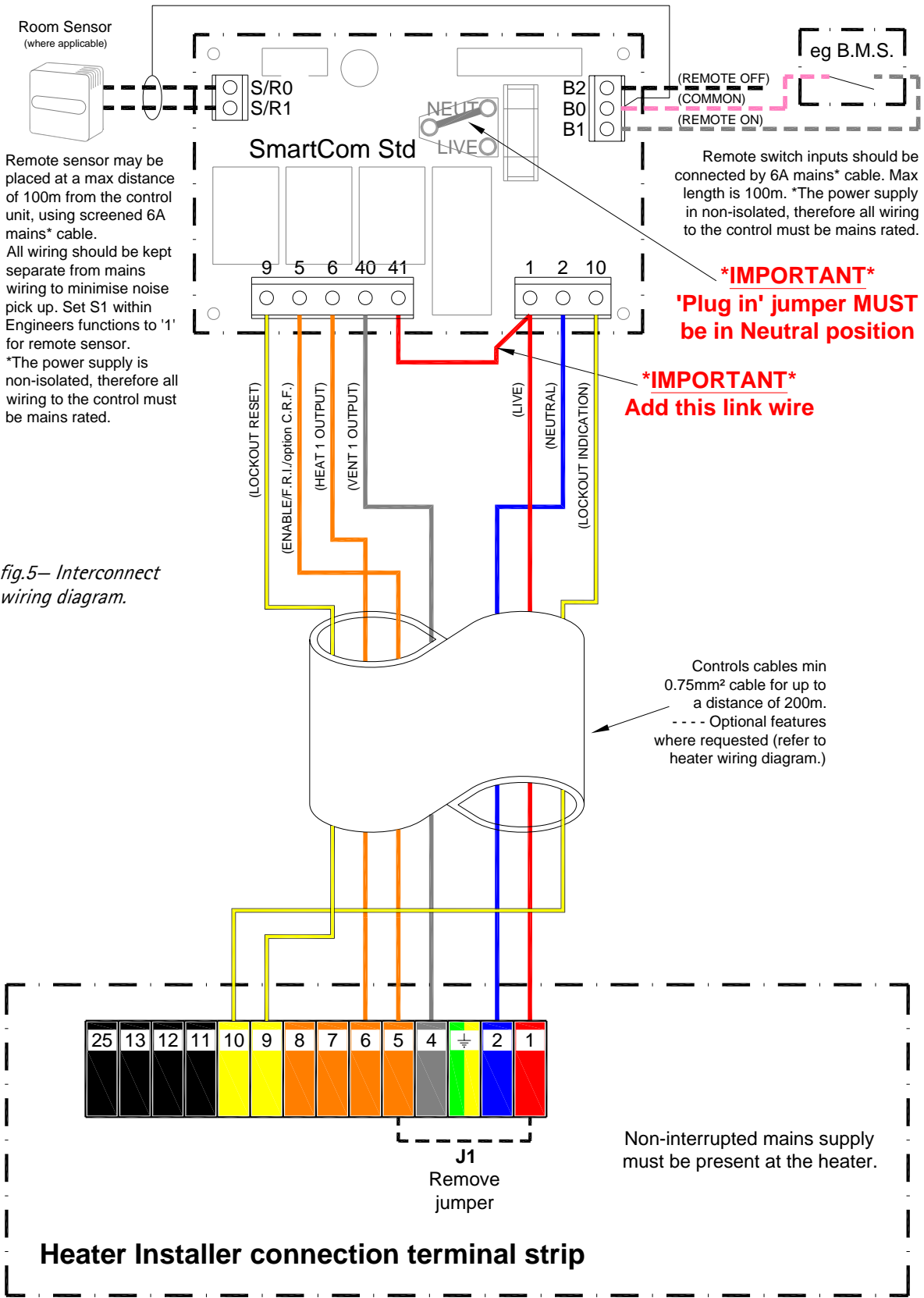


fig.5– Interconnect wiring diagram.



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