G401/G401F/G401X/G401FX/ G402/G402F FRYERS

INSTALLATION, SERVICING and USER INSTRUCTIONS

CAUTION: Read the instructions before using the appliance

These appliances must be installed and serviced by a qualified person as stipulated by the Gas Safety (Installation & Use) Regulations.

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 -

Gas safety (Installation & Use) regulations	**I.E.E. Regulations for Electrical Installations**
Health & Safety at work, etc Act	**Electricity at Work Regulations**
Local and National Building Regulations	**Fire precaution Act**

Detailed recommendations are contained in **Institute of Gas Engineers** published documents: **IGE/ UP/ 1, IGE/ UP/ 2, BS6173 and BS5440**

These appliances have been UKCA/CE-marked based on compliance with the Gas Appliance Regulations/Product Safety and Metrology Regulations, Electrical and Electromagnetic Compatibility (EMC) Regulations/Directives for the Countries, Gas Types and Pressures as stated on the data plate.

WARNING -   TO PREVENT SHOCKS, ALL APPLIANCES, GAS OR ELECTRIC, 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 user instructions should be handed over to the user, having had a demonstration of the operation and cleaning of the appliance.

PREVENTATIVE MAINTENANCE CONTRACT

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

We recommend that the oil level sensor (Patent No.GB2002725.6 & PCT/GB2020/050462) in the G401X/G401FX models should be serviced annually.

WEEE Directive Registration No. WEE/DC0059TT/PRO
At end of unit life, dispose of appliance and any replacement parts in a safe manner, via a licenced waste handler. Units are designed to be dismantled easily and recycling of all material is encouraged whenever practicable.

This equipment is **ONLY FOR PROFESSIONAL USE**, and shall be operated by **QUALIFIED** persons. It is the responsibility of the supervisor or equivalent to ensure that users wear **SUITABLE PROTECTIVE CLOTHING** and to draw attention to the fact that some parts will, by necessity, become **VERY HOT** and will cause burns if touched accidentally.

Falcon Foodservice Equipment
Wallace View, Hillfoots Road, Stirling, FK9 5PY, Scotland

Service Contact
Tel : 01438 363 000   Email: servicesupport@service-line.co.uk

T100745 Ref.17

IMPORTANT INFORMATION

ELECTRICAL SAFETY AND ADVICE REGARDING SUPPLEMENTARY ELECTRICAL PROTECTION

Commercial kitchens and foodservice areas are environments where electrical appliances may be located close to liquids, or operate in and around damp conditions or where restricted movement for installation and service is evident.

The installation and periodic inspection of the appliance should only be undertaken by a qualified, skilled and competent electrician; and connected to the correct power supply suitable for the load as stipulated by the appliance data label.

The electrical installation and connections should meet the necessary requirements to the local electrical wiring regulations and any electrical safety guidelines.

We recommend:-

- Supplementary electrical protection with the use of a residual current device (RCD)
- Fixed wiring appliances incorporate a locally situated switch disconnector to connect to, which is easily accessible for switching off and safe isolation purposes. The switch disconnector must meet the specification requirements of IEC 60947.

Your attention is drawn to:-
BS 7671:2018–Guidance Note 8 - 8.13 : Other locations of increased risk

It is recognized that there may be locations of increased risk of electric shock other than those specifically addressed in Part 7 of BS 7671. Examples of such locations could include laundries where there are washing and drying machines in close proximity and water is present, and commercial kitchens with stainless steel units, where once again, water is present.

Where because of the perception of additional risks being likely, the installation designer decides that an installation or location warrants further protective measures, the options available include:
- Automatic Disconnection of Supply (ADS) by means of a residual current device having a residual operating current not exceeding 30mA;
- Supplementary protective equipotential bonding; and
- Reduction of maximum fault clearance time.

The provision of RCDs and supplementary bonding must be specified by the host organization's appointed installation designer or electrical contractor and installed by a suitably qualified and competent electrician so as to comply with Regulations 419.2 and 544.2

Warranty Policy Shortlist

Warranty does not cover:-

- Correcting faults caused by incorrect installation of a product.
- Where an engineer cannot gain access to a site or a product.
- Repeat commission visits.
- Replacement of any parts where damage has been caused by misuse.
- Engineer waiting time will be chargeable.
- Routine maintenance and cleaning.
- Gas conversions i.e. Natural to Propane gas.
- Descaling of water products and cleaning of water sensors where softeners/ conditioners are not fitted, or are fitted and not maintained.
- Blocked drains
- Independent steam generation systems.
- Gas, water and electrical supply external to unit.
- Light bulbs
- Re-installing vacuum in kettle jackets.
- Replacement of grill burner ceramics when damage has been clearly caused by misuse.
- Where an engineer finds no fault with a product that has been reported faulty.
- Re-setting or adjustment of thermostats when unit is operating to specification.
- Cleaning and unblocking of fryer filter systems due to customer misuse.
- Lubrication and adjustment of door catches.
- Cleaning and Maintenance
    - Cleaning of burner jets
    - Poor combustion caused by lack of cleaning
    - Lubrication of moving parts
    - Lubrication of gas cocks
    - Cleaning/adjustment of pilots
    - Correction of gas pressure to appliance.
    - Renewing of electric cable ends.
    - Replacement of fuses
    - Corrosion caused by use of chemical cleaners.

Training and competence

To help ensure the safe use of this appliance there is a requirement for you to provide whatever information, instruction, training and supervision as is necessary to ensure, so far as is reasonably practicable, the health and safety of all users.

For further help and information on training and competence we would refer you the Health and Safety Executive website; www.hse.gov.uk document ref: health and safety training INDG345. International customers should default to the health and safety guidelines provided by your government body.

Risk assessment

As part of managing the health and safety of your business you must control any risks identified in your commercial kitchen. To do this you need to think about what might cause harm to people and decide whether you are taking reasonable steps to prevent that harm. This is known as risk assessment. It is important to consider the environment around the product as well as the product itself. For example oil or food spills will present a significant risk so users so the need to immediately clean up such spills must be reflected in staff training.

For further help and information on risk assessments we would refer you to you the Health and Safety Executive website; www.hse.gov.uk document ref: risk assessment INDG163. International customers should default to the health and safety guidelines provided by your government body.

Cleaning and maintenance

When removing heavy items to aid cleaning or maintenance particular care should be taken. A manual handling risk assessment is the best way to determine the level of risk to anyone using or maintaining this equipment. To help with such an evaluation we have included the weights of individual components that may present significant risk.

 For further help and information on manual handling and associated risk assessment we would refer you to you the Health and Safety Executive website; www.hse.gov.uk document ref: manual handling at work INDG143. International customers should default to the health and safety guidelines provided by your government body.

The cleaning of fryers or other products that use hot oil present significant risks to end users and particular care should be taken. Cold water and hot oil for example are an explosive mix and should be avoided at all costs.

Other useful references for health and safety issues

www.hse.gov.uk

Essentials of health and safety at work ISBN978

Noise at work INDG362

Safe systems of work

Other notes added to the body of the instructions

CONTENTS

SECTION 1 - INSTALLATION

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

Please ensure that any plastic coatings are removed prior to use. Before operation, pan requires to be thoroughly cleaned and dried.

Discolouration of heated parts is caused by factory testing to ensure a satisfactory unit. It does not affect quality or performance.

1.1 MODEL NUMBERS, NETT WEIGHTS and DIMENSIONS

Model	Width (mm)	Depth (mm)	Height (mm)	Weight (kg)
G401 Fryer	400	840	1200	83
G401X Fryer	400	840	1200	85
G401F Fryer	400	840	1200	94
G401FX Fryer	400	840	1200	96
G402 Fryer	400	840	1200	83
G402F Fryer	400	840	1200	94

Pan oil capacity:

18 litres cold, good quality oil (to - MIN - mark)

1.2 SITING

The unit must be installed on a firm, level floor in a well-lit draught free position. The fryer should not be installed in a position where the possibility of sideways tipping is likely when force is applied. The means of restraint may be the manner of installation, such as connection to a battery of appliances or installing the fryer in an alcove, or by separate means, such as adequate ties.

1.2.1 Anti-tipping Accessory

An anti-tipping mechanism is also available as an accessory. If these are to be fitted, the brackets must be fitted to locate the fryer in the correct position relative to any walls as detailed below. Fixing holes are provided in the fryer base to accommodate the bracket. The bracket should be fitted as detailed in Figure 1. The retaining chain has a quick release eyelet. Secure to fixing point and secure bracket to floor after alignment with anti-tipping device attached to the fryer. Adjust to slide below floor bracket.
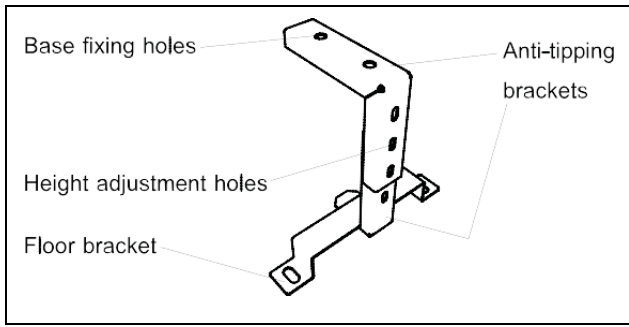
Figure 1 - Anti-tipping Bracket

1.2.2 Clearances

The unit requires a clearance of at least 150mm all round between unit and any walls. **The unit must only be installed next to non combustible walls**. A minimum vertical clearance of 750mm should be allowed between top edge of flue outlet and any overlying combustible surface.

Important

If fryer is to be installed with other appliances then the instructions for every model should be consulted to determine the necessary clearance to any wall or overlying surface.

Some appliances require greater clearance distances than others. The largest clearance will therefore determine overall distance for a complete suite of adjoining appliances.

1.3 VENTILATION

This appliance **MUST** be installed with sufficient ventilation to prevent the occurrence of unacceptable concentrations of substances harmful to health in the room in which they are installed. Installer must consult any additional local / national regulations.

The fresh air requirement for this appliance at a rate of 2M³/hour per kW is 44 M³ is as follows:

COMBUSTION AIR REQUIREMENTS	
APPLIANCE	**VENTILATION RATE**
G401	44 m³/h
G401X	44 m³/h
G401F	44 m³/h
G401FX	44 m³/h

1.4 GAS SUPPLY (All Models).

To be checked at installation, gas conversion or repair.

Note: Governor setting may be checked at burner manifold without the need to remove the right hand side panel.

To adjust appliance pressure;

The SIT gas valve, situated at rear RH side of unit and accessible by removing RH side, has an in-built governor.

The supply pressure should be checked at valve inlet test nipple using a manometer.

Burner pressure should be set at test nipple on burner manifold using a manometer.

Checking / Setting values are indicated below *(for either natural or propane gas)*.

This is achieved by removing brass dust screw from valve governor and adjusting governor accordingly using an approved VDE insulated screwdriver - clockwise rotation increases pressure. (see illustration) insulated

Warning: To avoid risk of electric shock, all adjustments to the governor should be made with the appliance switched off and unplugged.

Note: Propane (I_{3P}) appliances require governor to be adjusted clockwise to *maximum* adjustment.

	Supply pressure	Burner pressure at manifold
Natural Gas (I_{2H})	20mbar	14mbar
Propane Gas (I_{3P})	37mbar	34mbar

Supply Pressure Manometer connection

Govener Adjustment
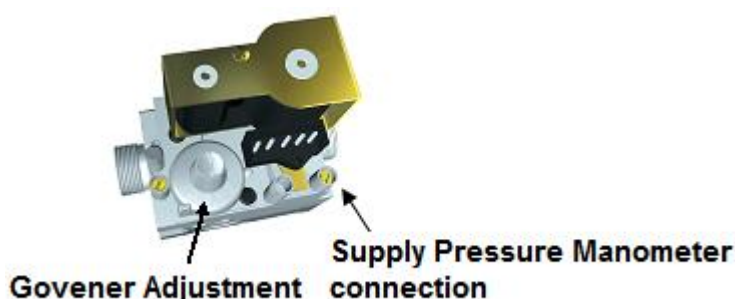
The incoming service must be of sufficient size to supply full rate without excessive pressure drop. A gas meter is connected to service pipe by gas supplier. Any existing meter should be checked preferably by gas supplier to ensure that it is adequate to deal with rate of gas supply required.

Installation pipe work should be fitted in accordance with IGE/UP/2. The size of pipes from meter to unit must not be less than that of appliance inlet connection. A 3/4" BSP inlet connection is fitted to unit.

An isolating valve must be located close to the appliance to facilitate shut down during an emergency or routine servicing. The cock must be easily accessible to the user. The installation must be tested for gas soundness as stated in IGE/UP/1.

Domestic type, flexible rubber tube connections must NOT be used with this appliance.

Only tube complying with BS669 Part 2, Specification for corrugated metallic flexible hoses for catering appliances, shall be used. These hoses must be no longer than 1.5 Metres, and should be periodically checked / replaced as necessary.

1.5   ELECTRICAL SUPPLY

The unit is equipped with a 3-core flexible cord with standard 3 pin plug fitted with a 13A fuse. A regular 13A socket outlet can be used.

If supply is through a distribution fuse box, this must be via a fuse with a maximum rating of 13A.

In the event of mains cable being replaced, any new cable should comply with 60245 IEC 57 designation. *(H05 RN - F)*

THE APPLIANCE MUST BE EARTH BONDED

Check that no damage has occurred to the appliance, power cable and plug face during transit. If damage has occurred do not use the appliance.

Ensure that the mains power cable is routed free from the appliance to avoid damage.

We recommend supplementary electrical protection with the use of a residual current device (RCD). Periodical testing, repair and fixing wiring connection should only be undertaken by a skilled and competent electrician.

This appliance is also provided with a terminal for connection of an external equipotential conductor. This terminal is in effective electrical contact with all fixed exposed metal parts of the appliance, and shall allow the connection of a conductor having a normal cross-sectional area of up to 10mm². It is located on the rear panel and is identified by the following symbol and must only be used for bonding purposes.

	Rated Voltage	Rated Current
G401/G401X/G401F/G401FX/G402/G402F	230V~	3.55amps

1.6 TOTAL RATED HEAT INPUTS:

Appliance	KW	BTU/Hr (gross)	Pilot
G401 / G401X / G401F / G401FX / G402 / G402F Nat (I_{2H})	21.5kW	80,700 btu/h	*0.29kw *Ignites with main burners
G401 / G401X / G401F / G401FX / G402 / G402F Prop (I_{3P})	22kW	82,600 btu/h	*0.26kw *Ignites with main burners

1.7 INJECTOR SIZES:

Appliance	Main Burners	Pilot
G401 / G401X / G401F / G401FX / G402 / G402F Nat (I_{2H})	2 x Ø2.6mm	Polidoro G31.2
G401 / G401X / G401F / G401FX / G402 / G402F Prop (I_{3P})	2 x Ø1.7mm	Polidoro G25

SECTION 2 - ASSEMBLY and COMMISSIONING

The gas supply piping and connection to appliance must be installed in accordance with the various regulations listed on the cover of this manual.

2.1 ASSEMBLY

a) Unpack appliance

b) Unpack fryer baskets and accessories.

c) Place basket support grid and basket in pan.

d) Level appliance and fit all service protection kits.

(Anti-tilt kit, if ordered as accessory).

2.2 CONNECTION TO A GAS SUPPLY

Connect gas supply and test for gas soundness.

Caution
Ensure that pan contains an acceptable level of liquid before igniting burner.

Due to the presence of mains electrics, integral pipe work should be checked for gas soundness using an appropriate gas leak detector.

Caution
Installation engineers should note that for first time connection of appliance to supply, it is essential that inlet gas supply to fryer is completely purged of air prior to first lighting attempt. Otherwise, since this is a light pilot first every time system, it will take a significant number of tries to light due to the small amount of air bled from pipe by pilot at each attempt. This should not initially be treated as a fault.

Please note that several attempts will still be required after air purge to fryer for first time lighting. This is due to capacity of valve and governor.

2.3 CONNECTION TO AN ELECTRICAL SUPPLY

Ensure flexible cable does not come into contact with any hot parts. The fuse rating should be 13A.

The colour coding of power supply cables are as follows:

Live - **Brown**, Neutral - **Blue**, Earth - **Green/Yellow**

2.4 STARTING UP

If you are in the fat melting cycle *(FMC – G401/G401F only)* and loading solid fat for the first time, always remove basket support plate as detailed in Section 9. Solid fat should be in direct contact with fryer pan.

Refer to Section 9.

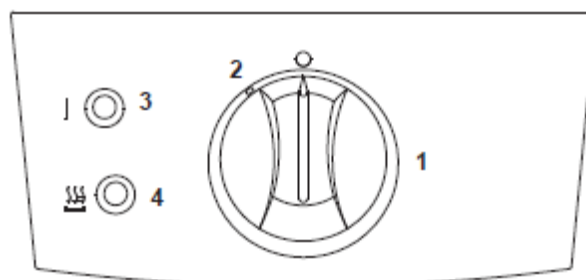### 2.4.1 G401/G401F Fryer Control Panel (See Figure 2)

Figure 2 – G401/G401F Control Panel

1. **ON/OFF and Temperature Control Knob**

   Temperature Selection *(130 - 190°C). (Unit is off when control is in position indicated).*

2. **Fat Melt Position**

Feature for slow pulsed heating of solid fats.

3. **Power on indicator.**

4. **Heat Demand Indicator**

Illuminates when thermostat demands heat, i.e. oil temperature is more than 5ºC below temperature setting. Extinguishes when desired temperature is reached.

2.4.2 G401X/G401FX Fryer Control Panel (See Figure 3)
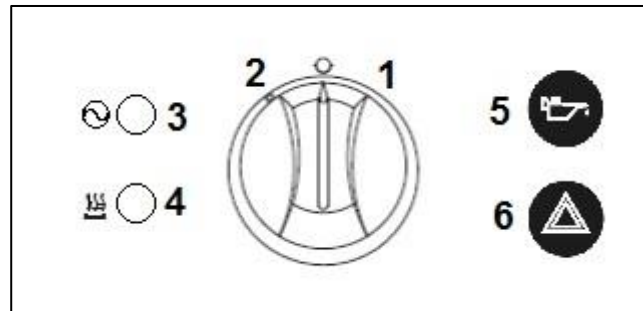
Figure 3 – G401FX Control Panel

1. **ON/OFF and Temperature Control Knob**

Temperature Selection *(130 - 190°C). (Unit is off when control is in position indicated).*

2. **Fat Melt Position**

Feature for slow pulsed heating of solid fats.

G401FX Only – For first use it is recommended that the solid fat is pre-melted before being added to the fry pot.

3. **Power on indicator (Red).**

Illuminates when the appliance is switched on.

4. **Heat Demand Indicator (Amber).**

Illuminates when thermostat demands heat, i.e. oil temperature is more than 5ºC below temperature setting. Extinguishes when desired temperature is reached.

5. **Top up oil indicator (Orange, Oil can symbol)**

Indicates when the oil level has dropped at least 40mm below the MIN mark.

6. **Low oil level indicator (Red Flashing, Hazard triangle).**

Indicates when the oil has dropped to the same level as the temperature probe (approximately 80mm below MIN mark

2.4.3 G402/G402F Fryer Control Panel (See Figure 4)

Figure 4 – G402/G402F Control Panel

1. **Four Digit LED Display**

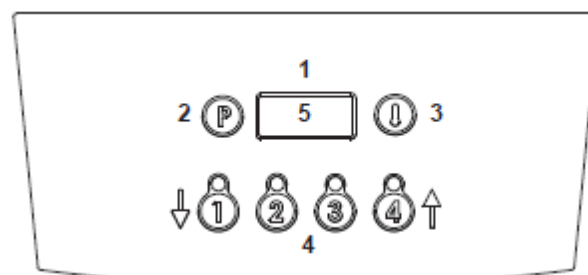   Displays Set temp, Actual temp, cook time remaining and also used for programming purposes.

2. **Program Button**

   Used to enter timer programme mode *(to change each of the 4 pre-set timer select channels - See Section 6).*

3. **Temperature Button**

   Used to view Actual/Set temperature and also to enter Set temperature mode *(See Section 6).*

4. *Timer Keys (1 – 4)*

   Used to start/cancel pre set cook times. Buttons 1 & 4 also used to change times or temperatures when in either set mode *(See Section 6).*

5. **Heat demand LED indicator**

   A small green dot after the first digit. Illuminates when thermostat demands heat, i.e. oil is more than 2ºC below programmed set temperature. Will extinguish when desired setting is reached.

2.4.4 G401/G401X/G401F/G401FX/G402/G402F Additional Controls (See Figure 5)
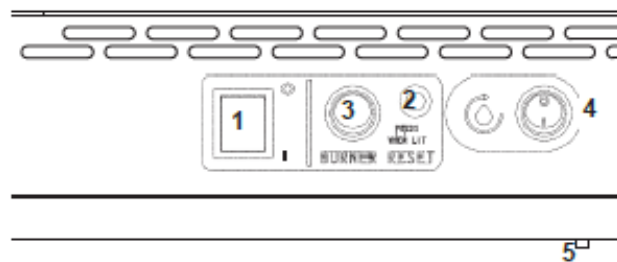
Figure 5 - G401/G401F/G401FX/G402/G402F Additional Controls

The following additional controls are located behind cabinet door.

1. **Burner and Temperature Controls ON/OFF Switch**

   Cuts power to burner and temp controls.

2. **Burner Lockout Indicator**

   Indicates flame failure.

3. **Burner Lock-Out Reset Switch**

   Resets burner for further lighting attempts, when burner lockout indicator is illuminated.

4. **Filtration Pump Switch (G401F, G401FX & G402F only)**

   Energises filtration pump when burner switch is in OFF (O) position

5. **Temperature Limit (Safety) Thermostat Reset Button**

   Inside red recess.

2.4.5 G401/G401X/G401F/G401FX Controller Diagnostic Indicators

(On printed circuit board of controller, behind control panel)

Green LED 'ON' indicates heat demand. Green LED 'OFF' indicates no heat demand.

Red LED flashes if temperature probe is either short or open circuited.

Red LED is permanently 'ON' to indicate system is OK. Set point is +/-7ºC of mid-set point.

2.5   PRE COMMISSIONING CHECK

a) Clean out pan thoroughly using hot water and detergent. Rinse out and **dry** thoroughly.

Ensure that no water remains inside Drain Valve, by drying thoroughly inside and operating valve several times to remove extra drips.

Note - For further detail with regard to cleaning, refer to Section 8.

b) Ensure drain valve is closed. Fill pan with clean cooking oil to - MIN - *(maximum cold fill mark)* indicated on basket hanging rail. *(See Figure 5).* **Note**: MAX refers to maximum **hot** fill mark.

c) With gas supply still shut off, turn on electrical mains supply.

d) Open door and press temperature limit (safety) thermostat reset button *(red)*, refer to Section 2.6. Set burner switch to Position 'I' *(ON position)*.

e) Turn control knob to desired temperature *(140ºC)* *(G401/G401X/G401F/G401FX only)* and heat demand indicator will illuminate *(Figure 2, item 4)*.

f) G402/G402F has a temperature range of between 130*ºC to* 190*ºC* *(See Section 6.3 - how to change set temperature)*.

g) Fryer ignition sequence will commence and spark may be heard before unit locks out.

Note: Ignition system will try a second sequence 14 seconds after completion of first attempt if no flame is detected during first attempt. *(Unit will only lock out after 2nd attempt).*

h) The neon next to burner switch inside door will illuminate to indicate that lockout has occurred and that no burner flame is present. G401/G401X/G401F/G401FX/G402/G402F Additional controls - Item 2 on Figure 5.

i) Turn gas supply on.

j) Press lockout reset switch. See Figure 5 *(Lock out indicator will extinguish).*

k) Burner will ignite and heat indicator will illuminate to signify that burner is on.

If lockout should occur, repeat Steps 10 -11 until air is bled from supply and burner lights

l) When burner flame is established, check for gas leaks. Care should be taken because mains voltage is present. Isolate after gas checks

Checking Controller Operation

To check operation of controls, refer to "Using the Controller" - Section 6.2.3.

Checking Oil Filtration Pump

To check operation of pump, refer to Section 7.

Important

After installation, the responsible technician should check for gas leaks and ensure the appliance is operating safely and satisfactorily before handing over to the user.

2.6   TEMPERATURE LIMIT (SAFETY) THERMOSTAT

The unit is equipped with an additional temperature limit (safety) thermostat, independent of the main controller.

In the case of operating thermostat failure, allowing oil temperature to rise above predetermined legislation safe zone *(230ºC)*, safety limit device will activate and cut power to controller. It will also stop the flow of gas to burner.

To re-set temperature limit thermostat, refer to Figure 4.

G401/G401X/G401F/G401FX/G402/G402F Models

a) Turn burner and temperature controls ON/OFF switch to OFF position.

b) Allow oil to cool below 180ºC

c) Reset red button on limit thermostat with a pen or similar item. The button is located behind cabinet door at upper RH, below facia panel.

d) Turn burner and temperature controls ON/OFF switch to ON position.

e) Reselect temperature.

f) If limit thermostat reactivates, carry out fault finding on temperature control circuitry.

2.7   OIL LEVEL SENSOR (G401X/G401FX only)

The unit is equipped with an additional Oil Level Sensor (Patent No.GB2002725.6 & PCT/GB2020/050462).

When the oil level drops to at least 40mm below the MIN mark, then the Top Up Oil LED will indicate (Orange oil can symbol) warning the user that the oil level has dropped considerably.

When the oil level drops to approximately 80mm below the MIN mark (same level as temperature probe), the Low Oil Level LED will indicate (Flashing red hazard triangle) warning the user that the oil level is unacceptable.

At this point the fryer will stop the flow of gas to the burner and put the fryer into lockout. The fryer cannot be taken out of lockout until the fry pot has been filled with oil to an acceptable level.

2.8   INSTRUCTION TO USER

After installing and commissioning appliance, please hand Instructions to user or purchaser and ensure that the person*(s)* responsible understands the instructions to correctly operate and clean unit in a safe manner.

Emphasis should be given to safe operation and use of drain valve and oil bucket. Oil bucket should not be overfilled to allow safe movement.

It is important to ensure that location of gas shutoff valve is made known to user and that procedure for operation in an emergency be demonstrated.

SECTION 3 - SERVICING AND CONVERSION

BEFORE ATTEMPTING ANY SERVICING, TURN OFF GAS SHUTOFF VALVE AND ELECTRICAL SUPPLY. TAKE STEPS TO ENSURE THAT THESE CANNOT BE INADVERTENTLY TURNED ON.

AFTER ANY MAINTENANCE TASK, CHECK UNIT TO ENSURE THAT IT PERFORMS SAFELY AND CORRECTLY AS DESCRIBED IN SECTION 2.5.

ALWAYS CHECK FOR GAS LEAKS.

Moving the fryer with hot or cold oil in fry pot can be dangerous. Scalding could occur. Spilled oil or fat on the kitchen floor could cause slipping accidents and any such deposit should be cleaned up straight away.

To prevent any such hazard, caution must be observed when moving fryer.

3.1 GAS CONVERSION

(Natural to propane or propane to natural)

This model is suitable for field conversion. A kit with fitting instructions can be supplied upon request.

Appliance is converted from one gas category to another as follows:

a) Change Main Jets.

b) Change Pilot injector.

c) Adjust Governor.

d) Change Data badge.

3.2 INTEGRAL COMPONENTS

The following parts must be checked and serviced regularly:

a) Oil ingress to electrical components.

b) Flue for any blockages.

c) Visual inspection of components and fryer pan.

3.3 ACCESS PROCEDURES

Before removal of any fryer components:

a) **Ensure appliance electrical and gas supply has been shut off and cannot be accidentally turned back on.**

b) **Allow oil to cool before any operation that requires pan to be drained.**

c) Only use parts specified by the manufacturer.

d) All components replaced MUST be fully checked after fitting to ensure safe operation.

e) A full pre-commissioning check as detailed in Section 2.5 should be carried out.

3.4 GAS CONTROL VALVE

a) Remove RH side panel *(fixing behind control panel, hex bolt below panel at front and 3 fixings at rear)* and rear control compartment cover *(3 fixings)*.

b) Unplug valve control wires.

c) Split pipe work from both sides of valve.

d) Disconnect pilot pipe.

e) Remove screws holding valve to bracket.

f) Replace in reverse order. Check system for gas leaks.

g) Reset burner pressure as detailed in Section 1.4.

3.5 PILOT/IGNITER/SENSOR ASSEMBLY

a) Open door and remove oil bucket splash cover by means of two screws on each leg at front and slide out through door.

b) Disconnect electrode and ignition wires.

c) Using a screwdriver and 8mm spanner, remove pilot assembly and bracket from burner.

d) Drop assembly and remove pilot pipe.

e) Replace parts in reverse order. Ensure that a good earth connection has been made.

3.6 BURNER

a) Remove pilot/igniter/sensor assembly as Section 3.5.

b) Remove drain handle.

c) Split incoming gas connection to manifold.

d) Undo two middle mounting bolts and remove two front burner retention bolts and slide burner forward until it clears rear retention mountings. Carefully drop burner.

e) Re-connect in reverse order.

f) Gas leak check manifold and pilot gas connections.

3.7 BURNER RESET SWITCH, ON/OFF SWITCH and FILTRATION PUMP SWITCH

a) Remove control panel by undoing fixings at top and bottom of control panel and unplug control panel.

b) Hinge down switch mounting panel.

c) Remove electrical connections from switch. Remove switch by squeezing side fixings and pushing it through aperture.

d) Replace part in reverse order.

3.8 BURNER LOCK OUT NEON

a) Remove control panel by undoing fixings at top and bottom of control panel and gently pull panel forward. (Control panel may be rested on hob, with wires still attached)

b) Hinge down switch mounting panel.

c) Remove electrical connections from neon and remove neon retention nut.

d) Replace part in reverse order.

3.9 OPERATING THERMOSTAT (Thermistor) PROBE

a) Ensure fry pot is empty. Refer to Section 8.

b) Remove control panel by undoing fixings at top and bottom of control panel and gently pull panel forward. (Control panel may be rested on hob, with wires still attached).

c) Remove probe and temperature limit (safety) thermostat protective cover *(ensuring insulation is removed intact)*.

d) Remove probe protective cage inside pan.

e) From inside controls compartment, remove hex securing nut and remove probe.

f) Disconnect wire connector plug.

g) Replace in reverse order.

3.10 TEMPERATURE PCB CONTROLLER (Operating Thermostat Board)

a) Remove control panel by undoing fixings at top and bottom of control panel and gently pull control panel forwards.(Control panel may be rested on hob, with wires still attached)

b) Disconnect wires connected to board from loom.

c) Remove Control Knob

d) From front of control panel, remove fixings to enable controller to be removed.

e) Carefully replace in reverse order.

3.11 MAINS ON and HEAT DEMAND NEONS

a) Remove control panel by undoing fixings at top and bottom of control panel. Disconnect control panel.

b) Remove electrical connections from neon. Undo neon retention nut.

c) Carefully replace in reverse order.

3.12 DRAIN VALVE

h) Remove burner as detailed in Section 3.6

i) Ensure fry pot is empty. Refer to Section 8.

j) Remove nut from handle and lift handle off.

k) Remove front panel fasteners.

l) Disconnect wiring, noting all connections.

m) Remove front panel to access drain valve.

n) Undo drain pipe. Use appropriate size of spanner to remove drain valve.

o) Replace in reverse order and check for oil leaks.

3.13 FILTRATION PUMP

a) Remove back panel and flexi-hose at filtration pump.

b) Disconnect electrical coupling plug and connections from start.

c) Remove nuts from pump mounting bolts *(accessed through fryer door at rear of oil bucket compartment)* and lift pump clear.

d) Disconnect pump from bracket. Replace in reverse order.

Note
Remember to check for oil leaks before replacing any panels.

3.14 IGNITION CONTROL BOX

a) Remove rear compartment cover.

b) Unplug valve and control plugs. Remove ignition, detector and earth connections.

c) Undo three fixings *(one at rear, two at front)*.

d) Remove ignition control box.

e) Replace in reverse order & test.

3.15 TEMPERATURE LIMIT (Safety) THERMOSTAT

a) Ensure fry pot is empty

b) Open control panel.

c) Remove probe and Temperature limit (safety) thermostat protective cover

   (ensuring insulation is removed intact).

d) Remove phial and probe protective cage inside pan.

e) Undo two phial bracket retention nuts and remove thermostat phial from bracket.

f) Undo safety thermostat capillary nut. Using a thin screwdriver inserted in boss from inside pan, carefully tap capillary sealing washers through to control compartment.

g) Remove thermostat.

h) Disconnect thermostat wires.

i)

3.16 OIL LEVELSENSOR (G401X/G401FX only, Figure 6)

a) Ensure fry pot is empty

b) Remove back panel.

c) Disconnect oil sensor wires (blue & red BNC connectors) from the evaluation unit.

d) Remove LH side panel.

e) Remove control panel.

f) Carefully feed oil sensor wires (blue & red BNC connectors) back through hole in the side of the electrics box behind the control panel.

g) Undo oil level sensor retaining nuts

h) Lift oil level sensor guard.

i) Pull the oil level sensor forward into the pan and carefully feed the wires through the boss.

j) Carefully replace in reverse order.

Note
In the extraordinary event that the oil level sensor does come into contact with fire. The probe should be replaced.

3.17 TOP UP AND LOW OIL LEVEL LEDS (G401X/G401FX only, Figure 6)

a) Remove control panel by undoing fixings at top and bottom of control panel. Disconnect control panel.

b) Remove electrical connections from LEDs. Undo LED retention nut.

c) Carefully replace in reverse order.

## 3.18 OIL LEVEL SENSOR EVALUATION UNIT (G401X/G401FX only, Figure 6)

a) Remove back panel.

b) Disconnect oil sensor wires (blue & red BNC connectors) from the evaluation unit.

c) Disconnect evaluation unit wires (brown, blue, white & black) from relays and power supply unit.

d) Disconnect earth lead from chassis.

e) Remove evaluation unit from bracket by undoing fixings.

f) Replace in reverse order.

3.19 RELAYS & RELAY BASES (G401X/G401FX only, Figure 6)

a) Remove back panel.

b) Disconnect wiring.

c) Remove relay and base from DIN rail.

d) Replace in reverse order.

3.20 POWER SUPPLY UNIT (G401X/G401FX only, Figure 6)

a) Remove back panel.

b) Disconnect wiring.

c) Remove power supply unit from the DIN rail.

d) Replace in reverse order.
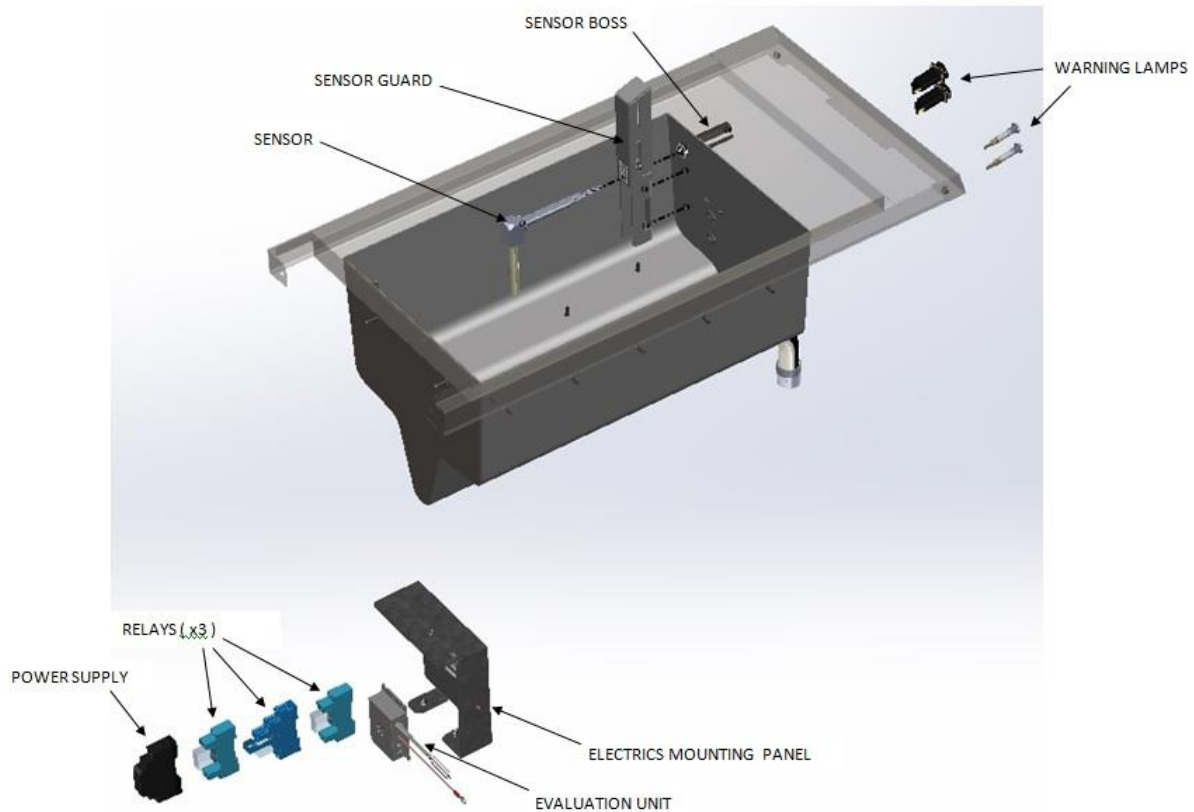
Figure 6 – Oil level sensor circuit components

SECTION 4 - SPARES

When ordering spare parts, always quote appliance type and serial number. This information will be found on unit data plate, located inside the fryer door on LH leg support face.

Operating Controller	Operating Controller Knob
Operating Controller Temperature Sensing Probe	Safety Thermostat
Gas Valve	Gas Ignition Box
Burner Assembly	Pilot Assembly
Flame Sensor Assembly	Electrode Assembly
Drain Valve	Ballast Resistor
Fuse - 2Amp	Fuse - 5Amp
Red Neon	Amber Neon
Adjustable Leg	Castor
Chip Basket	Pan Crumb Catcher
Oil Pump	Oil Pump Timer
Oil Filter Basket	Fine Mesh Oil Filter
Oil level sensor	Evaluation unit
24V power supply	24VDC Relay
230VAC Relay	

SECTION 5 – CRITICAL DIMENSIONS

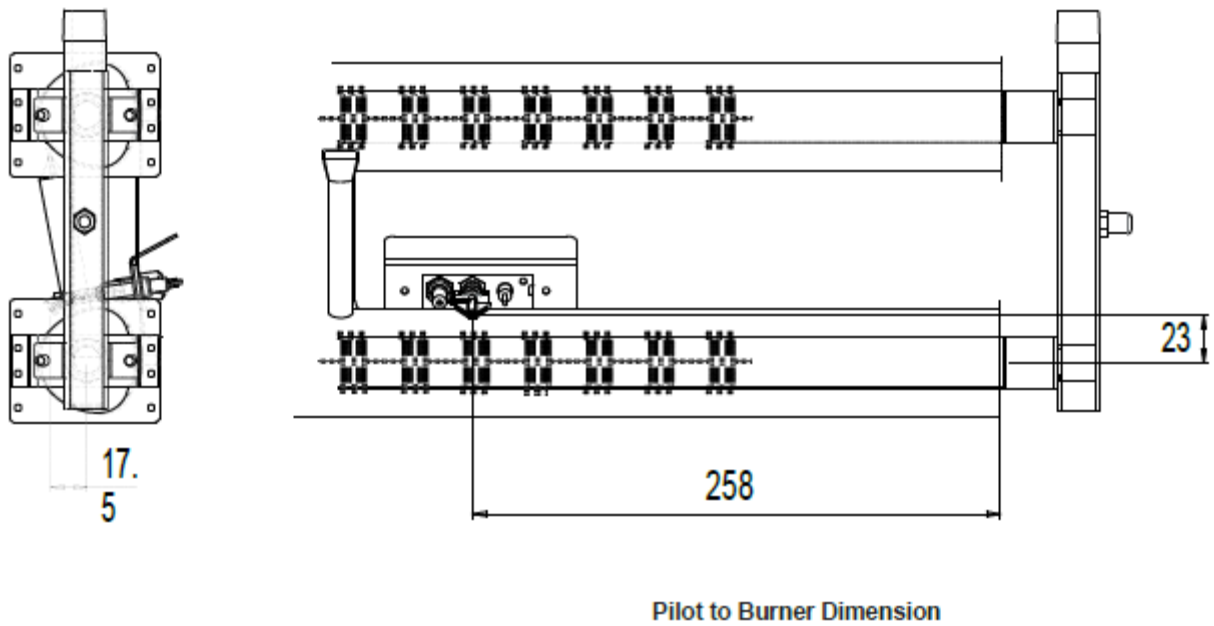**Operating and Safety Thermostat**
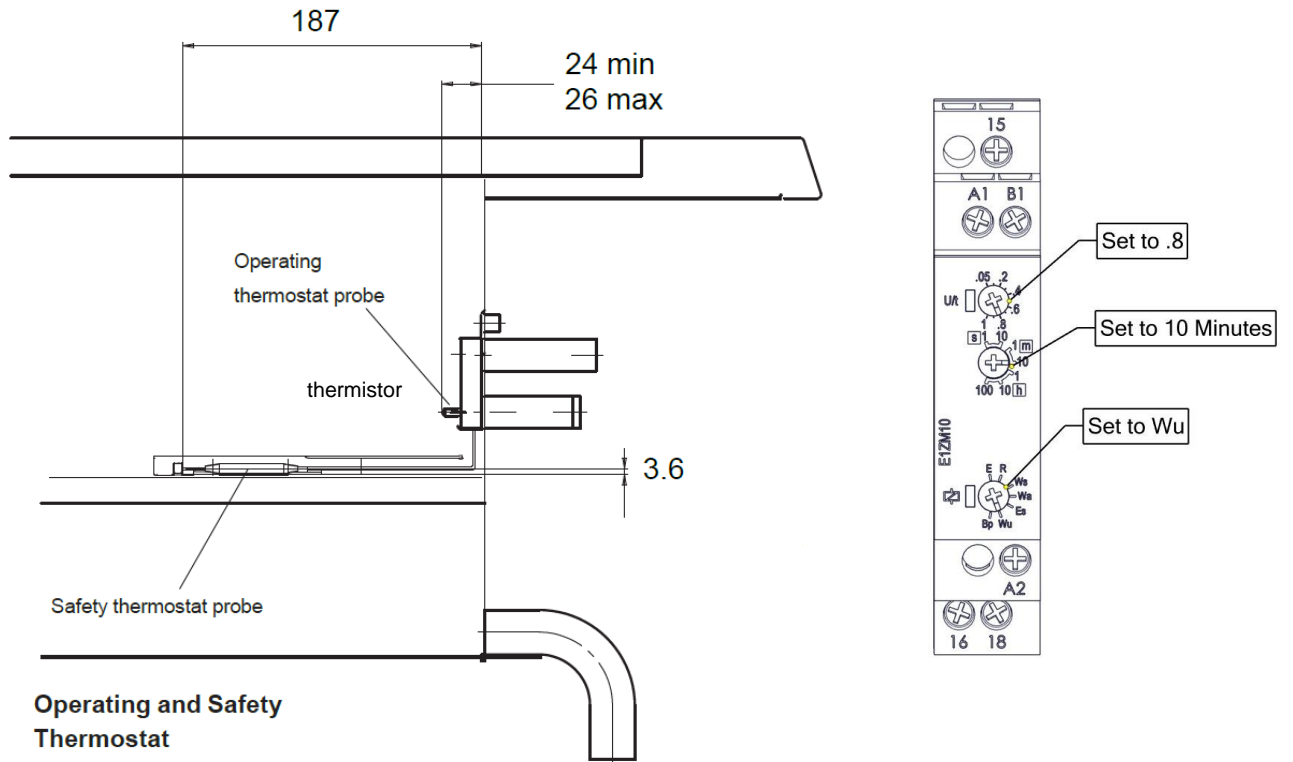
Pilot to Burner Dimension

Figure 7 – Critical dimensions

SECTION 6 - OPERATING INSTRUCTIONS

PARTS WHICH HAVE BEEN PROTECTED BY THE MANUFACTURER ARE NOT TO BE ADJUSTED BY THE USER.

The fryers are of single pan type and the following units are covered by this manual.

G401 - Manual control model.

G401F - Manual control model with built-in filtration.

G401X - Manual control model with oil level sensor.

G401FX - Manual control model with built-in filtration and oil level sensor.

G402 - Four product key electronic control model.

G402F - Four product key electronic control model with built-in filtration.

Note: The oil container may be heavy. Drain small amounts at a time if necessary, before lifting container. Manual handling regulations should be observed.

Warning: Appliances on Castors

When the fryer is supplied with castors it should be connected to supply piping by means of a connector for moveable appliances. In addition, a restraining chain should be connected between appliance and wall. Ensure this restraint is re-connected when unit is returned to original position.

Moving the fryer with hot or cold oil in fry pot can be dangerous to the operator. Scalding could occur. Spilled oil or fat on the kitchen floor could cause slipping accidents and any such deposit should be cleaned up straight away.

To prevent any such hazard, <u>DO NOT move fryer until all liquid has been drained from fry pot.</u>

USE OF OILS/SHORTENING/SOLIDS
(COOKING MEDIUM)

As these are highly flammable when in their liquid state, caution should always be taken when using cooking medium.

Recommendation

PPE *(Personal Protective Equipment)* should be used when cleaning or handling medium within this fryer.

Medium should not be overheated as this will increase the risk of fire.

Note: Fryer is fitted with a Temperature limit (safety) thermal safety device. This will stop heating of medium if it becomes overheated.

Warning

This appliance should only be used with both oil temperature controlling Thermostat and Thermal limit (safety) Thermostat in working condition.

NEVER leave a working unit unattended. Medium must always be maintained within fry pot.

Cold Medium - when filling with cold medium (see Figure 8), DO NOT FILL MEDIUM PAST -MIN- LEVEL MARK (Maximum cold fill mark) also, for Solid Medium - See Section 9.

-MIN- Level Mark: Medium should NEVER be allowed to drop below this mark. Should this occur, top up immediately or switch fryer OFF.

Hot Medium and Topping Up Medium DO NOT FILL MEDIUM PAST -MAX- LEVEL MARK

(Maximum Hot Fill Mark). (See Figure 8).

— MAX —
— MIN —
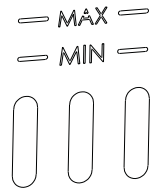
Figure 8

CAUTION
SUITABLE PROTECTIVE CLOTHING MUST BE WORN when topping up whilst fat in fryer is hot.

Medium and Foodstuffs

As foodstuffs increase volume during cooking - follow these rules:

DO NOT ADD WATER TO FRYING MEDIUM AT ANY TIME!

Do not introduce excessively wet food into the fryer.

WARNING
No attempt must be made to operate this appliance during a power supply failure.

Please ensure that any plastic coated items are removed prior to use. Before operation, pan requires to be thoroughly cleaned and dried.

Discolouration of heated parts is caused by factory testing to ensure unit is satisfactory. It will not affect quality or performance.

Never leave products that are in use unsupervised and always turn products off at the end of service.

All Models

A neon indicator is incorporated to indicate flame failure when illuminated.

An electronic thermostat with temperature (thermistor) probe is fitted to automatically control oil temperature. The burner is protected by an electronic flame sensor device.

An additional temperature limit (safety) thermostat is also fitted, independent of main thermostat.

Operating thermostat failure could allow oil temperature to exceed the legislated maximum safe temperature (230ºC). In such condition, the temperature limit (safety) thermostat will activate and cut power to controller and it will also stop the flow of gas to burner.

To find location of Temperature limit (safety) thermostat re-set button, refer to figure 4.

To Reset Temperature Limit (Safety) Thermostat

a) Turn burner and temperature controls ON/OFF switch to OFF position.

b) Allow oil to cool below 180ºC.

c) Unscrew black protective cap from limit (safety) thermostat reset button, button is located behind cabinet door at upper RH below fascia panel.

d) Reset red button on limit (safety) thermostat with a pen or similar item.

e) Turn burner and temperature controls ON/OFF switch to ON position.

f) Reselect temperature.

g) If temperature limit (safety) thermostat reactivates, an investigation to determine the reason must be carried out by a qualified technician.

6.1 APPLIANCE CONTROLS

Refer to Sections 2.4.1, 2.4.2 and 2.4.3 for controls layout and description.

6.2 LIGHTING and OPERATION Safety Precautions

The installer must fit a gas shut-off valve in the gas pipe which supplies the unit.

The user MUST be familiar with the location and operation of this valve for shutting off gas in event of an emergency.

IF A SMELL OF GAS IS EVIDENT:

a) TURN OFF GAS SUPPLY.

b) VENTILATE AREA.

c) CALL YOUR LOCAL GAS SUPPLIER.

NEVER USE AN OPEN FLAME TO CHECK FOR GAS LEAKS!

6.2.1 Lighting Instructions

Remove lid *(if fitted)* and baskets and set these aside. Ensure fryer pan is clean and completely dry. Ensure also that drain valve is closed. Pour clean, cold oil to -MIN- pan level mark on basket hanging rail.

Both Models

a) Ensure pan is filled with solid/shortening to indicated level and gas supply is established.

b) Ensure burner switch is in off position (O).

c) Press burner switch to on position (I).

d) Refer to individual unit info below.

G401/G401F/G401FX only - Turn knob to select temperature. *(If solid fat is used - Select FMC fat melt cycle).*

Warning
Do not select any setting other than FMC when using solid fats as this will trip Temperature Limit (safety) thermostat or in a worst case scenario, ignite the liquefied oils.

G402/G402F only – *Unit has temperature range of between 130ºC to 190 ºC (See Section 6.3 for instructions on how to change set temperature).*

Refer to individual unit info below.

G401/G401X/G401F/G401FX - Heat demand indicator will illuminate.

G402/G402F only – Display will illuminate with figures **8888** for 2 secs, **CTT** for 2 secs, **r 02** for 2 secs and **SEt dEg** flashes.

Press ↓1 or 4↑ on control panel, last temperature will display, if temperature acceptable press <temperature button 3> to activate. If temperature is not acceptable see section 6.3 for instructions on how to change to set temp. When temperature is set **L.ouu**

displays and the heat demand LED indicator will illuminate (small dot between **L** and **o**)

e) If burner fails to light, lock-out indicator will illuminate. **Note**: Ignition system will try a second ignition sequence - 14 secs after completion of first attempt if no flame is detected during first attempt. *(Unit will only lock out after 2nd attempt).*

f) Reset burner by pressing burner lock-out reset switch.

g) If burner repeatedly fails to light, switch off electrical and gas supplies. Call service engineer.

6.2.2 Fryer maximum basket loading (Both models)

Pre-blanched chilled fries– **2 x 1.5kg baskets.**

Frozen fries – **2 x 1.2kg baskets**.

6.2.3 Using the Controller

G401/G401X/G401F/G401FX Models Only - Manually Operated

When unit is lit as detailed in Section 6.2.1 lighting instructions above, fryer may be operated as follows:-

a) If using solid fat, turn control knob clockwise to select FMC *(Fat Melt Cycle).*

b) When solid/shorteninghas liquefied, select desired temperature.

Warning
Do not select any setting other than FMC when using solid fats as this will trip the Temperature Limit (safety) thermostat or in a worst case scenario, ignite the liquefied oils.

c) Fat or oil temperature will then be governed by controller to desired set temperature, selected by user on the control knob.

G402/G402F Models only – Programmable

When unit is lit as detailed in Section 6.2.1 lighting instructions above, fryer may be operated as follows:-

NOTES:

1) There is NO solid fat melt pulsing cycle (*FMC)* incorporated in this controller.

2) The oil temperature will be governed by the controller at a temperature range between 130 ⁰C and 190⁰C. See Section 6.3 for instructions on how to set temperature.

3) When actual temperature is within 10⁰C of set point the display reads **redy**. See Section 6.3 for instructions on how to display actual or set temperature).

   Before carrying out any cooking operations, controller should be set up for particular application of use *(e.g. up to four timer programmes, product frying temperature, ⁰C/⁰F).* This can all be carried out using the following guide in Section 6.3.

Operating the Controller:

a) **Start a timing cycle**: Press any product key *(1 to 4)* to start a timing cycle. If key is programmed, the correct time will be displayed and will immediately start to count down and LED above key will flash. DONE will display when cook cycle has ended and alarm will sound. If DONE is displayed immediately and alarm sounds, the key has not been programmed See Section 6.3 for programming details.

b) **Stop a timing cycle**: Press and hold an active product key for 3 seconds, or press key 3 times within 2 seconds.

c) Respond to a **DONE** alarm: Cancel signal by pressing same product key used to start timing cycle.

d) **Multiple timing cycles**: If a second or third product key is pressed while the first is still active, the shortest time remaining key is displayed and only the LED above key flashes, the other*(s)* remain constantly lit. Once shortest time programme ends and is accepted, next shortest is displayed and LED above flashes. **Note**: All product key timers will count down although not displayed until shorter one ends.

e) **Action Alarms** *(Shake, etc.)*: If control is programmed for action alarm, they will signal at a preset time during the timing cycle. The signal, a dual-rhythm beeping, will last 5 seconds and then self-cancel. The display will flash action alarm time and then will continue counting towards **0:00**.

f) **Viewing Actual/Set Temperatures**: Pressing the temperature key once will display ***"AXXX"*** where XXX is actual temperature in degrees *(C or F depending on how controller is programmed – See Section 6.3).* Pressing the temperature key again within 5 seconds will display ***"PXXX"*** where XXX is the programmed Set temperature of the controller in degrees *(C or F depending on how controller is programmed – See Section 6.3).* If temperature key is not pressed again within 5 seconds, display returns to idle or timer mode.

6.3   PROGRAMMING THE G402/G402F

Display Descriptions

Set dEg – Indicates that the operator needs to set a temperature.

L.ouu - Controller is in operating mode. Actual vat temperature is more than 10° below programmed vat temperature. The dot "**.**" After the first digit ('**L**') indicates that the

rEdy - Controller is in operating mode. Actual vat temperature is within proper cooking temperature range. Vat is ready to begin a cook cycle***.***

HI - Controller is in operating mode. Actual vat temperature is more than 30° above highest programmed vat temperature.

Prob - Control probe is either open circuited or short circuited. Display will be accompanied by an audible alarm if shorted. Check or replace probe.

2:30 - The control is in operating mode and a cook cycle is in progress.

Done - The control is in operating mode and a cook cycle has been completed. Display will be accompanied by a pulsing audible alarm.

6.3.1   Programming temperature set point and temperature scale

a) Press and hold temperature key for 3 seconds. ***"Prog"*** will be displayed. Then press **DOWN** *(key 1)* or **UP** *(key 4)* key.

b) The display will show either *"ºC"* or *"ºF"* *(degrees celsius or degrees fahrenheit)*. Once desired temperature scale is displayed, press temperature key to accept/enter.

c) Display will now alternate between ***"Sett"*** and ***"XXXZ"***   *(where X denotes temperature and Z indicates temperature scale)*.

d) Adjust temperature (range 130-190ºC) using **DOWN** *(key 1)* and **UP** *(key 4)* keys. The longer key is pressed, the faster temperature scrolls.

e) When desired temperature has been reached, press temperature key to accept/enter.

f) To exit temperature programming, press temperature key again.

6.3.2   Programming a Product Cycle Time and Action Alarm

a) Press and hold P key for 3 seconds. ***"Prog"*** will display. **Note**: Programming mode will exit automatically if no keys are pressed within 2 minutes.

b) Select a product key to program *(1 to 4)*. The display will alternate between ***"ti-z"*** and ***"X:XX"*** where **z** is the number of the key pressed and **X:XX** is the set time in minutes and seconds.

c) Adjust the time up or down using the **DOWN** *(key 1)* and the **UP** *(key 4)* keys. The longer key is held, the faster time will scroll.

d) Once desired time is reached, press **P** key to accept/enter.

e) The display will now alternate between **"PrEz"** and **"X:XX"** where **z** is the number of key presses and **X:XX** is action alarm time in minutes and seconds.

   NOTE: The time entered here is the time action is required before the end of the total cycle time entered above. If NO Action time is required, leave at **"0:00"**. Adjust time as c) above.

f) Once desired time is reached, press P key to accept/enter.

g) **"Prog"** will again be displayed and another product key can be selected for programming. Repeat above steps. When no more keys are required to be programmed and **"Prog"** is displayed, press **P** key to exit programming mode and return to idle mode.

SECTION 7 - CHANGING/FILTERING THE OIL

Warning

After filtering, wait 30 seconds before removing bucket.

It is dangerous to use shortening that is too old. This medium has a reduced flash point temperature and is prone to surge boiling.

Caution

To prevent surge boiling, DO NOT EXCEED recommended loads or charge the pan with over-wet food items. NEVER LEAVE a working appliance unattended

Warning

When draining solids/shortening, ensure oil has time to strain through strainer basket. Heavily unfiltered oil may overflow.

Note

This could cause pump to block over a period of time and is considered as misuse of equipment.

Warning

When pumping solids/shortening back into fryer pan. Ensure all trace of solids/shortening is emptied from receptacle *(bucket)*.

If oil is not emptied on a regular basis or if oil is left in the receptacle, it may solidify and overflow or spill on to the kitchen floor to create a hazard.

7.1   STARTING THE FILTRATION PROCESS

1. Turn burner & temperature controls ON/OFF switch to OFF position and allow oil to cool below 170°C *(or if cold, heat to minimum temperature of 60°C).* Open cabinet door and pull filter bucket forward.

2. Ensure bucket is clean and emptied of all solid/shortening and debris. Refer to Section 8 for details of how to clean filter components.

3. Ensure that strainer and micro filter are clean.

4. With strainer and micro filter in position, slide bucket back on to runner cradle and back into fryer.

Please Note – Warning

Do not handle filter components or adjacent surfaces when pump is operating. Components will remain hot for a period after filter. Allow cooling. Use of PPE's is recommended.

Note: Burner and temperature controls ON/OFF switch must be in OFF position before operation of filter pump can begin.

7.2 G401F, G401FX and G402F MODELS ONLY

a) Press filtration pump switch to turn on pump.

   Note: With cabinet door open, switch is located at RH side of drain valve *(Refer to Figure 4)*.

b) Turn drain handle clockwise.

c) Pan will drain through strainer basket and microfilter into bucket and will pump back into pan.

d) Clear debris from pan.

e) If pan drain becomes blocked, clear using drain prod.

f) When debris has been removed from pan, turn valve handle anti-clockwise to close valve.

g) Allow pan to refill.

h) If any solid/shortening remains, repeat Step 1.

Warning

Ensure all shortening has been pumped from receptacle before topping up pan.

i) Switch filtration pump off.

j) Top up fryer, if required.

Please Note

If the G401FX/G401X pan has not been refilled until at least the low oil level indication (Flashing hazard triangle) clears, then the fryer will not light.

SECTION 8 - CLEANING and MAINTENANCE

The following procedure should be undertaken, **AT LEAST DAILY.**

RECOMMENDATION

Personal protective equipment *(PPE's)* should be used when cleaning or handling medium within this appliance.

WARNING
NEVER PUMP WATER THROUGH THE FILTRATION PUMP AT ANY TIME!
Water and hot oil are an explosive mixture.

IMPORTANT

Disconnect electrical supply before any cleaning is undertaken.

All spills onto the product and on the floor should be cleaned up immediately.

WARNING

Oil must be allowed to cool to a safe temperature before draining. Do not overfill draining receptacle.

THE APPLIANCE MUST NOT BE CLEANED WITH A JET OF WATER OR BE STEAM CLEANED. DO NOT USE ACID OR HALOGEN-BASED *(e.g. chlorine)* DESCALING LIQUIDS, FLAMMABLE LIQUIDS, CLEANING AIDS OR CLEANING POWDERS. NEVER CLEAN PRODUCTS WHILST THEY ARE HOT.

Stainless Steel Surfaces

It should be noted that certain scouring pads including nylon types, could easily mark stainless steel. Care should be exercised during cleaning process.

When rubbing stainless steel with a cloth, always rub along in grain direction.

8.1   CLEANING THE APPLIANCE.

Unit should be switched OFF and fry pot drained of oil.

a) Carry out actions detailed in Sections 8 and 9.

b) Remove baskets, fish plate and crumb catcher. Soak these components in hot soapy water.

c) With drain valve open, remove any traces of debris from fry pot using a clean, damp cloth.

   NOTE: Care should be taken not to damage both sensor probes located at the front of the pan.

d) Remove strainer and micro filter; soak these in hot soapy water.

e) Wash, rinse and dry removed items thoroughly. Set these aside.

f) Close drain valve.

g) Fill fry pot 3/4 full with hot water.

h) Clean pan using a soft, clean cloth and hot soapy water, rub away any stubborn staining with a scouring pad and suitable detergent.

i) Slide up the oil level sensor guard (G401X/G401FX only).
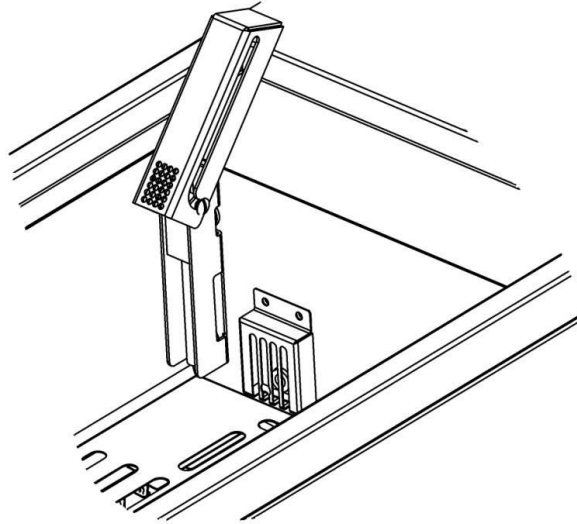
Oil level sensor guard raised for cleaning

j) Clean guard and sensor probe using a soft clean cloth and hot soapy water (G401X/G401FX only).

   NOTE: Care should be taken not to damage the oil level sensor probe located at the front of the pan.

k) Open drain valve. Drain water into bucket below.

l) Use clean water to rinse fry pot and dry thoroughly.

m) Close drain valve.

n) Return crumb catcher, fish plate and baskets to pan.

o) Slide down oil level sensor guard (G401X/G401FX only).
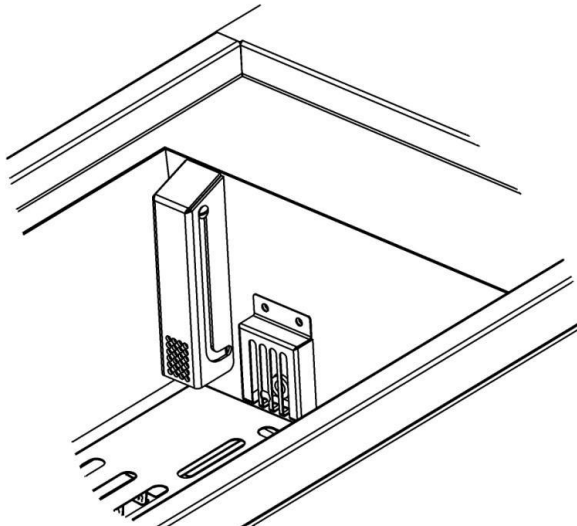
Oil level sensor guard lowered for normal operation

p) Remove oil bucket by pulling forward then upward.

q) Use handles and lift oil bucket to sink.

r) Pour away soiled water.

s) Thoroughly wash, rinse and dry oil bucket and oil suction pipe.

t) Replace strainer and micro filter in oil bucket and return oil bucket to cradle.

u) Fill fry pot with clean oil/solid/shortening to -MIN- mark. To relight, refer to Section 6.2.

SECTION 9 - PREPARATION OF SOLID FATS/SHORTENING

COOKING HINTS

Allow approximately 10 minutes for unit to heat up from cold to required operating temperature.

CHOICE OF FRYING MEDIUM

Select a top quality medium to obtain optimum results. Shortening or solid fats can be used if necessary.

Solid fats MUST be heated carefully as these have a lower smoke point temperature than shortening.

The G401/G401X/G401F/G401FX is equipped with a fat melt cycle that will pulse heat into the fryer.

A quality shortening is a more stable frying medium. It allows longer periods of use without smoking or foaming. It will also give food a better flavour.

Quality shortening has a higher flashpoint temperature and will reduce gumming around the pan.

Regular filtering will help improve lifespan of the medium.

WARNING
NEVER MIX SHORTENING AND SOLID FAT!

Charging the pan

Prior to operation, clean fry pot out using hot water and detergent. Rinse out and dry thoroughly.

Ensure drain valve is closed. Fill fry pot with cold shortening to -MIN- level mark on fish plate.

Approximate maximum oil level capacity is 18 litres.

Solid Fat

G401X/G401FX Only – For first use it is recommended that the solid fat is pre-melted before being added to the fry pot.

If solid fat is to be used, remove fish plate and cut fat into small pieces. Place 17kg in fry pot and pack it down.

Position fish plate upon the top of fat. Push front end into fat lightly until front edge is below temperature probe.

Ensure that **FAT MELT CYCLE** *(G401/G401X/G401F/G401FX only)* is selected for this process.

Note

Fish plate will lower slowly into fry pot as solid fat melts.

WARNING

If fish plate does not sit flat, lift plate from centre slightly and lower carefully to ensure that no splashing of hot shortening occurs.

Check that correct shortening level is achieved when all solid fat has melted. Required temperature may then be set.

Solid fat should always be heated this way to prevent overheating and burning.

WARNING
It is dangerous to use shortening that is too old. Such shortening has a reduced flash point temperature and is prone to surge boiling.

CAUTION
To prevent surge boiling. DO NOT EXCEED recommended loads or charge pan with over-wet food items. NEVER leave a working appliance unattended.

SECTION 10 - COOKING HINTS

Frying food involves many variables and the following information is a guide only.

a) Ensure frying medium is clean and free of debris.

b) When topping up with oil, ensure oil level does not exceed **-MIN-** line when cold and **-MAX-** line when hot.

c) Never overfill baskets with food product.

Warning (G401X/G401FX only)
Do not pour food stuffs directly onto the oil level sensor guard, as this may affect the performance of the oil level sensor.

d) Filter oil as often as is practically possible. Remember, this can be done whilst oil is below 180°C.

e) It is advised that a skimmer is used continuously between frying batches to remove any floating debris. Failure to do this can result in the oil becoming bitter to taste.

f) During quiet spells, it is recommended that thermostat is turned down to a lower setting. This will conserve energy in addition to extending expected oil life.

g) To ensure a good eating experience, fry food as near to serving time as possible.

h) After serving and when fryer has been turned off, replace lid to ensure that no foreign bodies can contaminate frying medium.
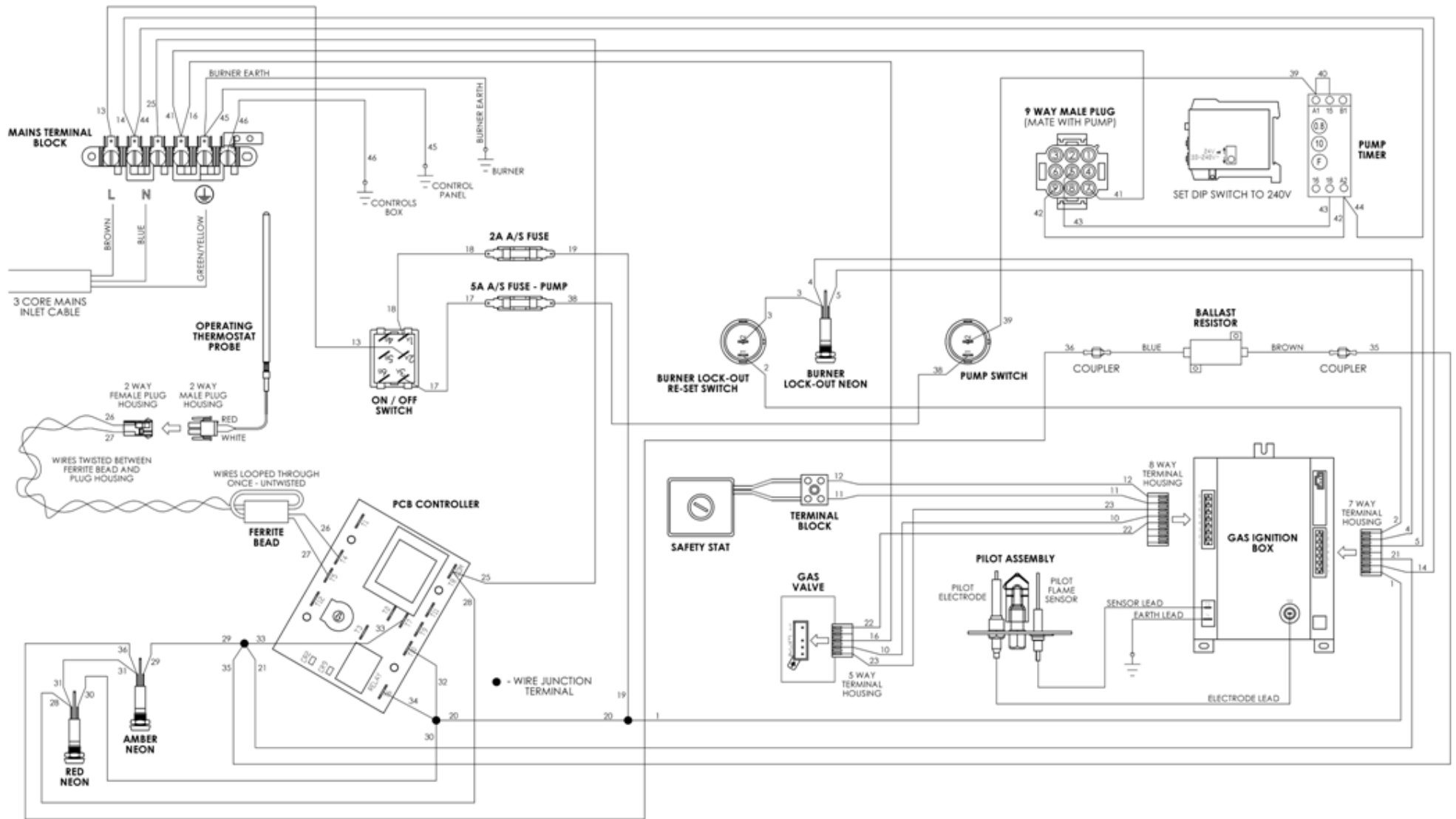
SECTION 11 – WIRING DIAGRAMS
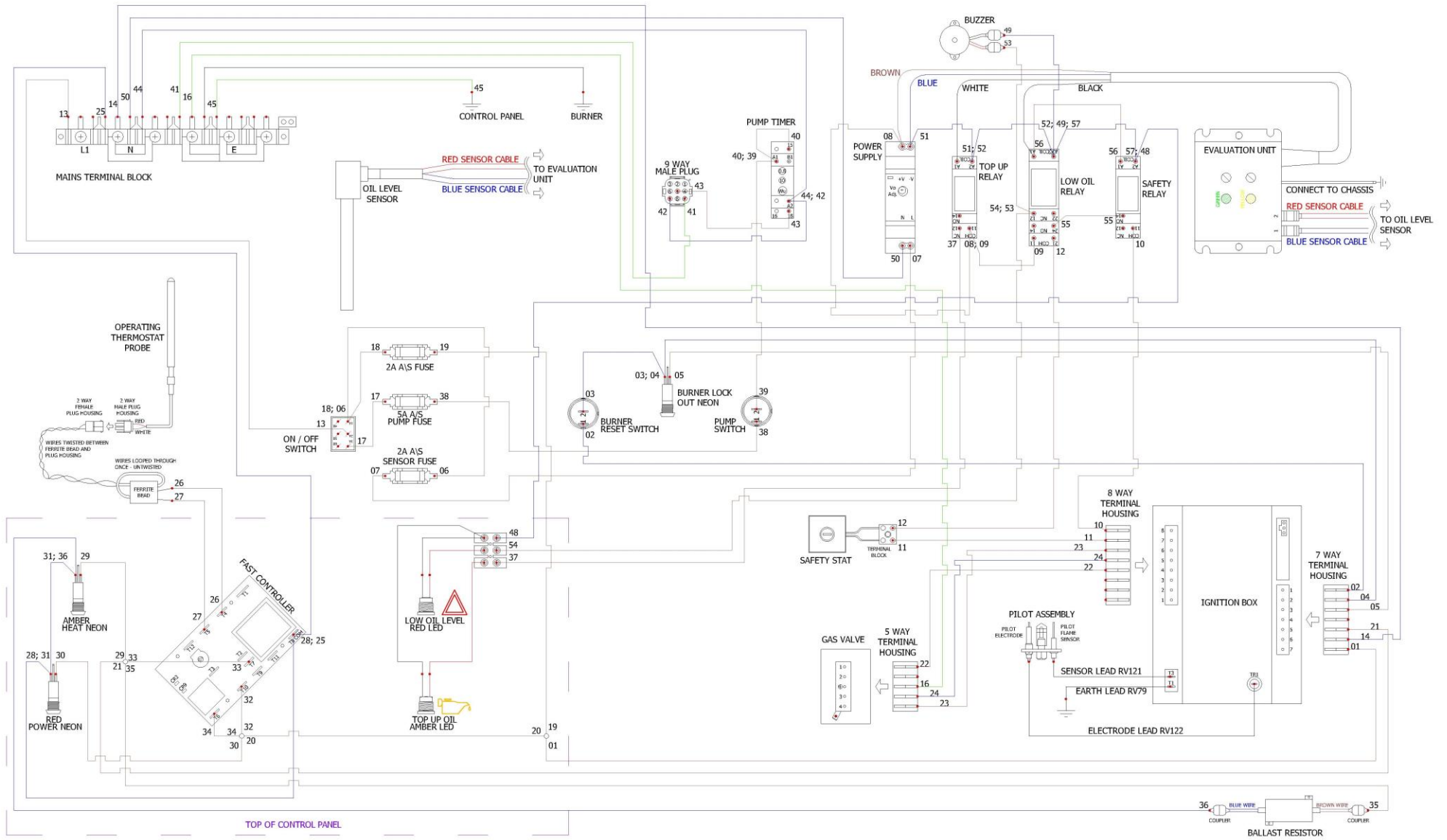
WIRING DIAGRAM FOR G401
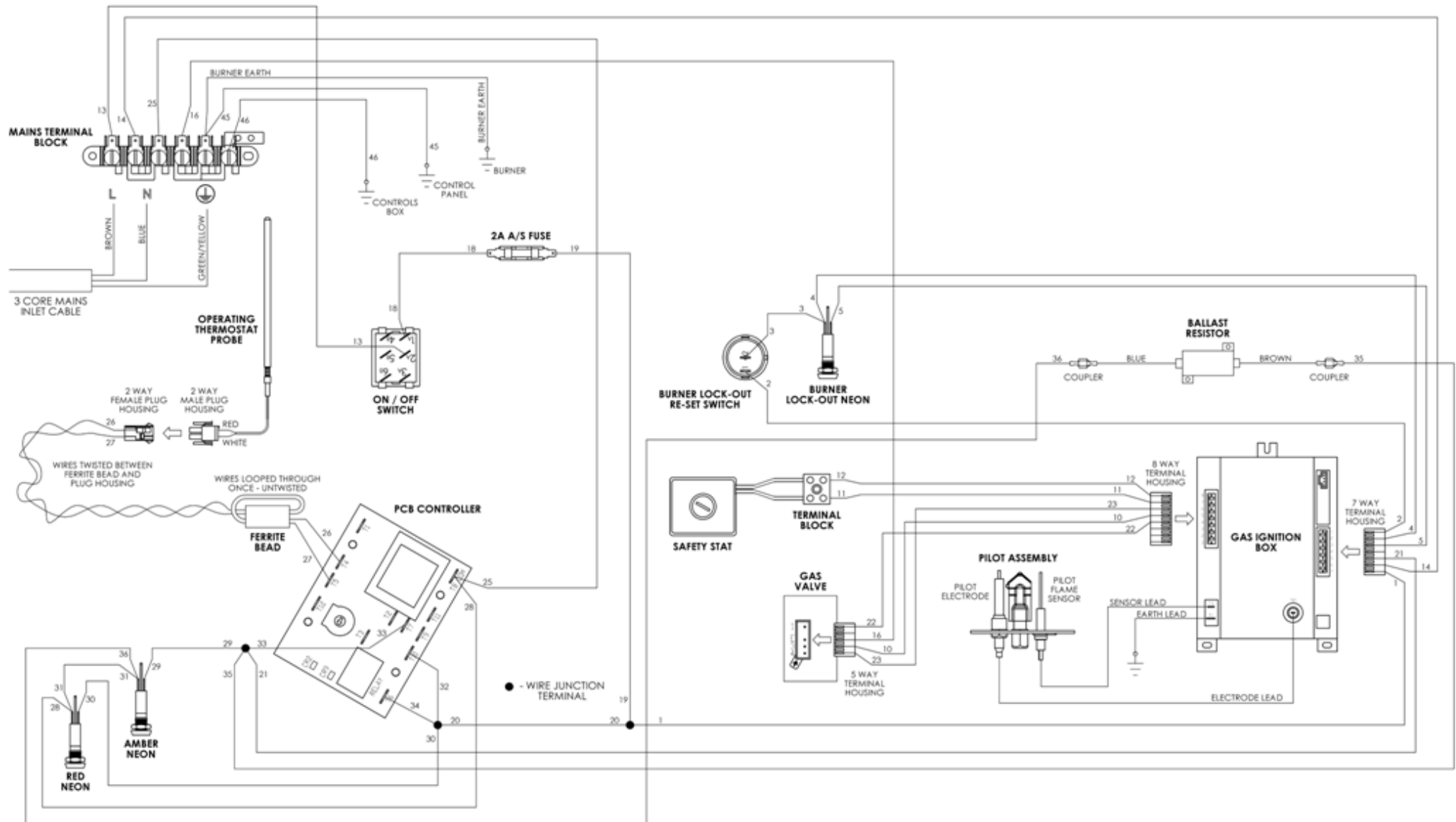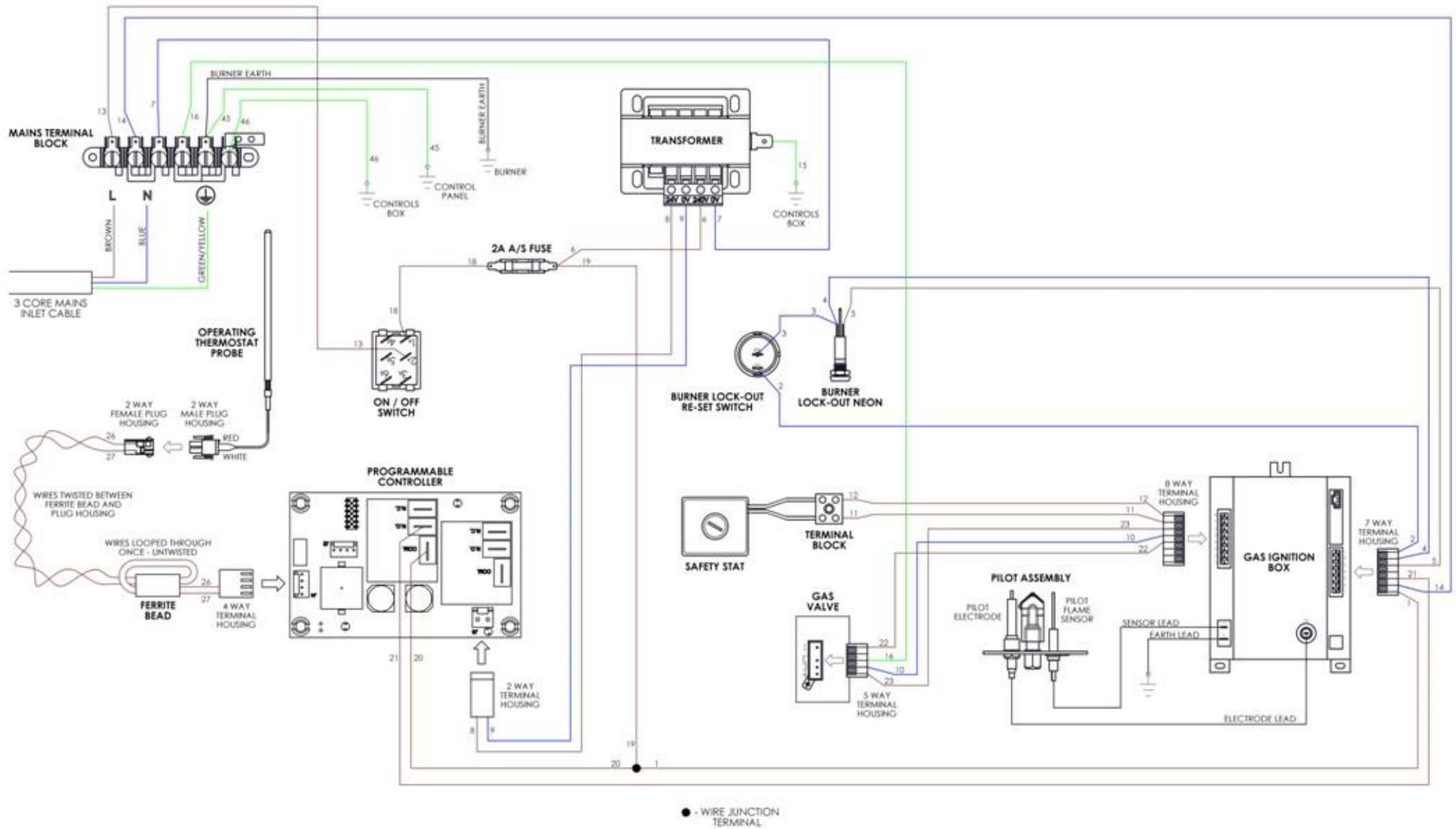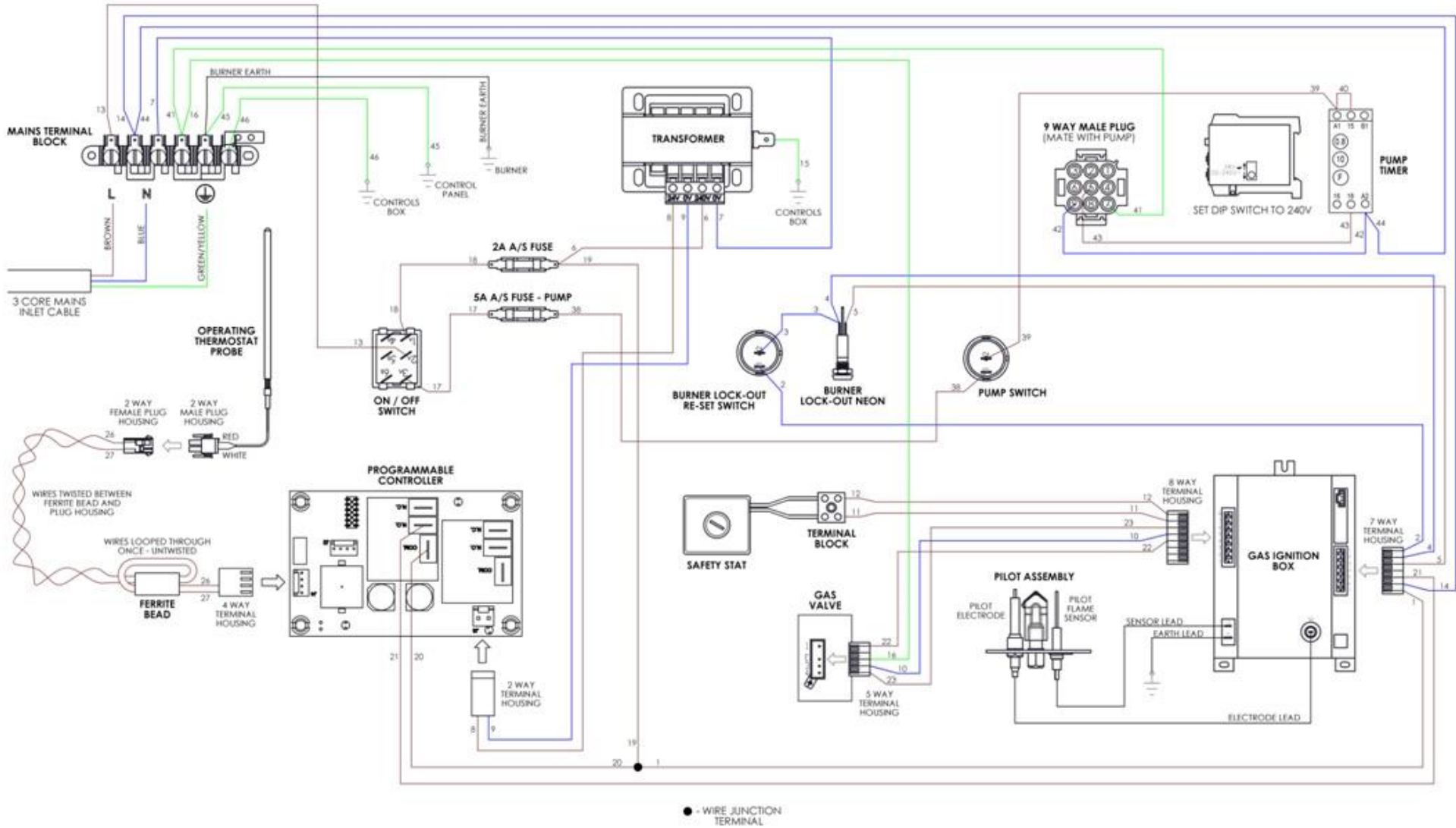
WIRING DIAGRAM FOR G401X
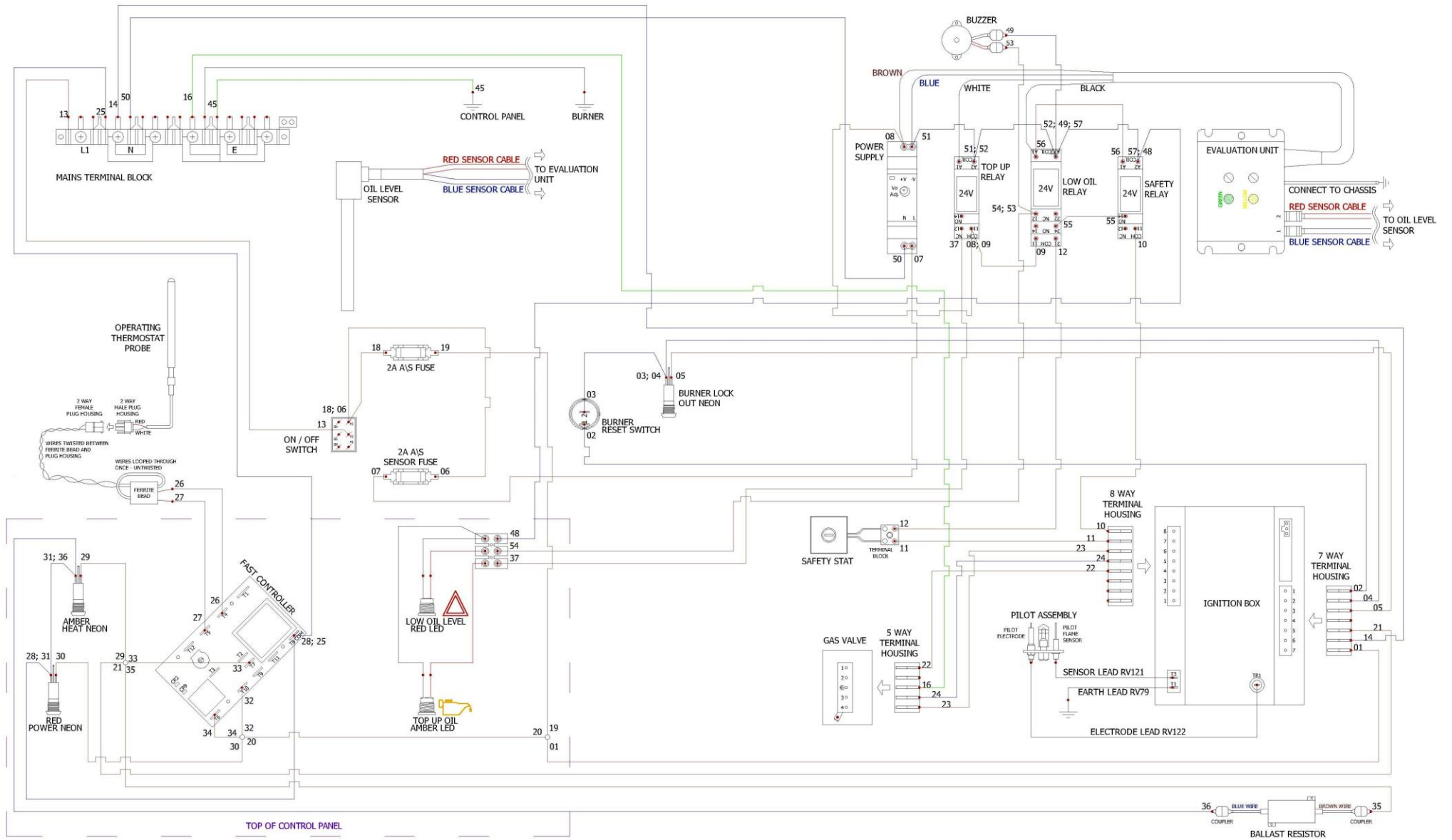
WIRING DIAGRAM FOR G401F
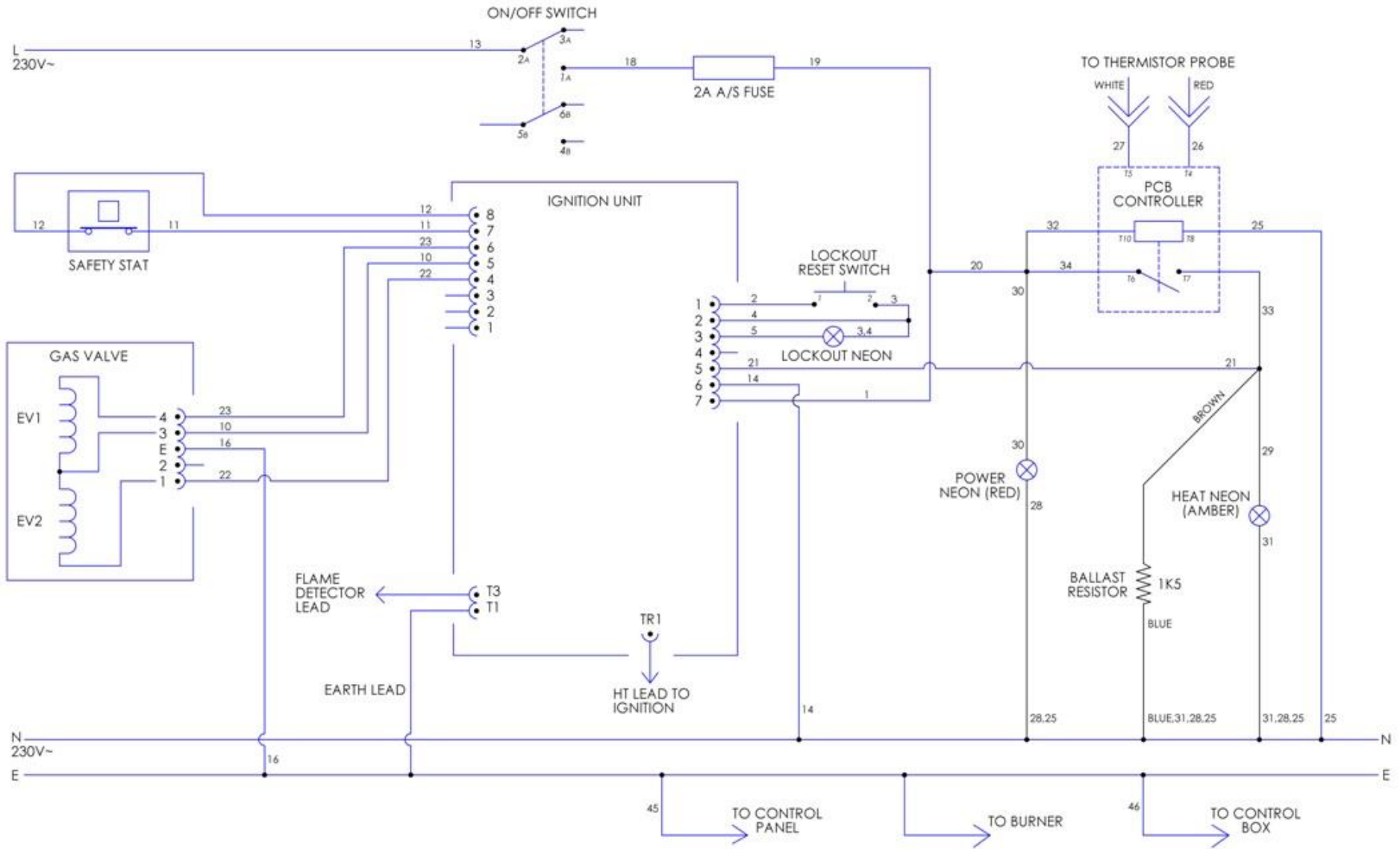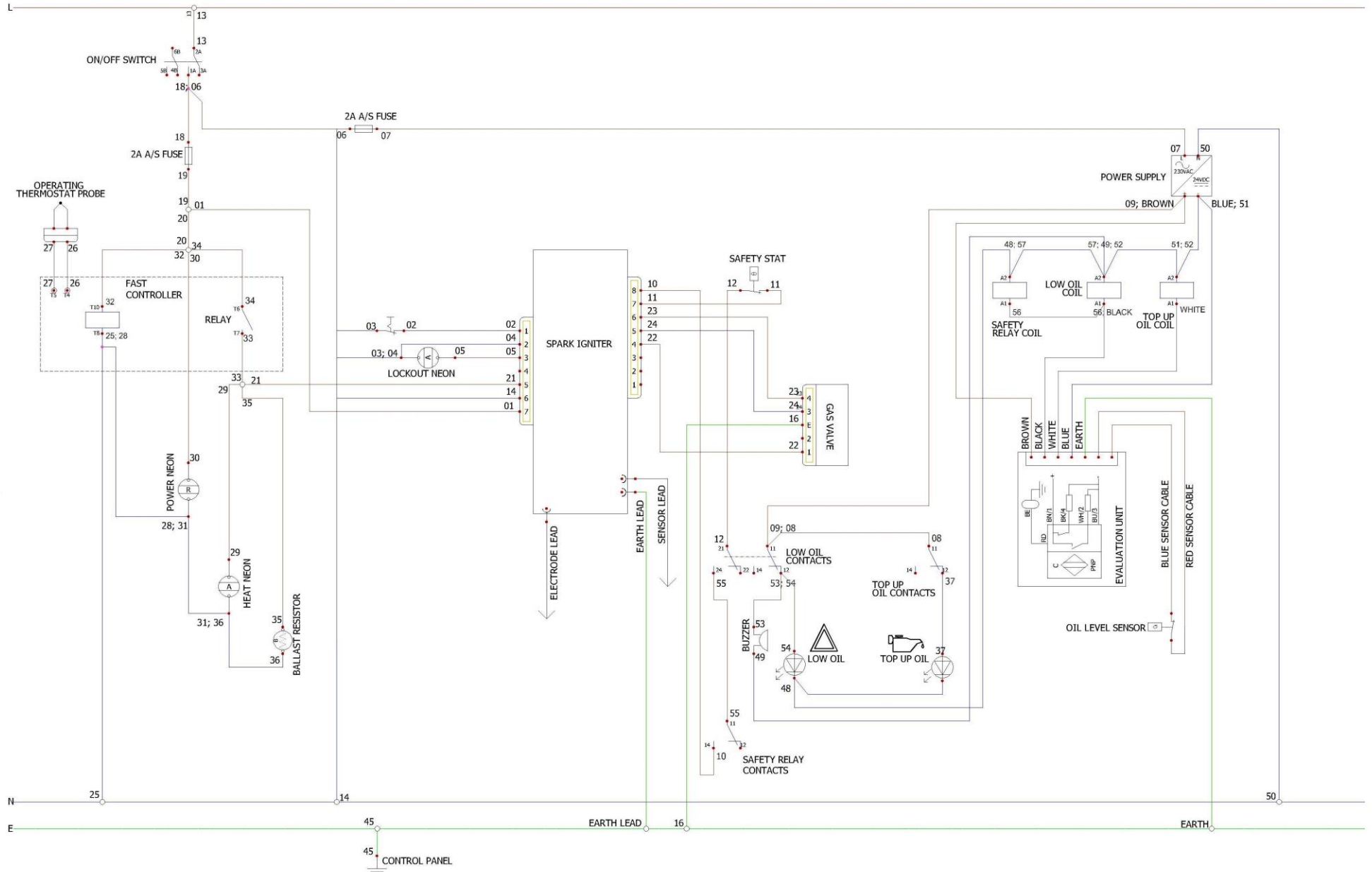
WIRING DIAGRAM FOR G401FX

WIRING DIAGRAM for G402

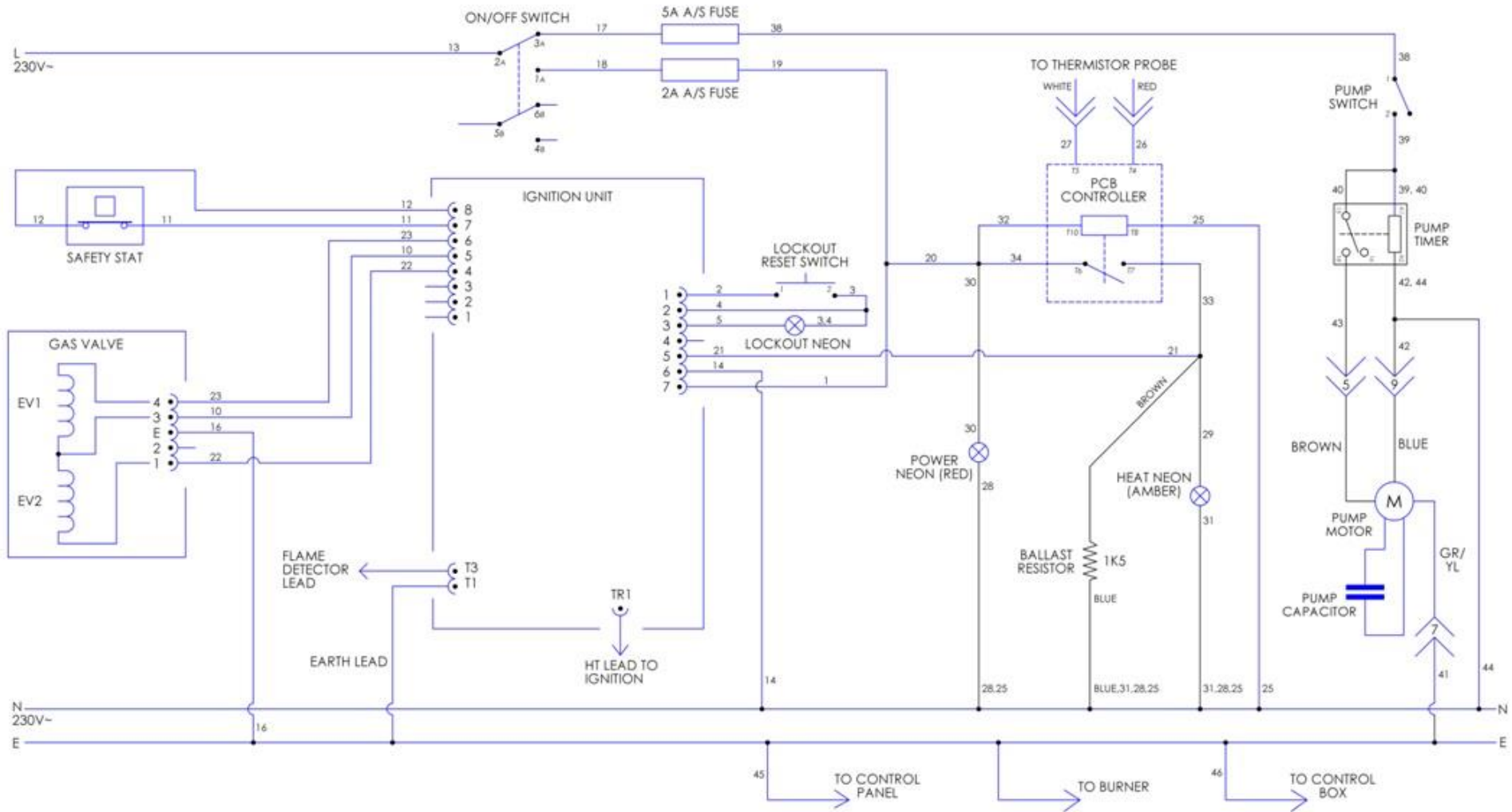**WIRING DIAGRAM for G402F**

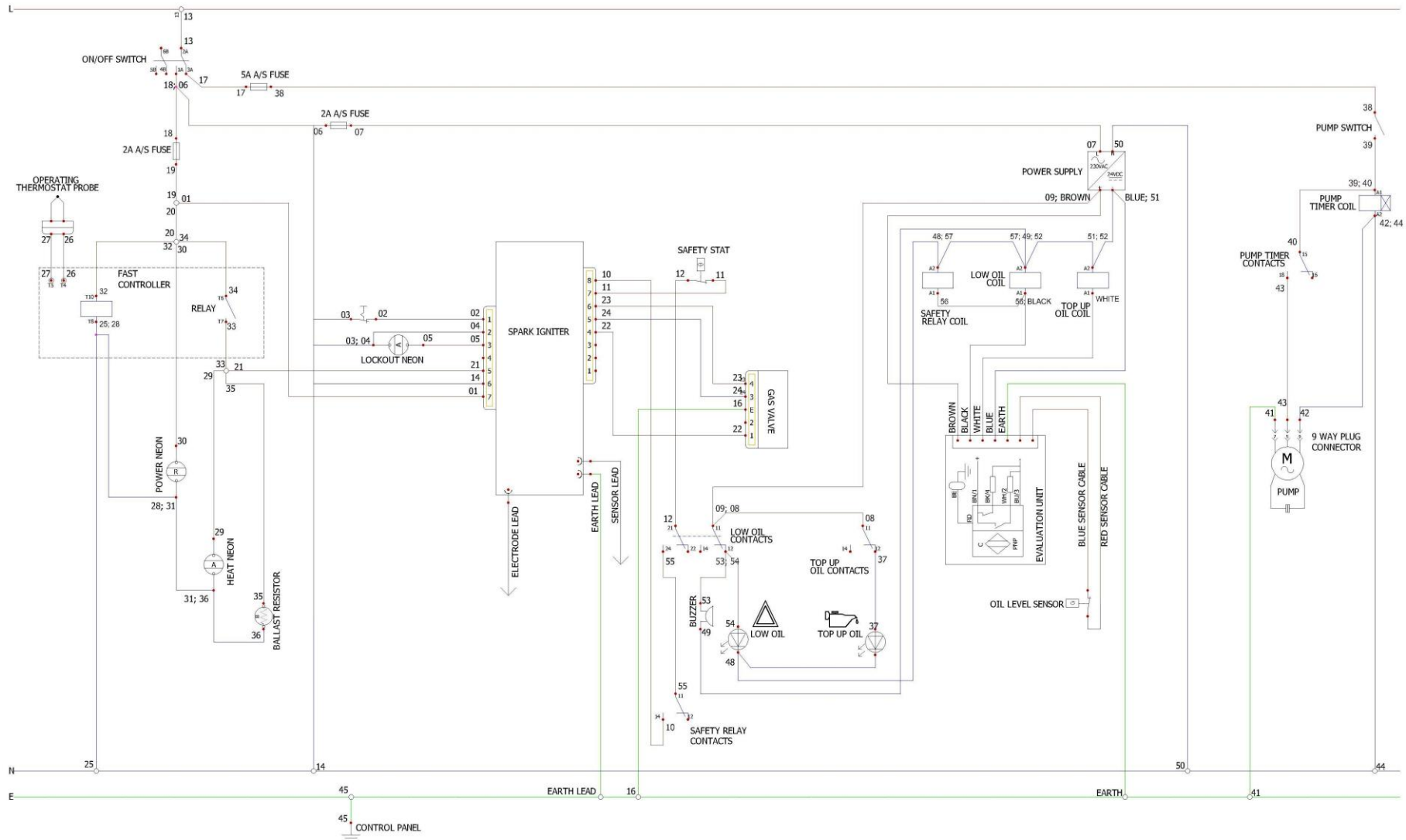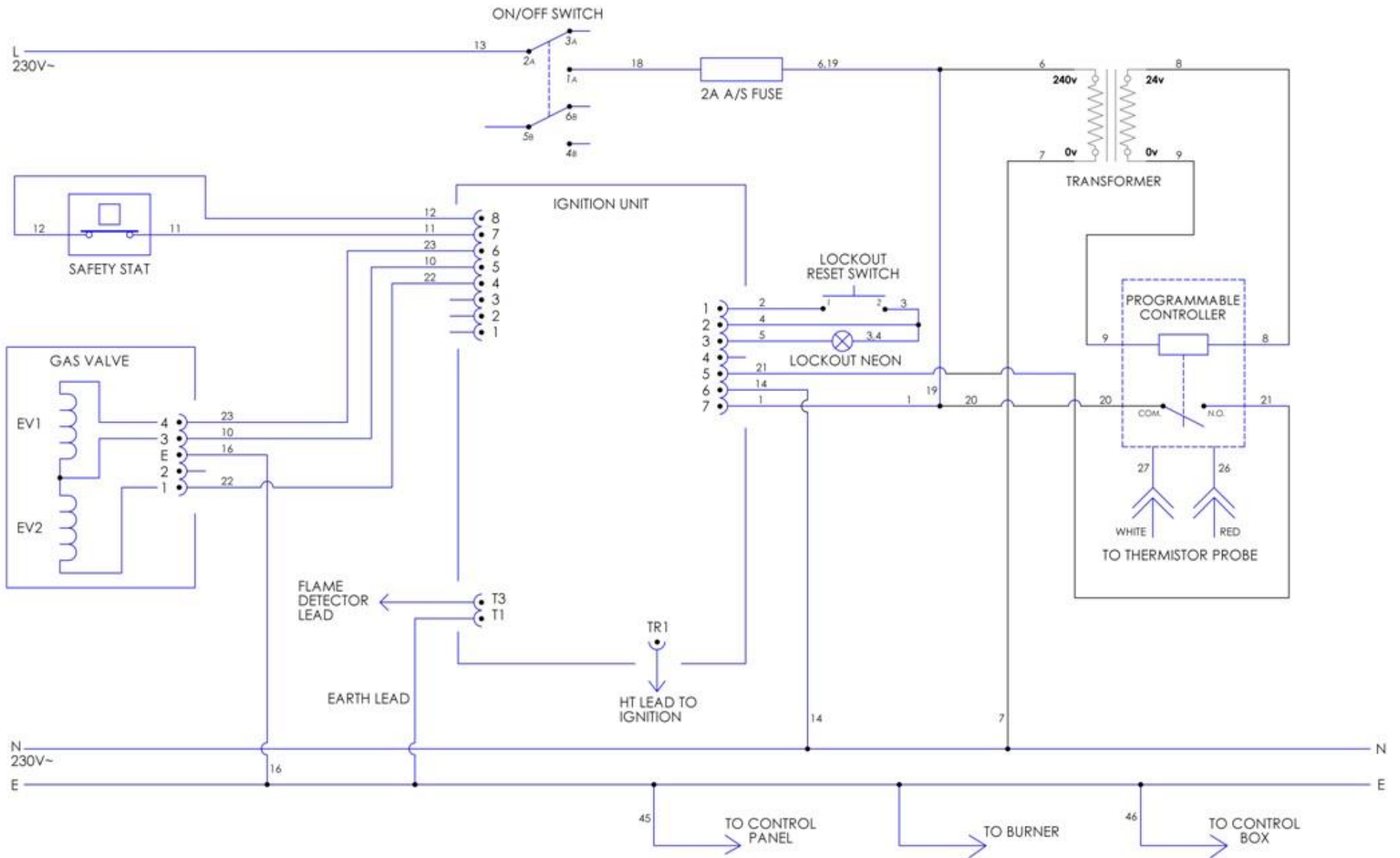# CIRCUIT DIAGRAM FOR G401X

CIRCUIT DIAGRAM FOR G401F

CIRCUIT DIAGRAM FOR G401FX

CIRCUIT DIAGRAM FOR G402

CIRCUIT DIAGRAM FOR G402F