# E1808, E1838 and E1848 DEEP FAT FRYERS

# INSTALLATION and SERVICING INSTRUCTIONS

**IMPORTANT**

The installer must ensure that the installation of the appliance is in conformity with these instructions and National Regulations in force at the time of installation. Particular attention MUST be paid to -

**BS7671 IEE Wiring Regulations**

**Electricity at Work Regulations**

**Health And Safety At Work Act**

**Fire Precautions Act**

This appliance has been CE-marked on the basis of compliance with the Low Voltage and EMC Directives for the voltages stated on the Data Plate

**WARNING -THIS APPLIANCE MUST BE EARTHED**

On completion of the installation these instructions should be left with the Engineer-in-Charge for reference during servicing. Further to this, The Users Instructions should be handed over to the User, having had a demonstration of the operation and cleaning of the appliance.

**IT IS MOST IMPORTANT THAT THESE INSTRUCTIONS BE CONSULTED BEFORE INSTALLING AND COMMISSIONING THIS APPLIANCE. FAILURE TO COMPLY WITH THE SPECIFIED PROCEDURES MAY RESULT IN DAMAGE OR THE NEED FOR A SERVICE CALL.**

**PREVENTATIVE MAINTENANCE CONTRACT**

In order to obtain maximum performance from this unit we would recommend that a Maintenance Contract be arranged with AFE SERVICELINE. Visits may then be made at agreed intervals to carry out adjustments and repairs. A quotation will be given upon request to the contact numbers below.


## Falcon Foodservice Equipment

**HEAD OFFICE AND WORKS**

PO Box 37, Foundry Loan, Larbert.
Stirlingshire. Scotland. FK5 4PL

**AFE SERVICELINE CONTACT -**

PHONE - 01438 751 111 FAX - 01438 369 900



RZZ 192 Ref. 2


AGA FOODSERVICE EQUIPMENT

# SECTION 1 - INSTALLATION

UNLESS OTHERWISE STATED, PARTS WHICH HAVE BEEN PROTECTED BY THE MANUFACTURER ARE NOT TO BE ADJUSTED BY THE INSTALLER

### 1.1 MODEL NUMBER, NETT WEIGHTS and DIMENSIONS

| MODEL | WIDTH mm | DEPTH mm | HEIGHT mm | WEIGHT kg | WEIGHT lbs |
|---|---|---|---|---|---|
| E1808 | 300 | 850 | 1125 | 51 | 112 |
| E1838 | 600 | 850 | 1125 | 78 | 172 |
| E1848 | 600 | 850 | 1125 | 100 | 220 |

### 1.2 SITING

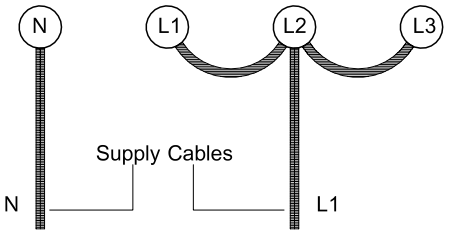
The appliance should be installed on a firm, level floor in a well lit and draught free position. The unit must be secured to the floor using the holes in the feet.

The installation of the appliance must be made in accordance with local and/or national regulations as listed on the cover of this manual, and a competent installer must be employed.

The unit may be installed against both side and rear walls.

### 1.3 ELECTRICAL SUPPLY

The fryers are for use on A.C. supplies only, and the terminals are normally arranged for 2 or 3 phase operation. If single phase supply is specified, the appropriate copper bridging plate is supplied with the appliance. It is important that the connections are made exactly as shown in the following diagram.




Cable entry is at the rear RH side of the unit, in the form of a 30mm diameter conduit connection. A conduit tube extends forward into the control compartment. Access to this area is gained upon removing the cover behind the door.

A suitably rated isolating switch with contact separation of at least 3 mm in all poles must be installed and the wiring executed in accordance with the relevant regulations listed on the front cover of this manual.

**Note**

When a unit is stored for a long period prior to installation, especially in damp conditions, the insulation resistance of the elements may fall to an unacceptable level (i.e. below 2 megohm).

Should this occur, it is recommended that the elements be switched on for an hour then be allowed to cool.

This process being repeated as necessary to restore the required insulation resistance.

**Warning**

**This Appliance must be earthed.**

The electrical loadings are as stated on the appliance data plate.

### 1.4 PRE-COMMISSIONING CHECK

Fill the pan with oil to the mark on the element guard. Approximately 19 litres (4 gallons) per pan for the E1808 and E1848 models and 39 litres ($8^1/_2$ gallons) for the E1838 model. Switch on at the isolator switch and at the fryer control panel switch. Turn the thermostat to maximum setting and check that it operates when the oil heats up.

If possible the operator of the fryer should be made familiar with its use; the importance of never switching on unless the elements are covered must be stressed.

# SECTION 2 - MAINTENANCE

BEFORE ATTEMPTING ANY MAINTENANCE, SWITCH OFF AT THE MAIN ISOLATING SWITCH AND TAKE STEPS TO ENSURE THAT IT IS NOT INADVERTENTLY SWITCHED ON.

### 2.1 ELECTRICAL CONTROL GEAR

The terminals, contactor and thermostats are contained within a box at the front of the unit. To gain access, open the door and remove the cover panel behind. The control and neon lamps are mounted on the facia panel, which is secured by two screws.

### 2.2 NEON INDICATOR LIGHTS

These must be replaced by new lights in the event of failure. To remove a faulty light, first remove the facia panel. Undo the two screws through the trim, ease the panel and trim downwards then withdraw. Pull off the snap-on light connectors, and remove the light by taking off the fixing nut.

### 2.3 THERMOSTATS

The fryer has an electronic control thermostat and an electro-mechanical safety thermostat. Both adjustable control thermostat and safety thermostats are mounted inside the front of the fryer.

Access is gained by removal of the control cover-plate. The safety thermostat is designed to cut off the power to the elements if the oil temperature exceeds 230°C. Manual intervention is required to re-set the control in the event of a cut-out. Re-set button is located at the bottom of the control compartment, accessible by opening the fryer door.

### 2.3.1 Users' Thermostat

a) Remove the control panel.

b) Remove the control cover plate by undoing four screws on the E1808 model, and five screws on the E1838 and E1848 models. Disconnect the electric leads and the leads to the potentiometer.

c) Undo the screws which secure the P.C.B. and withdraw.

d) Replace in reverse order.

e) To check thermostat calibration, select a temperature of 190°C on the control knob and allow the oil to heat up. With a suitable thermometer or thermocouple immersed 25mm below the surface of the oil at the pan centre. Check that the oil temperature corresponds with this setting.

### 2.3.2 Potentiometer

a) Remove the control panel.

b) Remove the control cover plate by undoing four screws on the E1808 model and five screws on the E1838 and E1848 models. Disconnect the potentiometer leads at the P.C.B.

c) Pull off the potentiometer knob and undo the securing screws to allow the potentiometer and bracket to be withdrawn.

d) Undo the M4 Allen screws and pull the extended spindle away from the potentiometer.

e) Undo the nut which secures the potentiometer to the bracket.

f) Replace in reverse order.

g) To check thermostat calibration select a temperature of 190°C on the thermostat knob and allow the oil to heat up. With a suitable thermometer or thermocouple immersed 25mm below the surface of the oil at the centre of the pan. Check that the oil temperature corresponds with this setting.

### 2.3.3 High Temperature Limit Device

This device is set to shut off the power to the element should the oil temperature exceed 230° C. Manual intervention is required to reset the control in the event of a failure.

**To Reset**

Open the fryer door and push the button which protrudes from the underside of the control chamber.

**To Replace**

a) Remove the control panel.

b) Remove the controls cover plate.

c) Disconnect the electrical leads from the safety thermostat.

d) Undo the three screws which secure the safety thermostat to the flange on the control panel.

e) Withdraw the safety thermostat probe by undoing the nut from the boss on the fryer body. Ensure that the pan has been drained of oil. Withdraw the capillary and probe from the pan.

f) Replace in reverse order.

The operation of the high temperature limit device must be checked at regular intervals adopting the following procedure:

a) As per items 2(a) and (b) above.

b) Bridge the thermocouple connection on the P.C.B. with a short piece of wire (see wiring diagram).

c) Fill the pan with oil to the indicated level mark and install a means of measuring the oil temperature. The measuring sensor must be placed at the geometric centre of the pan 25mm below the surface of the oil.

d) Switch on the unit and observe the rising oil temperature. If the unit functions properly, the high temperature limit device will cut-off the power supply when oil temperature is between 220°C and 225°C. Should the device fail to operate at a maximum temperature of 230°C, shut the unit OFF immediately by depressing the OFF switch on the control panel and carry out investigations to find the fault.

e) Once satisfied that the high temperature limit device is functioning correctly, remove the bridge connection from the P.C.B., replace all panels and push the re-set button to activate the control.

## 3.4 COOLING FAN

a) Remove the control panel.

b) Remove the controls cover plate.

c) Disconnect the electric leads.

d) Undo the four securing nuts and remove the fan.

e) Replace in reverse order.

## 3.5 ON/OFF SWITCH

a) Remove the control panel.

b) Pull off the electric connections.

c) Push the switch out of the control panel.

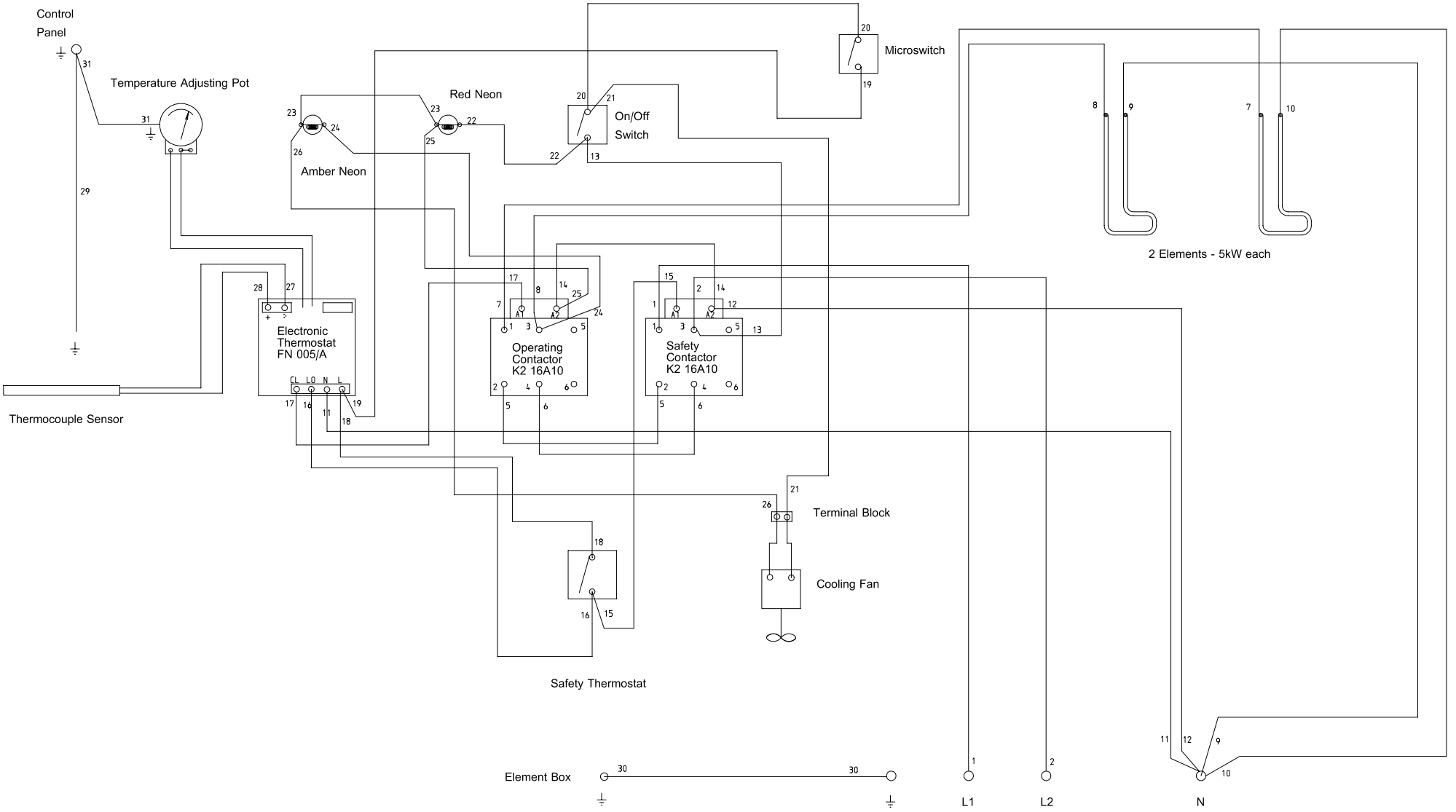
d) Replace in reverse order.

## 3.6 GENERAL NOTE

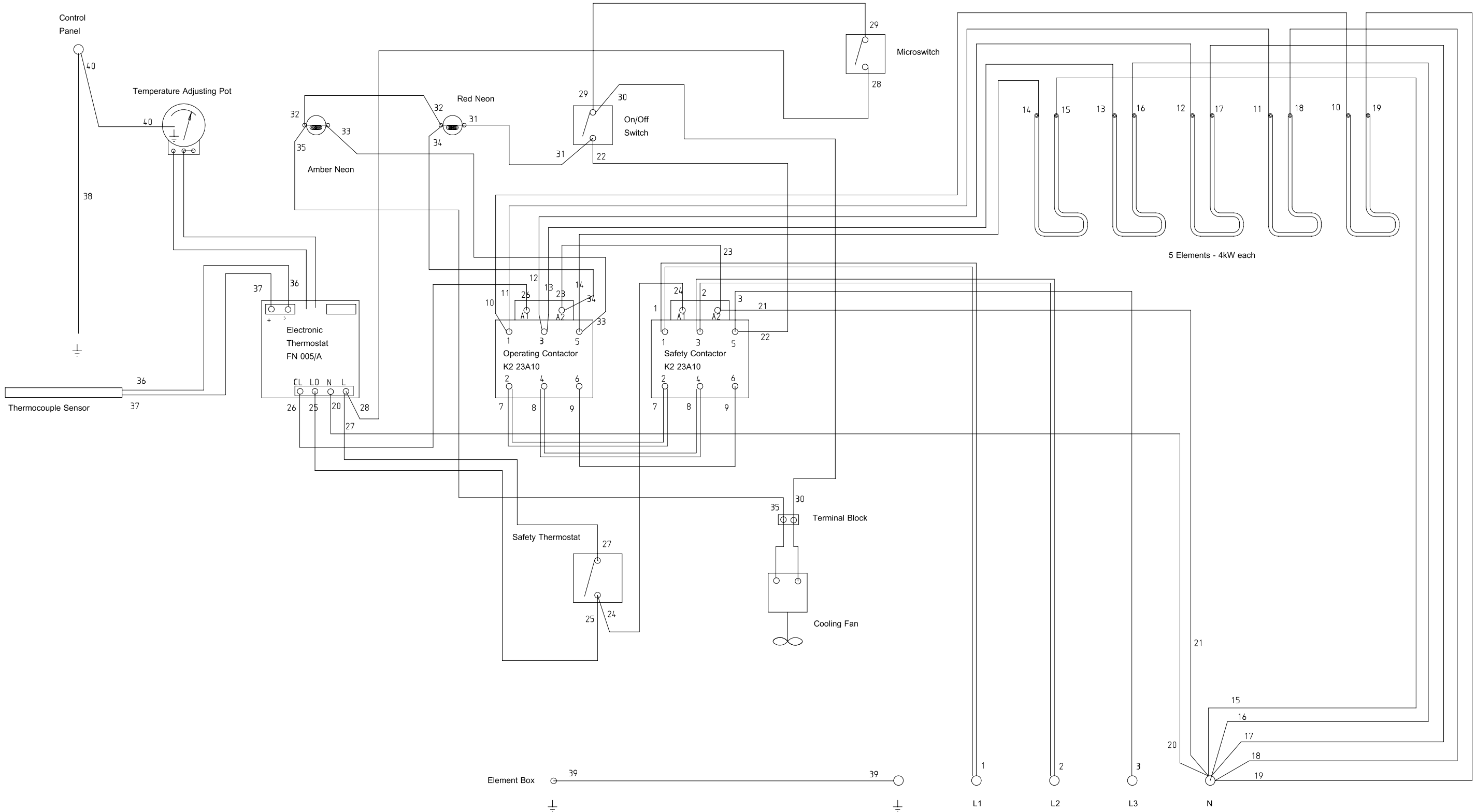
After any maintenance task, check the appliance to ensure that it performs correctly. Carry out any adjustments necessary as in Section 1 - Installation.

## 3.7 SPARE PARTS

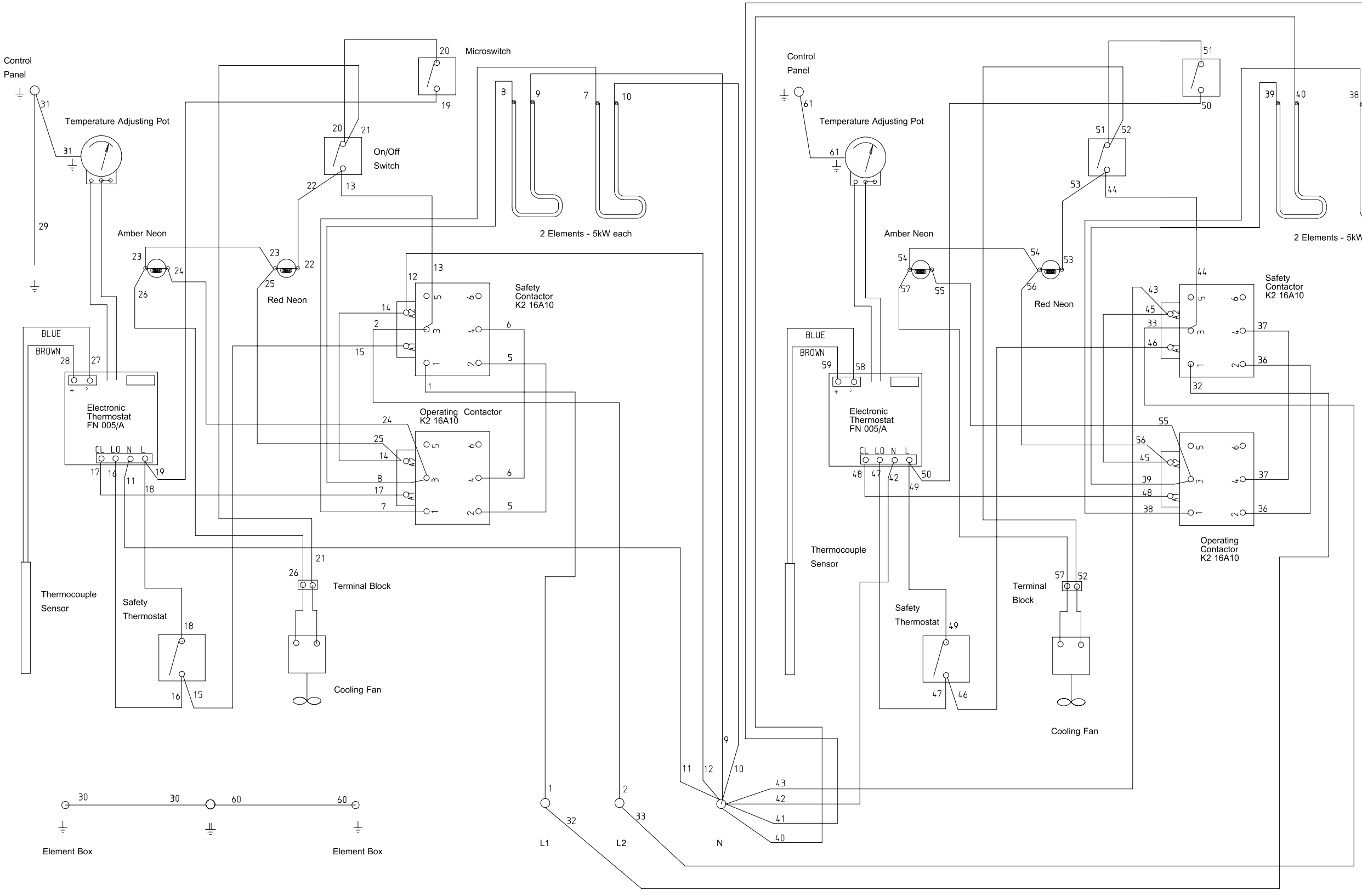
When ordering spare parts, always quote the appliance type and serial number. This information will be found on the date badge attached to the control cover, behind the fryer door.




**E1808 FRYER WIRING DIAGRAM - Drawing Non. CW26333/D**




## E1838 FRYER WIRING DIAGRAM - WIRING DIAGRAM CW26334/1




# E1848 FRYER WIRING DIAGRAM - CW26698/B