Instructions for IA ‘Oven Arm Assembly’ Replacement

The Oven Arm Assemblies for the IA9000 series instruments were updated in 2012, along with other IA model updates, to incorporate LED oven illumination and 4 wire PT100 sensors. These latest configuration Oven Arm Assemblies can however be fitted to all previous models. Instructions for fitting to the various models are set out below.

For easy identification purposes early model IA9000 instruments can easily be identified as they have the model type number (i.e. 9100, 9200 or 9300) shown on the BLUE KEYPAD.

Later models (2012 onwards) show the ELECTROTHERMAL brand name on the GREY KEYPAD (see pictures below).

For **early models**, fitting instructions are as follows:

1. Remove base (3 screw) and lower oven arm Adjustment Knob. See picture.
1. Disconnect PL12A sensor connector (brown wires).
3. Disconnect PL8 & PL9 (oven heater wires).
4. For IA9300, disconnect the remaining 4 way Molex adjacent to LS1.
5. Cut off old connectors from wires and pull old Oven Arm Assembly away from unit.
   Transfer the lens assembly from the old to the new Oven Arm Assembly.
6. Insert wires from new Oven Arm Assembly through side hole in main IA casing. First
   the PT100 sensor 4 wires with the 5 way Molex connector (then if an IA9300 the 4
   way Molex connector for the capillary tube red LED indicators) then the remaining
   wires.
7. Ease the wires around the corner of the PCBA (lift corner - loosen the PCBA
   retaining screws to assist if necessary and then retighten once all the wires are in the
   correct position). See picture.
8. Locate the “5 way to 2 way Molex converter” (supplied in the kit) and assemble to the
   5 way end to the sensor wire Molex. Then connect the 2 way Molex end to PL12A.
9. Assembly pink tab connectors (supplied in kit) to the remaining 4 stripped wires using
   suitable crimp tool.
11. Connect red illumination wires to PL10 (+) and PL11 (-). Polarity IS IMPORTANT.
    Positive (+) marked wire to be connected to PL10. For IA9300, then reconnect the
    remaining 4 way Molex to connector adjacent to LS1.
12. Reassemble Oven Arm with Adjustment knob. Carefully extend the inner arm to the
    fully out position to pull the wires back into the arm to the correct position.
13. Recalibrate unit as per Instruction Book (M6346).
For later models, fitting instructions are as follows:

Remove base (3 screw) and lower oven arm Adjustment Knob. See picture

1. Disconnect 5 way Molex from PT100 position.
2. Disconnect P1 & P2 (oven illumination).
3. Disconnect P3 & P4 (oven heater wires)
4. For IA9300, disconnect the remaining 4 way Molex from ‘Head Up’ location.
5. Cut off old connectors from wires and pull old Oven Arm Assembly away from unit. Transfer the lens assembly from the old to the new Oven Arm Assembly.
6. Insert wires from new Oven Arm Assembly through side hole in main IA casing. First the PT100 sensor 4 wires with the 5 way Molex connector (then if an IA9300 the 4 way Molex connector for the capillary tube red LED indicators) then the remaining wires.
7. Ease the wires around the corner of the PCBA (lift corner - loosen the PCBA retaining screws to assist if necessary and then retighten once all the wires are in the correct position).
8. Connect the 5 way Molex to the “PT100” position marked on the PCB.
9. Assembly pink tab connectors to the remaining 4 stripped wires using suitable crimp tool.
10. Connect blue heater wires to P3 & P4. Polarity not important.
11. Connect red illumination wire marked (+) to P1 (+) and the black wire to P2 (-).
   Polarity IS IMPORTANT. For IA9300, then reconnect the remaining 4 way Molex to "Head Up "marked on the PCB.
12. Reassemble Oven Arm with Adjustment knob. Carefully extend the inner arm to the fully out position to pull the wires back into the arm to the correct position.
13. Refit base.
14. Recalibrate unit as per Instruction Book (M8144)