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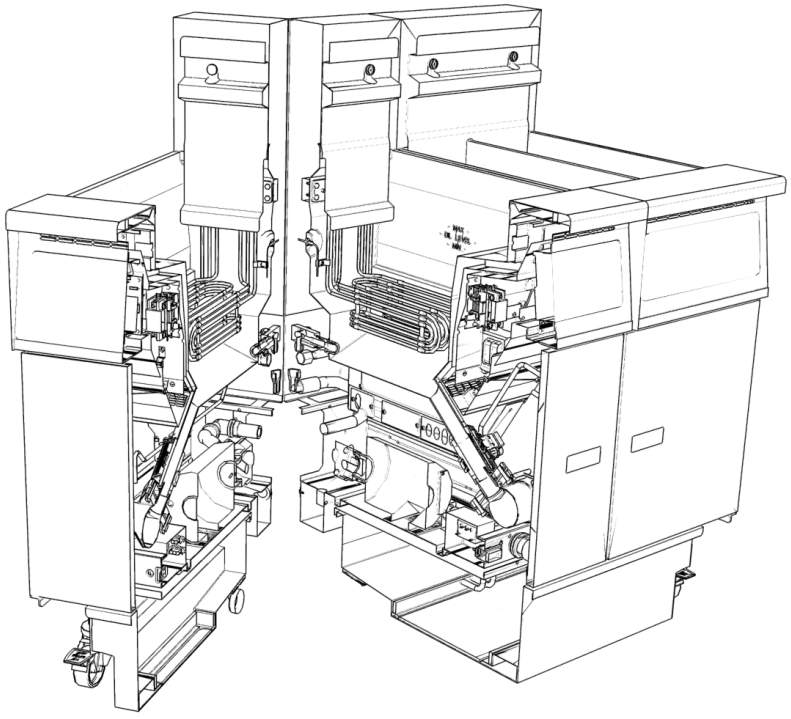
Technical Service and Exploded Parts For Electric Fryers Covering Models SEH50 Full and Split



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L22-238 Rev 2 (10/12)

TO THE PURCHASER, OWNER AND STORE MANAGER

Please review these warnings prior to posting them in a prominent location for reference.

WARNING

DO NOT store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WARNING

Improper installation, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this appliance.

WARNING

Installation, maintenance and repairs should be performed by a Pitco Authorized Service and Parts (ASAP) company technician or other qualified personnel. Installation, maintenance or repairs by unauthorized and unqualified personnel will void the warranty.

WARNING

Installation and all connections must be made according to national and local regulations and codes in force.

WARNING

A country approved all pole circuit breaker with a minimum open contact gap of 3mm must be used for proper installation. (CE countries)

WARNING

During the warranty period if a customer elects to use a non-original part or modifies an original part purchased from Pitco and/or its Authorized Service and Parts (ASAP) companies, this warranty will be void. In addition, Pitco and its affiliates will not be liable for any claims, damages or expenses incurred by the customer which arises directly or indirectly, in whole or in part, due to the installation of any modified part and/or received from an unauthorized service center.

WARNING

This appliance, when installed, must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, or the Canadian Electrical Code, CSA C22.2, as applicable.

WARNING

DO NOT alter or remove structural material on the appliance to facilitate storage or for any other reason.

WARNING

This appliance is intended for professional use only and should be operated by fully trained and qualified personnel.

WARNING

DO NOT use the electrical cord as a leash to move the appliance. Series injury and appliance damage can occur.

WARNING

If the supplied power cord or receptacle is damaged, it must be replaced by a Pitco Authorized Service and Parts (ASAP) company technician, or a similarly qualified person in order to avoid a hazard.

WARNING

The power supply must be disconnected before servicing, maintaining or cleaning this appliance.

WARNING

The appliance is NOT jet stream approved. DO NOT clean the appliance with a water jet.

WARNING

DO NOT attempt to move this appliance or transfer hot liquids from one container to another when the unit is at operating temperature or filled with hot liquids. Serious personal injury could result if skin comes in contact with the hot surfaces or liquids.

WARNING

DO NOT sit or stand on this appliance. The appliance's top panel, filter pan, filter carriage, pan cover is not a step. Serious injury could result from slipping, falling or contact with hot liquids.

WARNING

NEVER use the appliance as a step for cleaning or accessing the ventilation hood. Serious injury could result from slips, trips or from contacting hot liquids.

WARNING

The filter pan should be dry and free of water droplets prior to use. Serious injury could result from hot steam vapors when hot oil/shortening mixes with water.

WARNING

DO NOT overfill filter pan with hot oil/shortening. Do not leave appliance unattended while draining or refilling with oil/shortening. Over filling the appliance can cause serious injuries and damage the appliance.

WARNING

The contents of the crumb catch and/or filter pan of any filter system must be emptied into a fireproof container at the end of each day. Some food particles can spontaneously combust if left soaking in certain types of oil or shortening.

WARNING

Completely shut the appliance down when the oil/shortening is being drained from the appliance. This will prevent the appliance from heating up during the draining and filling process. Serious injury and appliance damage can occur.

WARNING

This appliance is intended for indoor use only.

WARNING

DO NOT operate appliance unless all panels and access covers are attached correctly.

WARNING

It is recommended that this appliance be inspected by a qualified service technician for proper performance and operation on a yearly basis

WARNING

This appliance is designed to operate on a specific voltage. This information can be found on the data plate located on the rear of the appliance

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Table of Contents

Chapter 1: HOW DOES IT WORK?

The SEH 50 fryer components function in specific order of operation. Knowing and understanding the sequence of fryer and components operation will enable you to diagnose equipment failure more accurately.

Heating System

Power to the machine is turned ON:

- If Fuse F1 on the Relay board is good, the A.C. light will illuminate. The computer is supplied with 24VAC and, if the drain valve handle is closed, the proximity switch will supply 24 VAC to the DVI (drain valve interlock) Input at the computer.
- The computer is turned ON:
- The side on relay will be energized, closing the circuit and the S.O. light on the Relay Board will illuminate. If the hi limit is NOT tripped the safety (side on) contactor will energize.
- Computer calls for heat:
- The 24 VDC "heat demand" relay will energize supplying the heat demand contactor with 24 VAC and the H.D. light on the Relay Board will illuminate. This will also supply the computer with a heat feedback signal.

Hi Limit System:

- If the hi limit trips, it causes the side on and heat demand contactors to lose 24VAC supply and the heat feed back loses 24VAC. The computer will display IGNITION FAILURE or HEAT FAIL. After the hi limit resets (unit cools to 375°F ± 20°F) the computer will have to be turned off and back on for the unit to heat.

Filter System:

- Opening the RED return valve handle will close the proximity switch causing the "pump run" relay to be energized. The pump motor will begin to run. Closing the return valve handle will de-energize the relay and the pump motor will stop running.

- The pump system is equipped with a circuit breaker which will de-energize the system and the heat tape in the event of overcurrent. The circuit breaker switch must be in the ON position for the pump and heat tape to operate.

- The return piping system may be provided with optional heat tape to prevent solidification of solid shortening. The heat tape is low wattage and is on constantly to maintain liquid shortening in the line.

Optional Basket Lift:

- The basket lift is a self contained unit that requires a 120, 208 or 240V supply. With most fryer configurations, the power is supplied from the entrance box at the back of the fryer but some cofigurations will require power direct from a wall outlet. When power is supplied to basket lift assembly, the baskets will lift to the up position. The baskets will lower with a 24 VDC output from the controller.

Chapter 2: COMPONENT TROUBLESHOOTING:

TEMP °F/°C	RESISTANCE OHMΩ	TEMP °F/°C	RESISTANCE OHMΩ
60/16	139,055	330/166	1,192
80/27	84,644	335/168	1,123
100/38	53,146	340/171	1,058
120/49	34,328	345/174	998
140/60	22,755	350/177	942
160/71	15,446	355/179	890
180/82	10,716	360/182	841
200/93	7,586	365/185	795
210/99	6,427	370/188	752
220/104	5,470	375/191	712
240/116	4,013	380/193	675
260/127	2,991	385/196	640
280/138	2,262	390/199	607
300/149	1,734	395/202	576
320/160	1,347	400/204	547
325/163	1,267		

Probe:

The resistance of the probe will change as the temperature changes. The resistance will decrease as the temperature rises. The lower the temperature the greater the resistance change will be per degree of temperature change, as the temperature approaches the working range of the probe, the resistance change will become more linear.

If the probe is suspect, check its resistance and the oil/air temperature at which it was taken. Compare these values on the chart below.
If the probe returns an open circuit or 0 Ohms reading it should be replaced. If the resistance varies more than 30 Ohms when being checked between 325-375°F the probe will give a false temperature reading on the computer and should be calibrated (up to 10°F) or replaced. However, it will continue to operate at a slightly higher or lower temperature.

Allow the oil to cool and check the probe resistance at a lower temperature. As can be seen from the chart a greater variation can be tolerated at a lower temperature.

Heat Demand Contactor:

The heat demand contactor has a 24VAC coil and will energize when the correct voltage is supplied to the coil. When energized, the contacts will close, allowing current to flow through the elements. The coil resistance is 192 ohms out of circuit.

Hi Limit:

The hi - limit switch is a normally closed switch until the temperature at the hi-limit bulb reaches 425°F ± 20°F.

WARNING!
This test should be performed by a qualified technician only! Monitor the fryer closely. This test will cause the oil to heat past the normal operating temperature and can cause damage to the machine and its operator if care is not taken.

WARNING!
This test will cause the elements to heat continuously. Remove test resistor when test is complete. Leaving the test resistor in the fryer could cause damage to equipment and/or personal injury.

To test the hi-limit, use a 2kΩ - 5kΩ resistor to simulate a 230°F - 275°F temperature. This will cause the elements to heat continuously until the hi-limit trips or the fryer is turned off.

•If the fryer is equipped with a **computer or digital controller**, plug the resistor in at connector J41 behind the front panel.

•If the fryer is equipped with a **solid state controller** behind the door, plug the resistor in at connector J43 behind the front panel.

If the switch does not trip between the prescribed limits it is defective and should be replaced. Once tripped, the switch cannot be reset until the oil has cooled to approximately 375°F ± 20°F. If the switch does not reset after oil has cooled it is defective.
Once the oil has cooled the hi-limit reset button must be pressed to reset the hi-limit relay on CE and export units only.

Drain Valve & Return Valve Switches:

These switches are a magnetically operated proximity switches. When the Drain Valve handle is moved to the open position, the Actuator will move away from the switch causing the switch to open. When the Drain Valve is closed the switch will close.

Opening the RED return valve handle will close the proximity switch causing the "pump on" relay to be energized. The pump will begin to pump. Closing the return valve handle will de-energize the relay and the pump will stop pumping. These switches can also be checked with an Ohm meter. The normal gap between the Actuator and the Sensor switch on the valve handle is $^{1}/_{8}$" - $^{1}/_{4}$" (3 - 6mm).

Transformer:

Transformers are multiple input voltage 24 volt output voltage and can be checked by reading the input and output voltages. A quick check for 24VAC can be done at the relay board behind the computer. The AC led will be lit if the F1 fuse is good and the board is receiving 24VAC

Elements:

Each Element has three coils inside it, check all element

coils out of circuit with an Ohm Meter, the resistance should correspond to the chart below, if the resistance varies more than 5 Ohm the element will need to be changed. Also check for continuity to ground on each end of the suspect element, there should be no continuity to ground.

208 volt elements	18.5 Ohms
220 volt elements	20.7 Ohms
240 volt elements	24.6 Ohms

Safety (Side On) Contactor:

Check the coil with an Ohm Meter, the resistance should be approximately 3 - 6 Ohms out of circuit. If it does not have this resistance it should be changed.

Relay Board:

Note: J connectors are marked on the relay board.

•With 24 VAC supplied to pin #2 at connector J35 and a good F1 fuse, the relay board will have a 24 VAC output at pin #2 on connectors J33 and J34 and the A.C. indicator will be illuminated.

Note: If the fryer is equipped with a computer or solid state digital, at connection J33 there will be a jumper from pin #2 to pin #10 to supply 24 VAC to pin # 2 at connection J31 to supply the controller with 24VAC.

•When the board receives a 24 VDC side on input at pin #7 on connectors J31 or J33, the S.O. indicator will illuminate, the side on relay (S.O.) will energize and there will be a 24 VAC output at pin #4 on connector J32.

•When the board receives a 24 VDC heat demand input at pin #6 on connectors J31 or J33, the H.D. indicator will illuminate, the heat demand relay (H.D.) will energize and there will be continuity between pin #1 and pin #2 at connector J32.

Computer Control:

Note: All controller test points are at connector P/J1 (closest connector to the controller).

•With 24 VAC supplied to pin #1(24VAC supply) and pin # 5(24VAC input from DVI), the display should read "OFF".

•With the controller turned on, there will be a 24 VDC output at pin #9 (side on).

•When the controller calls for heat, there will be a 24 VDC output at pin #8 (heat demand) and a 24 VAC input at pin #6 (heat feed back). If the controller does not receive the 24 VAC input at pin #6 in approximately 90 seconds, the controller will display "HEAT FAIL" or "IGNITION FAILURE". This would indicate a break in the heat demand or heat feed back circuit.

1. Check the hi-limit switch (is it open or tripped).
2. Check the ignition module (sensing pilot flame, locked out, 24 VAC at MV terminal).
3. Check the heat demand relay (H.D.) on the relay board (is heat demand relay energized, continuity through COM and NO contacts).

•If display reads "PROBE OP" "OPEN", ohm test the temperature probe. Check the wires and connectors between the probe and controller for continuity.

•If display reads "SYSTEM" "FAILURE", test the temperature probe and the wires and connectors between the probe and controller for a short.

•If display reads "DRAINING" "TURN OFF", verify that the drain valve is closed, check the proximity switch on the drain valve, turn the fryer off, then turn the fryer on.

Digital Solid State Control:

Note: All controller test points are at connector P/J1 (closest connector to the controller).

•With 24 VAC supplied to pin #1(24VAC supply) and pin # 5(24VAC input from DVI), the display should read "OFF".

•With the controller turned on, there will be a 24 VDC output at pin #9 (side on).

•When the controller calls for heat, the display will read "HEAt", there will be a 24 VDC output at pin #8 (heat demand) and a 24 VAC input at pin #6 (heat feed back). If the controller does not receive the 24 VAC input at pin #6 in approximately 90 seconds, the controller will display "HEAt" "FAIL" . This would indicate a break in the heat demand or heat feed back circuit.

1. Check the hi-limit switch (is it open or tripped).
2. Check the ignition module (sensing pilot flame, locked out, 24 VAC at MV terminal).
3. Check the heat demand relay (H.D.) on the relay board (is heat demand relay energized, continuity through COM and NO contacts).

•If display reads "Prob", ohm test the temperature probe. Check the wires and connectors between the probe and controller for continuity.

•If display reads "Prob" "HI", ohm test the temperature probe and the wires and connectors between the probe and controller for a short.
•If display reads "drn" "tUrn" "oFF", verify that the drain valve is closed, check the proximity switch on the drain valve.

Primary Solid State Control:

Note: All controller test points are at connector P/J3 (the 12 pin connector at the controller).

•24 VAC is supplied to the controller at pin #1(24VAC supply) and pin # 5 (24 VAC input from DVI),
•With the controller turned on, there will be a 24 VDC output at pin #9 (side on) and the green indicator will be illuminated.
•When the controller calls for heat, there will be a 24 VDC output at pin #8 (heat demand), the yellow indicator on the left will be illuminated and there will be a 24 VAC input at pin #6 (heat feed back).
•When the controller receives the 24 VAC input at pin #6, the yellow indicator on the right will illuminate. If the controller does not receive the 24 VAC input at pin #6, the indicator will not illuminate. This would indicate a break in the heat demand or heat feed back circuit.

1. Check the hi-limit switch (is it open or tripped).
2. Check the ignition module (sensing pilot flame, locked out, 24 VAC at MV terminal).
3. Check the heat demand relay (H.D.) on the relay board (is heat demand relay energized, continuity through COM and NO contacts).

•If the green indicator and the yellow indicator on the left come on and shut off when the controller is turned on, that indicates an open or shorted probe or wires in between the probe and the controller.
•If none of the indicators illuminate when the controller is turned on, verify that the drain valve is closed and that the magnetic proximity switch has continuity when the drain valve is closed. Also verify that there is 24 VAC at pin #1 (24 VAC supply) and pin #5 (24 VAC input from DVI).

Backup Solid State Control:

The backup solid state control works the same as the primary solid state control, with the exception of the 24 VAC supply passing through the solid state backup transfer switch to the computer or solid state digital control.
If the transfer switch is set to backup or if the backup controller has been unplugged, the primary controller will not work. The jumper must be installed on the relay board (connection J33) to allow the primary controller to function if the backup controller is removed.

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Optional Basket Lift:

•The basket lift is a self contained unit that requires a 120, 208 or 240V supply. With most fryer configurations, the power is supplied from the entrance box at the back of the fryer but some cofigurations will require power direct from a wall outlet.
•When supply voltage is applied to the basket lift assembly, it goes through a voltage selector switch to a multi tap 24V, 80VA transformer. The transformer supplies 24 VAC to the driver board at connection J54.
Note: When power is supplied to basket lift assembly, the baskets will lift to the up position.
•When a timer is activated, it will send a 24 VDC signal to pin #1 (24 VDC+) at connector J51 on the driver board. The driver board will generate a 24 VDC output at J53 to the basket lift motor, lowering the basket.
Note: For the purpose of testing, jumping pins #1 and #2 at connection J5 on the driver board will simulate a 24 VDC signal from the controller, lowering the basket.

Fryer Trouble Shooting

PROBLEM	POSSIBLE CAUSE	ACTION
Computer will NOT turn ON Display does NOT light	A. No power to the machine B. F1 Fuse blown C. T1A Transformer	A. Check building circuit breaker, verify power cord is plugged in B. Check F1A Fuse. Replace if defective C. Check voltage in and out of T1A
Computer shows "IGNITION FAILURE" or "HEAT FAIL" and machine does NOT heat.	A. Hi limit tripped B. Heat demand relay C. Relay board	A. Once the oil temp has gone below 375°F $\pm$ 20°, the Hi-limit should reset automatically, if not, replace Hi-limit B. Check & replace if defective C. Check & replace if defective
Machine is heating slowly	A. Side On contactor B. Heat Demand contactor C. Element D. Loss of power on one leg of 3 phase input power	A. Check & replace if defective B. Check & replace if defective C. Check & replace if defective D. Check input power. Repair or call a qualified electrician
Oil is hotter or colder than computer /controller displays	A. Temperature calibration B. Probe C. Probe wiring terminals	A. Adjust temperature offset up to $\pm$10°F B. Check & replace if defective C. Clean or repair terminals
Computer displays "DRAINING" or "TURN OFF"	A. Blue drain valve not fully closed B. Sensor switch C. Incorrect switch gap/alignment	A. Check position of handle B. Switch may be loose or have loose wires, replace if defective C. Check gap/alignment, replace if defective
Computer heat demand lights are lit, machine does not heat. HD & SO lights on relay board are lit.	A. Side on contactor B. Heat demand contactor C. Unit not getting 3 phase power	A. Check & replace if defective B. Check & replace if defective C. Check circuit breaker, is 3 phase power cord plugged in all the way
Computer displays "PROBE FAILURE"	A. Shorted probe B. Open probe C. Probe wiring terminals	A. Check probe & replace if defective B. Check probe & replace if defective C. Clean or repair terminals

Filter Trouble Shooting

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PROBLEM	POSSIBLE CAUSE	ACTION
Red return handle is pulled out, but no pump sound can be heard	A. Red return handle not completly open B. Filter circuit breaker may be tripped or in the off position C. Filter motor thermal overload may be tripped D. Sensor switch may be loose or defective E. Power cord unplugged or loose	A. Pull on red return handle to make sure valve is completly open B. Reset the circuit breaker or press it to the on position C. Push the red reset button on the end of the motor D. Check that the switch is tight and that it has the correct gap. Replace if defective E. Check the power cord at the fryer entrance box and at the pump box and make sure that the power cords are plugged in and /or pushed in all the way
Drain valve is closed, computer has been reset, but computer still displays "DRAINING"	A. Blue drain valve not fully closed B. Sensor switch C. Incorrect switch gap/alignment	A. Check position of handle B. Switch may be loose or have loose wires, replace if defective C. Check gap/alignment, replace if defective
Oil is returning to the vat slowly or not at all	A. Dirty filter paper B. Strainer cap dirty C. Filter pan not pushed in completely D. O-rings not sealing on pick up tube	A. Change filter paper B. Remove strainer cap and clean it C. Push filter pan in D. Check & replace if defective
Air bubbles are in the oil being returned to the vat	A. Strainer cap not tight B. Stainer cap not in pick up tube C. Filter pan not pushed in completely D. O-rings not sealing on pick up tube	A. Tighten strainer cap B. Install strainer cap C. Push filter pan in D. Check & replace if defective
Drain valve is open, the oil is draining slowly or not at all	A. Drain valve is not fully open B. Drain line is plugged with debris	A. Apply a little more pressure to the drain valve handle to check that the drain valve is fully open B. Use the clean out rod to clear the drain valve opening. If this does not clear the blockage, close the drain valve, and call for service

Relay Board Component Explanation

Fuse:

F1 - If fuse is blown, A.C. will not be lit.

Trouble Shooting Lights:

A.C. - When lit, F1 Fuse and T1 Transformer are good.
S.O. - When lit, A1 Computer is on and K10 Contactor should be energized.
H.D. - When lit, A1 Computer is on and calling for heat, K11 Contactor should be energized

Relays:

K1 - Heat Demand Relay, will be energized when A1 Computer calls for heat and when H.D. is lit.
K3 - Side On Relay, will be energized when A1 Computer is on and A.C. is lit.

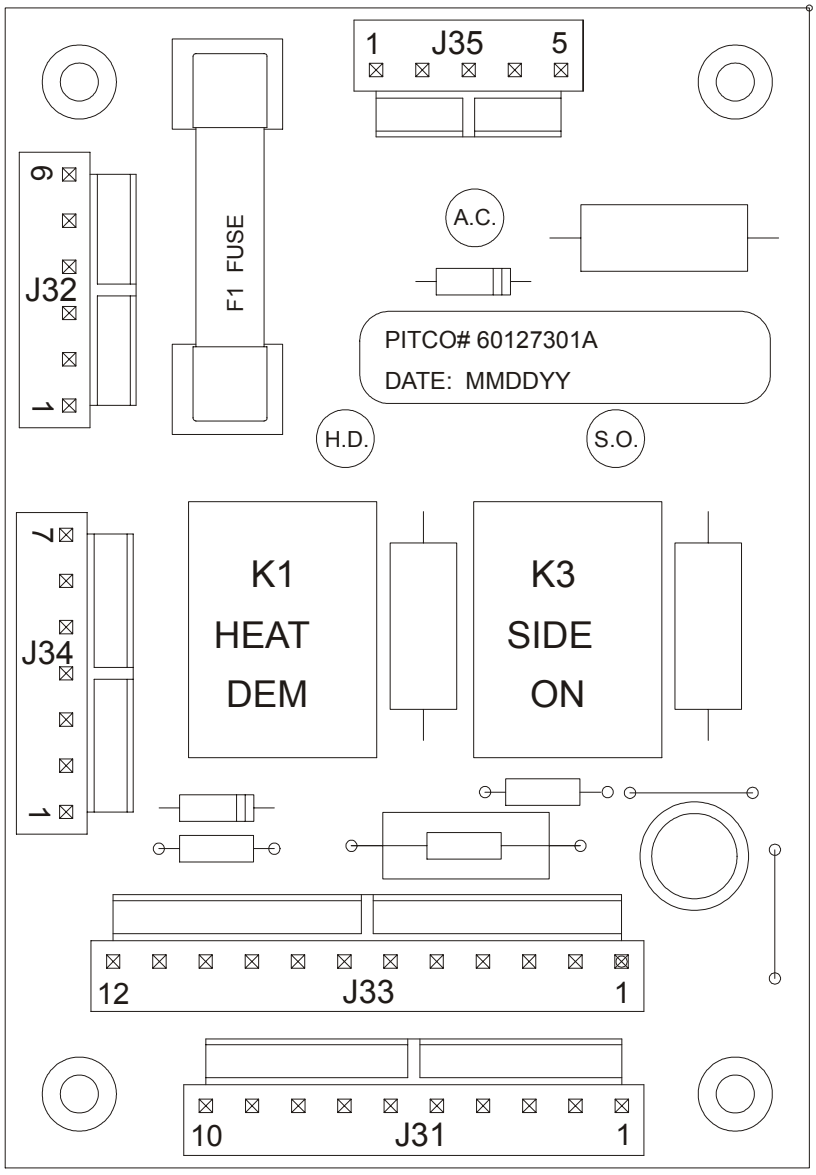
Connectors:

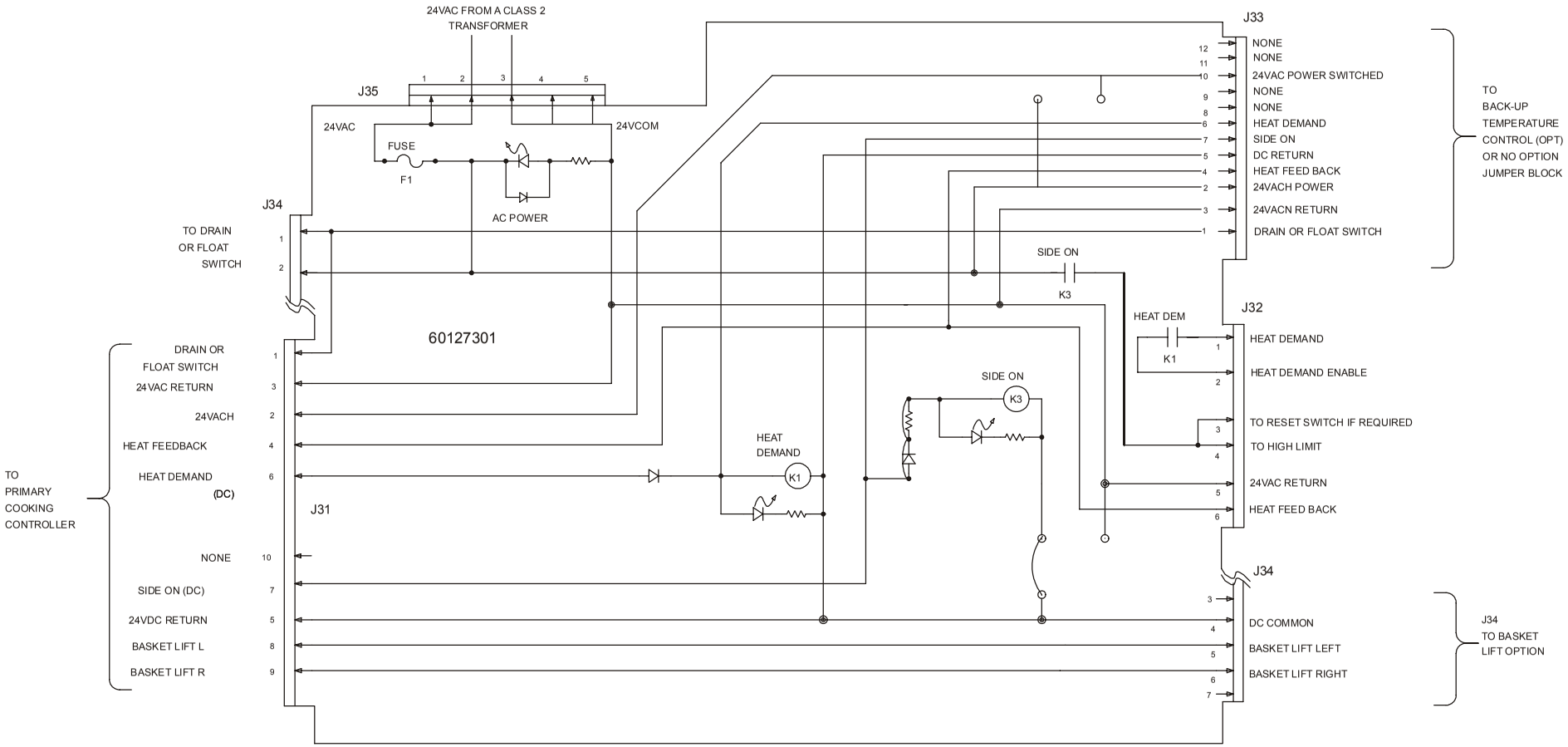
J31 - Connects to A1 Computer
J32 - To Side On and Heat Demand Contactors and Heat Feed Back.
J33 - To 24VAC jumper harness.
J34 - To Drain Switch and optional Basketlifts
J35 - Input voltage from transformer

Relay Board:

Note: J connectors are marked on the relay board.

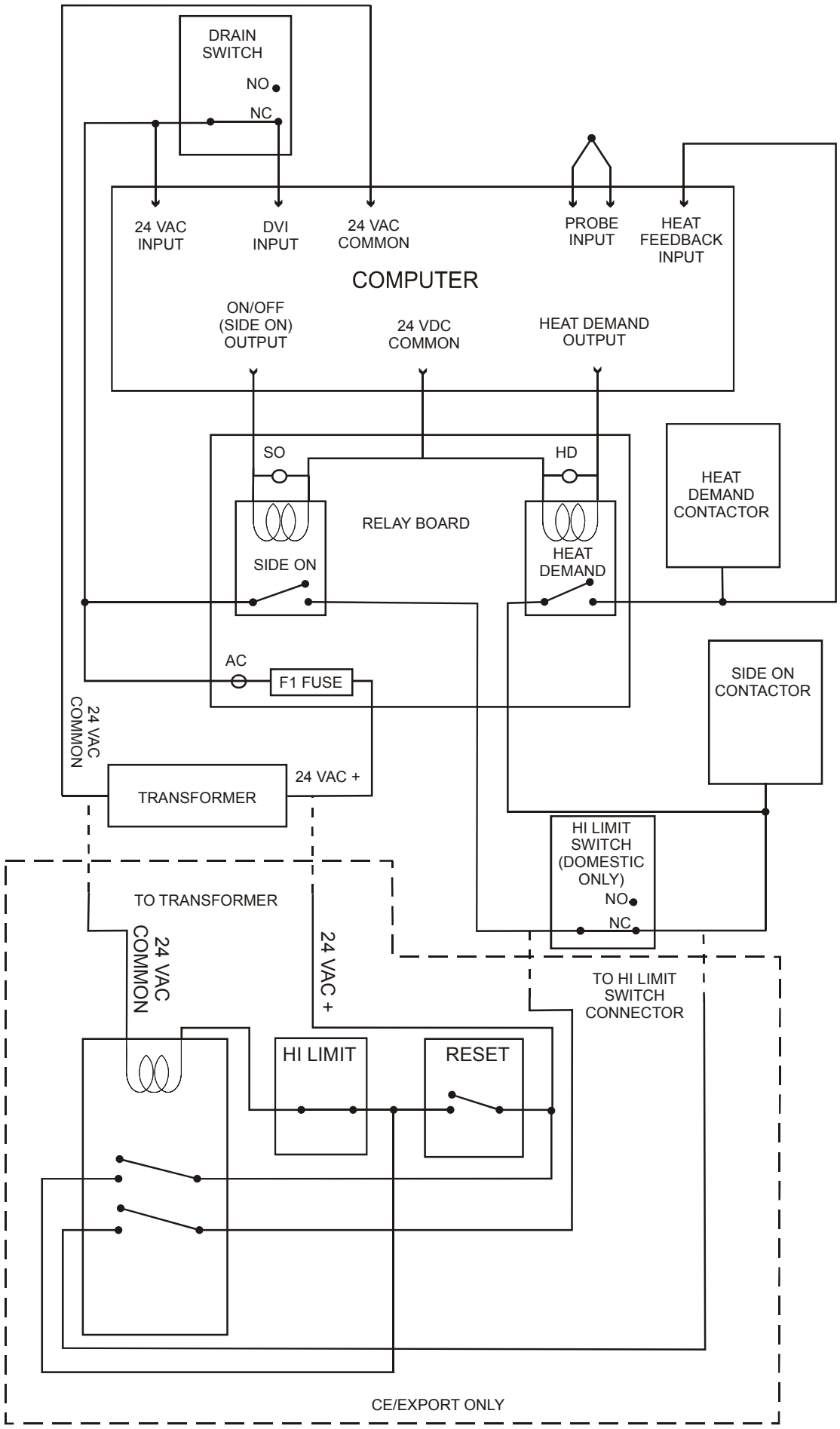
•With 24 VAC supplied to pin #2 at connector J35 and a good F1 fuse, the relay board will have a 24 VAC output at pin #2 on connectors J33 and J34 and the A.C. indicator will be illuminated.
Note: If the fryer is equipped with a computer or solid state digital, at connection J33 there will be a jumper from pin #2 to pin #10 to supply 24 VAC to pin # 2 at connection J31 to supply the controller with 24VAC.
•When the board receives a 24 VDC side on input at pin #7 on connectors J31 or J33, the S.O. indicator will illuminate, the side on relay (S.O.) will energize and there will be a 24 VAC output at pin #4 on connector J32.
•When the board receives a 24 VDC heat demand input at pin #6 on connectors J31 or J33, the H.D. indicator will illuminate, the heat demand relay (H.D.) will energize and there should continuity between pin #1 and pin #2 at connector J32.




24VAC FROM A CLASS 2 TRANSFORMER
J35
1 2 3 4 5
24VAC
24VCOM
FUSE
F1
AC POWER
J34
TO DRAIN OR FLOAT SWITCH
1
2
60127301
DRAIN OR FLOAT SWITCH
24VAC RETURN
24VACH
HEAT FEEDBACK
HEAT DEMAND (DC)
NONE
SIDE ON (DC)
24VDC RETURN
BASKET LIFT L
BASKET LIFT R
1
3
2
4
6
10
7
5
8
9
TO PRIMARY COOKING CONTROLLER
J31
HEAT DEMAND
K1
SIDE ON
K3
J33
12 NONE
11 NONE
10 24VAC POWER SWITCHED
9 NONE
8 NONE
6 HEAT DEMAND
7 SIDE ON
5 DC RETURN
4 HEAT FEED BACK
2 24VACH POWER
3 24VACN RETURN
1 DRAIN OR FLOAT SWITCH
TO BACK-UP TEMPERATURE CONTROL (OPT) OR NO OPTION JUMPER BLOCK
HEAT DEM
K1
SIDE ON
K3
J32
1 HEAT DEMAND
2 HEAT DEMAND ENABLE
3 TO RESET SWITCH IF REQUIRED
4 TO HIGH LIMIT
5 24VAC RETURN
6 HEAT FEED BACK
J34
3 DC COMMON
4 BASKET LIFT LEFT
5 BASKET LIFT RIGHT
6
7
J34 TO BASKET LIFT OPTION

Relay Board

Schematics


DRAIN SWITCH
NO
NC
24 VAC INPUT
DVI INPUT
24 VAC COMMON
PROBE INPUT
HEAT FEEDBACK INPUT
COMPUTER
ON/OFF (SIDE ON) OUTPUT
24 VDC COMMON
HEAT DEMAND OUTPUT
SO
HD
RELAY BOARD
SIDE ON
HEAT DEMAND
HEAT DEMAND CONTACTOR
AC
F1 FUSE
24 VAC COMMON
TRANSFORMER
24 VAC +
SIDE ON CONTACTOR
HI LIMIT SWITCH (DOMESTIC ONLY)
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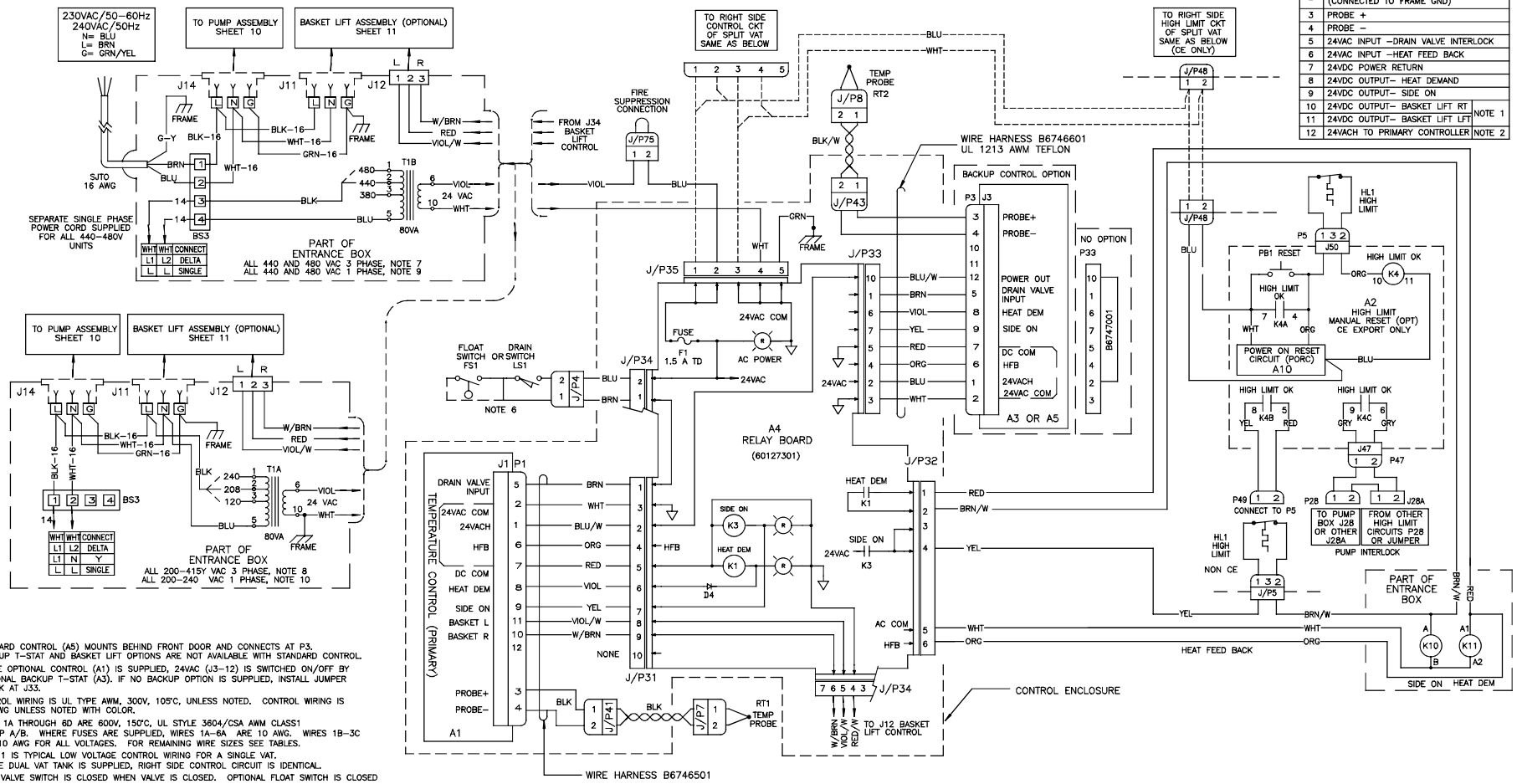
NC
TO TRANSFORMER
24 VAC COMMON
24 VAC +
TO HI LIMIT SWITCH CONNECTOR
HI LIMIT
RESET
CE/EXPORT ONLY



CONTROLLER CONNECTIONS (P1)		
PIN	DESCRIPTION	
1	24VACH POWER IN	
2	24VAC COM POWER RETURN (CONNECTED TO FRAME GND)	
3	PROBE +	
4	PROBE –	
5	24VAC INPUT –DRAIN VALVE INTERLOCK	
6	24VAC INPUT –HEAT FEED BACK	
7	24VDC POWER RETURN	
8	24VDC OUTPUT– HEAT DEMAND	
9	24VDC OUTPUT– SIDE ON	
10	24VDC OUTPUT– BASKET LIFT RT	NOTE 1
11	24VDC OUTPUT– BASKET LIFT LFT	
12	24VACH TO PRIMARY CONTROLLER	NOTE 2

NOTES:

1. STANDARD CONTROL (A5) MOUNTS BEHIND FRONT DOOR AND CONNECTS AT P3. BACKUP T-STAT AND BASKET LIFT OPTIONS ARE NOT AVAILABLE WITH STANDARD CONTROL.
2. WHERE OPTIONAL CONTROL (A1) IS SUPPLIED, 24VAC (J3-12) IS SWITCHED ON/OFF BY OPTIONAL BACKUP T-STAT (A3). IF NO BACKUP OPTION IS SUPPLIED, INSTALL JUMPER BLOCK AT J33.
3. CONTROL WIRING IS UL TYPE AWM, 300V, 105°C, UNLESS NOTED. CONTROL WIRING IS 18 AWG UNLESS NOTED WITH COLOR.
4. WIRES 1A THROUGH 6D ARE 600V, 150°C, UL STYLE 3604/CSA AWM CLASS1 GROUP A/B. WHERE FUSES ARE SUPPLIED, WIRES 1A-6A ARE 10 AWG. WIRES 1B-3C ARE 10 AWG FOR ALL VOLTAGES. FOR REMAINING WIRE SIZES SEE TABLES.
5. SHEET 1 IS TYPICAL LOW VOLTAGE CONTROL WIRING FOR A SINGLE VAT. WHERE DUAL VAT TANK IS SUPPLIED, RIGHT SIDE CONTROL CIRCUIT IS IDENTICAL.
6. DRAIN VALVE SWITCH IS CLOSED WHEN VALVE IS CLOSED. OPTIONAL FLOAT SWITCH IS CLOSED WHEN OIL LEVEL IS ABOVE FLOAT.
7. 3 PHASE 440 AND 480 VAC UNITS: OPTIONAL FILTER PUMP OR BASKET LIFT REQUIRE A SEPARATE SINGLE PHASE POWER SUPPLY AT 230-240VAC 50/60HZ. LINE CORDS ARE UL TYPE SJTO, WIRE GAUGE (AWG) AS SHOWN. PLUG SUPPLIED BY OTHERS.
8. 3 PHASE 200-415Y VAC UNITS: CONTROLS AND ALL OPTIONS ARE POWERED FROM L1 AND L2 (DELTA CONNECTED UNITS) OR L1 AND NEUTRAL (Y CONNECTED UNITS). ADD 4 AMPS TO HEATER CURRENTS SHOWN IN TABLES FOR CABINET WITH FILTER PUMP INSTALLED.
9. SINGLE PHASE 440 AND 480 VAC UNITS: OPTIONAL FILTER PUMP OR BASKET LIFT REQUIRE A SEPARATE SINGLE PHASE POWER SUPPLY AT 230-240VAC 50/60HZ. LINE CORDS ARE UL TYPE SJTO, WIRE GAUGE (AWG) AS SHOWN. PLUG SUPPLIED BY OTHERS.
10. SINGLE PHASE 200-240 VAC UNITS: CONTROLS AND ALL OPTIONS ARE POWERED FROM LINE (L) AND NEUTRAL (N). ADD 4 AMPS TO HEATER CURRENTS SHOWN ON TABLES FOR CABINET WITH FILTER PUMP INSTALLED.

CONTROL CIRCUIT

SE14X, SE14	
SE14R, SE14T	
SE18, SE18R	
USED ON	NEXT ASSY

REV	DWG APPROVAL	DATE
EN NO	DR: JGAR	2/19/01
DATE	ORG:	
DR	ENG NO. 11096	4/29/03
CK	CUST APPD:	
APPD		

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: .XX ± .02, .XXX ± .015, ANGLE ± .5°

MATERIAL:

FINISH:

PITCO FRIALATOR, INC. P.O. BOX 501 CONCORD, NH 03302-0501

TITLE: SCHEMATIC, ELECTRIC SE PLATFORM

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PART NO: SEE TABLE 1

SCALE: NONE SH 1 OF 13

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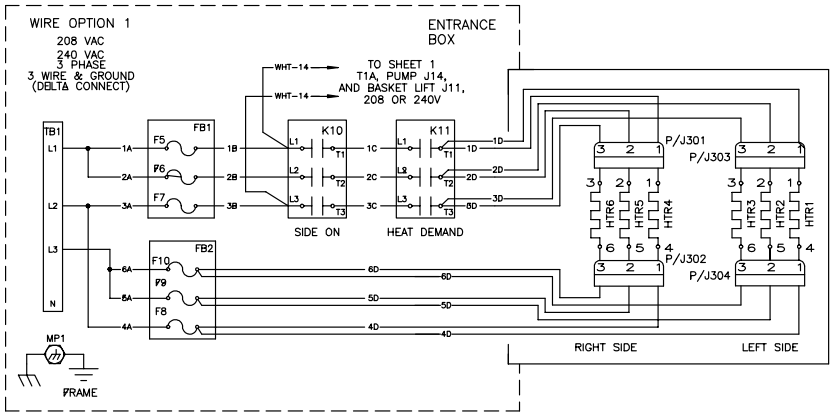

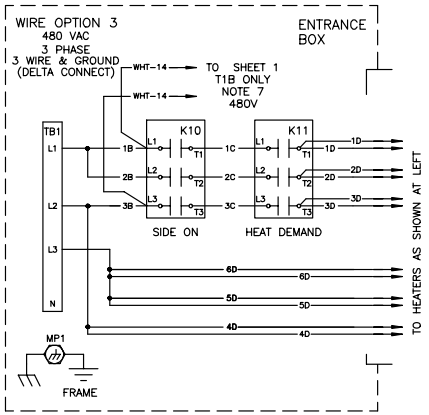

TABLE 2A LINE CONNECTION OPTIONS FOR U.S. AND CANADIAN SERIVCES SE14X, SE14, SE14R

LINE CONNECTIONS		FILTER PUMP	TRANSFORMER	MODEL SE14X			MODEL SE14			MODEL SE14R		
VOLTAGE	WIRE OPTION	P/N	P/N	TOTAL HEATER LESS OPTIONS NOTES 7,8	HTR1, HTR2 P/N	FUSES F5–F7	TOTAL HEATER LESS OPTIONS NOTES 7,8	HTR1, HTR2 P/N	FUSES F5–F7	TOTAL HEATER LESS OPTIONS NOTES 7,8	HTR1, HTR2 P/N	FUSES F5–F7
WIRES & GND		CONNECT	CONNECT–(TAP)		TOTAL HEAT KW	P/N		TOTAL HEAT KW	P/N		TOTAL HEAT KW	P/N
LOAD TYPE		VOLTAGE/ AMPS	TAP VOLTS		1A–3C WIRE SIZE	AMPS		1A–3C WIRE SIZE	AMPS		1A–3C WIRE SIZE	AMPS
208 3 PHASE 3 WIRE & GND DELTA	1	B6730808 BLK–L1, WHT–L2 208V 3.8A 50/60Hz	PP10429 BLK–(2), WHT–(5) 208	L1–38.9 A L2–38.9 A L3–38.9 A	50006609 14.0 KW 10 AWG	P5045701 40 A	L1–47.2 A L2–47.2 A L3–47.2 A	50006601 17.0 KW 10 AWG	P5045701 40 A	L1–61.1 A L2–61.1 A L3–61.1 A	50006605 22.0 KW 10 AWG	P5045701 40 A
240 3 PHASE 3 WIRE & GND DELTA	1	B6730801 BLK–L1, WHT–L2 230V 3.4A 50/60Hz	PP10429 BLK–(1), WHT–(5) 240	L1–33.7 A L2–33.7 A L3–33.7 A	50006612 14.0 KW 10 AWG	P5045701 40 A	L1–40.9 A L2–40.9 A L3–40.9 A	50006603 17.0 KW 10 AWG	P5045701 40 A	L1–52.9 A L2–52.9 A L3–52.9 A	50006607 22.0 KW 10 AWG	P5045701 40 A
480 3 PHASE 3 WIRE & GND DELTA	3	6030801 W/SEPRATE POWR CORD 1PH @ 230V 3.8A 50/60Hz	PP10428 BLK–(1), WHT–(5) 480	L1–16.8 A L2–16.8 A L3–16.8 A	50006613 14.0 KW 14 AWG		L1–20.4 A L2–20.4 A L3–20.4 A	50006604 17.0 KW 14 AWG		L1–26.5 A L2–26.5 A L3–26.5 A	50006608 22.0 KW 14 AWG	

TABLE 2B LINE CONNECTION OPTIONS FOR U.S. AND CANADIAN SERIVCES SE18X, SE18, SE18R

LINE CONNECTIONS		FILTER PUMP	TRANSFORMER	MODEL SE18X			MODEL SE18			MODEL SE18R		
VOLTAGE	WIRE OPTION	P/N	P/N	TOTAL HEATER LESS OPTIONS NOTES 7,8	HTR1, HTR2 P/N		TOTAL HEATER LESS OPTIONS NOTES 7,8	HTR1, HTR2 P/N	FUSES F5–F10	TOTAL HEATER LESS OPTIONS NOTES 7,8	HTR1, HTR2 P/N	FUSES F5–F10
WIRES & GND		CONNECT	CONNECT–(TAP)		TOTAL HEAT KW	P/N		TOTAL HEAT KW	P/N		TOTAL HEAT KW	P/N
LOAD TYPE		VOLTAGE/ AMPS	TAP VOLTS		1A–3C WIRE SIZE	AMPS		1A–3C WIRE SIZE	AMPS		1A–3C WIRE SIZE	AMPS
208 3 PHASE 3 WIRE & GND DELTA	1	B6730808 BLK–L1, WHT–L2 200V 4.0A 50/60Hz	PP10429 BLK–(2), WHT–(5) 208	L1–38.9 A L2–38.9 A L3–38.9 A	50006609 14.0 KW 10 AWG	P5045701 40 A	L1–47.2 A L2–47.2 A L3–47.2 A	50006601 17.0 KW 10 AWG	P5045701 40 A	L1–61.1 A L2–61.1 A L3–61.1 A	50006605 22.0 KW 10 AWG	P5045701 40 A
240 3 PHASE 3 WIRE & GND DELTA	1	B6730801 BLK–L1, WHT–L2 230V 3.8A 50/60Hz	PP10429 BLK–(1), WHT–(5) 240	L1–33.7 A L2–33.7 A L3–33.7 A	50006612 14.0 KW 10 AWG	P5045701 40 A	L1–40.9 A L2–40.9 A L3–40.9 A	50006603 17.0 KW 10 AWG	P5045701 40 A	L1–52.9 A L2–52.9 A L3–52.9 A	50006607 22.0 KW 10 AWG	P5045701 40 A
480 3 PHASE 3 WIRE & GND DELTA	3	B6730801 W/SEPRATE POWR CORD 1PH @ 230V 3.8A 50/60Hz	PP10428 BLK–(1), WHT–(5) 480	L1–16.8 A L2–16.8 A L3–16.8 A	50006613 14.0 KW 14 AWG		L1–20.4 A L2–20.4 A L3–20.4 A	50006604 17.0 KW 14 AWG		L1–26.5 A L2–26.5 A L3–26.5 A	50006608 22.0 KW 14 AWG	

3 PHASE

3 PHASE U.S. AND CANADIAN ELECTRICAL SERVICES
FOR MODELS SE14X, SE14, SE14R, SE18X, SE18, SE18R

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PART NO:	NONE	
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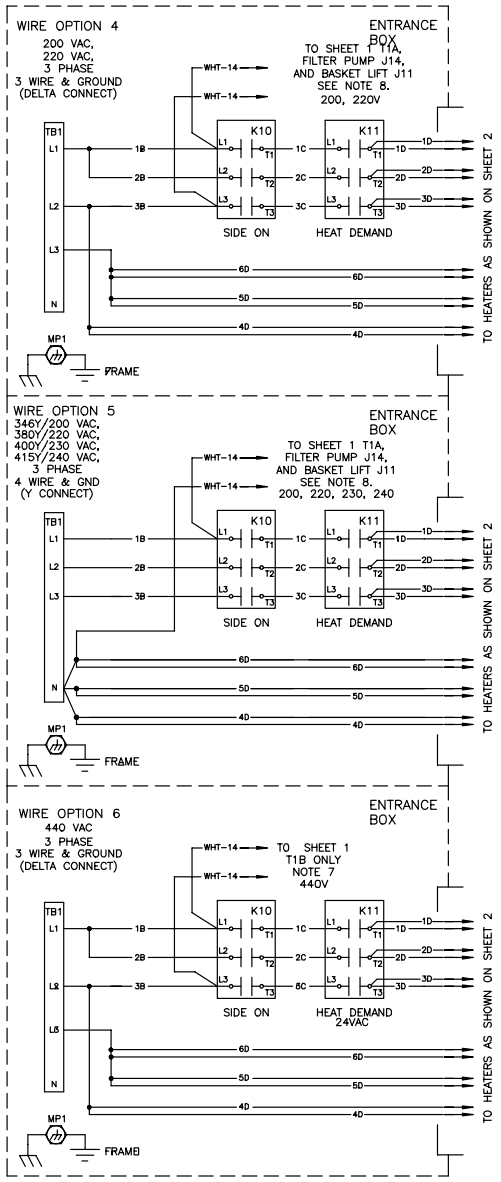

TABLE 3A LINE CONNECTION OPTIONS FOR INTERNATIONAL SERVICES SE14X, SE14, SE14R

LINE CONNECTIONS		FILTER PUMP	TRANSFORMER	MODEL SE14X		MODEL SE14		MODEL SE14R	
VOLTAGE / WIRES & GND / LOAD TYPE	WIRE OPTION	P/N / CONNECT / PUMP VOLTS/AMPS	P/N / CONNECT–(TAP) / TAP VOLTS	TOTAL HEATER LESS OPTIONS NOTES 7,8	HTR1, HTR2 P/N / TOTAL HEAT KW / 1B–3C WIRE SIZE	TOTAL HEATER LESS OPTIONS NOTES 7,8	HTR1, HTR2 P/N / TOTAL HEAT KW / 1B–3C WIRE SIZE	TOTAL HEATER LESS OPTIONS NOTES 7,8	HTR1, HTR2 P/N / TOTAL HEAT KW / 1B–3C WIRE SIZE
200 3 PHASE 3 WIRE & GND DELTA	4	60130808 BLK– L1 WHT–L2 208V 4A 50Hz	PP10429 L1–(2) L2–(5) 208	L1–37.4 A L2–37.4 A L3–37.4 A	50006609 12.9 KW 10 AWG	L1–45.4 A L2–45.4 A L3–45.4 A	50006601 15.7 KW 10 AWG	L1–58.7 A L2–58.7 A L3–58.7 A	50006605 20.3 KW 10 AWG
220 3 PHASE 3 WIRE & GND DELTA	4	60130801 BLK–L1 WHT–I2 230V 3.8A 50/60Hz	PP10429 L1–(1) L2–(5) 240	L1–36.7 A L2–36.7 A L3–36.7 A	50006610 14.0 KW 10 AWG	L1–44.6 A L2–44.6 A L3–44.6 A	50006602 17.0 KW 10 AWG	L1–57.7 A L2–57.7 A L3–57.7 A	50006606 22.0 KW 10 AWG
346Y/200 3 PHASE 4 WIRE & GND WYE	5	60130808 BLK–L1 WHT–N 208V 4A 50Hz	PP10429 L1–(2) N–(5) 208	L1–21.6 A L2–21.6 A L3–21.6 A	50006609 12.9 KW 10 AWG	L1–26.2 A L2–26.2 A L3–26.2 A	50006601 15.7 KW 10 AWG	L1–33.9 A L2–33.9 A L3–33.9 A	50006605 20.3 KW 10 AWG
380Y/220 3 PHASE 4 WIRE & GND WYE	5	60130801 BLK–L1 WHT–N 230V 3.8A 50/60Hz	PP10429 L1–(1) N–(5) 240	L1–21.3 A L2–21.3 A L3–21.3 A	50006610 14.0 KW 10 AWG	L1–25.8 A L2–25.8 A L3–25.8 A	50006602 17.0 KW 10 AWG	L1–33.4 A L2–33.4 A L3–33.4 A	50006606 22.0 KW 10 AWG
400Y/230 3 PHASE 4 WIRE & GND WYE	5	60130801 BLK–L1 WHT–N 230V 3.8A 50/60Hz	PP10429 L1–(1) N–(5) 240	L1–20.2 A L2–20.2 A L3–20.2 A	50006611 14.0 KW 10 AWG	L1–24.5 A L2–24.5 A L3–24.5 A	50006614 17.0 KW 10 AWG	L1–31.8 A L2–31.8 A L3–31.8 A	50006615 22.0 KW 10 AWG
415Y/240 3 PHASE 4 WIRE & GND WYE	5	60130802 BLK–L1 WHT–N 240V 3.5A 50Hz	PP10429 L1–(1) N–(5) 240	L1–19.5 A L2–19.5 A L3–19.5 A	50006612 14.0 KW 10 AWG	L1–23.7 A L2–23.7 A L3–23.7 A	50006603 17.0 KW 10 AWG	L1–30.6 A L2–30.6 A L3–30.6 A	50006607 22.0 KW 10 AWG
440 3 PHASE 3 WIRE & GND DELTA	6	60130801 W/SEPRATE POWR CORD 1PH @ 230V 3.8A 50/60Hz	PP10428 L1–(2) L3–(5) 440	L1–15.4 A L2–15.4 A L3–15.4 A	50006613 11.8 KW 14 AWG	L1–18.7 A L2–18.7 A L3–18.7 A	50006604 14.3 KW 14 AWG	L1–24.3 A L2–24.3 A L3–24.3 A	50006608 18.5 KW 14 AWG

TABLE 3B LINE CONNECTION OPTIONS FOR INTERNATIONAL SERVICES SE18X, SE18, SE18R

LINE CONNECTIONS		FILTER PUMP	TRANSFORMER	MODEL SE18X		MODEL SE18		MODEL SE18R	
VOLTAGE / WIRES & GND / LOAD TYPE	WIRE OPTION	P/N / CONNECT / PUMP VOLTS/AMPS	P/N / CONNECT–(TAP) / TAP VOLTS	TOTAL HEATER LESS OPTIONS NOTES 7,8	HTR1, HTR2 P/N / TOTAL HEAT KW / 1B–3C WIRE SIZE	TOTAL HEATER LESS OPTIONS NOTES 7,8	HTR1, HTR2 P/N / TOTAL HEAT KW / 1B–3C WIRE SIZE	TOTAL HEATER LESS OPTIONS NOTES 7,8	HTR1, HTR2 P/N / TOTAL HEAT KW / 1B–3C WIRE SIZE
200 3 PHASE 3 WIRE & GND DELTA	4	60130808 BLK– L1 WHT–L2 208V 4A 50Hz	PP10429 L1–(2) L2–(5) 208	L1–37.4 A L2–37.4 A L3–37.4 A	50006609 12.9 KW 10 AWG	L1–45.4 A L2–45.4 A L3–45.4 A	50006601 15.7 KW 10 AWG	L1–58.7 A L2–58.7 A L3–58.7 A	50006605 20.3 KW 10 AWG
220 3 PHASE 3 WIRE & GND DELTA	4	60130802 BLK–L1 WHT–L2 240V 3.5A 50Hz	PP10429 L1–(1) L2–(5) 240	L1–36.7 A L2–36.7 A L3–36.7 A	50006610 14.0 KW 10 AWG	L1–44.6 A L2–44.6 A L3–44.6 A	50006602 17.0 KW 10 AWG	L1–57.7 A L2–57.7 A L3–57.7 A	50006606 22.0 KW 10 AWG
346Y/200 3 PHASE 4 WIRE & GND WYE	5	60130808 BLK–L1 WHT–N 208V 4A 50Hz	PP10429 L1–(2) N–(5) 208	L1–21.6 A L2–21.6 A L3–21.6 A	50006609 12.9 KW 10 AWG	L1–26.2 A L2–26.2 A L3–26.2 A	50006601 15.7 KW 10 AWG	L1–33.9 A L2–33.9 A L3–33.9 A	50006605 20.3 KW 10 AWG
380Y/220 3 PHASE 4 WIRE & GND WYE	5	60130801 BLK–L1 WHT–N 230V 3.8A 50/60Hz	PP10429 L1–(1) N–(5) 240	L1–21.3 A L2–21.3 A L3–21.3 A	50006610 14.0 KW 10 AWG	L1–25.8 A L2–25.8 A L3–25.8 A	50006602 17.0 KW 10 AWG	L1–33.4 A L2–33.4 A L3–33.4 A	50006606 22.0 KW 10 AWG
400Y/230 3 PHASE 4 WIRE & GND WYE	5	60130801 BLK–L1 WHT–N 230V 3.8A 50/60Hz	PP10429 L1–(1) N–(5) 240	L1–20.2 A L2–20.2 A L3–20.2 A	50006611 14.0 KW 10 AWG	L1–24.5 A L2–24.5 A L3–24.5 A	50006614 17.0 KW 10 AWG	L1–31.8 A L2–31.8 A L3–31.8 A	50006615 22.0 KW 10 AWG
415Y/240 3 PHASE 4 WIRE & GND WYE	5	60130802 BLK–L1 WHT–N 240V 3.5A 50Hz	PP10429 L1–(1) N–(5) 240	L1–19.5 A L2–19.5 A L3–19.5 A	50006612 14.0 KW 10 AWG	L1–23.7 A L2–23.7 A L3–23.7 A	50006603 17.0 KW 10 AWG	L1–30.6 A L2–30.6 A L3–30.6 A	50006607 22.0 KW 10 AWG
440 3 PHASE 3 WIRE & GND DELTA	6	60130801 W/SEPRATE POWR CORD 1PH @ 230V 3.8A 50/60Hz	PP10428 L1–(2) L3–(5) 440	L1–15.4 A L2–15.4 A L3–15.4 A	50006613 11.8 KW 14 AWG	L1–18.7 A L2–18.7 A L3–18.7 A	50006604 14.3 KW 14 AWG	L1–24.3 A L2–24.3 A L3–24.3 A	50006608 18.5 KW 14 AWG

3 PHASE

3 PHASE INTERNATIONAL ELECTRICAL SERVICES
FOR MODELS SE14X, SE14, SE14R, SE18X, SE18, SE18R

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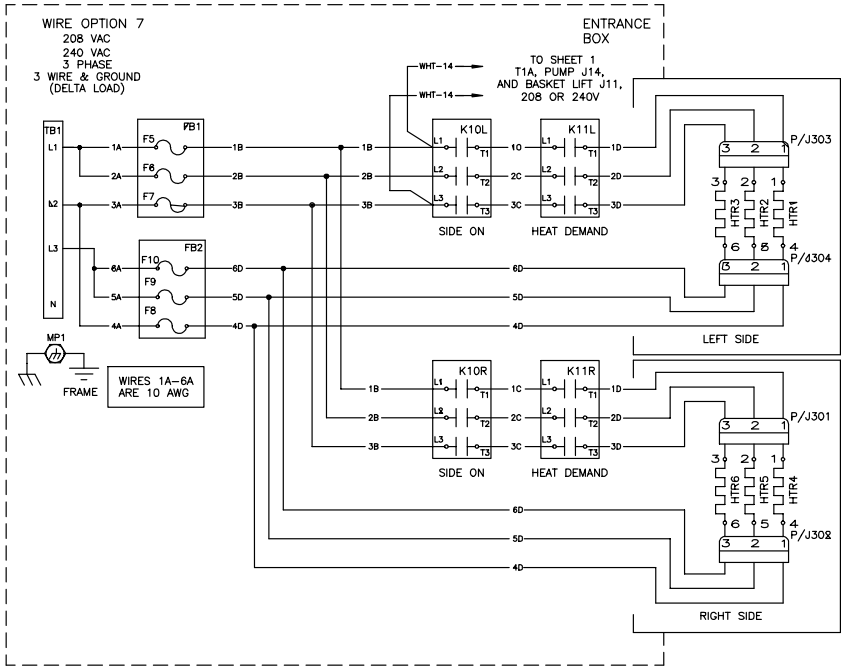

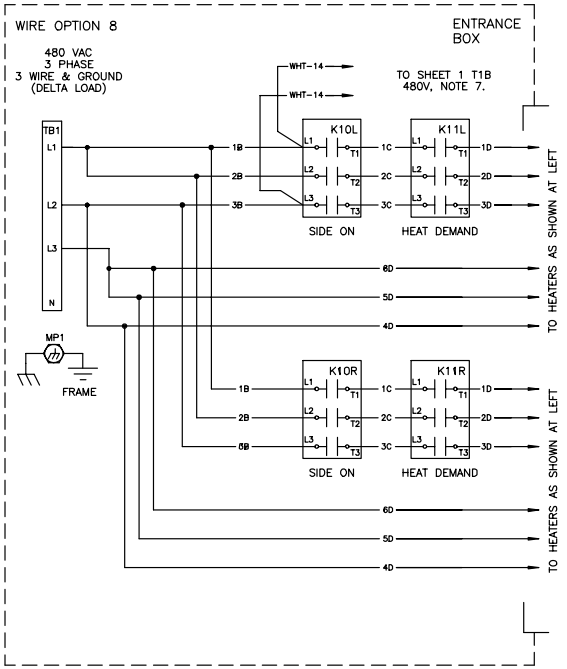

TABLE 4 LINE CONNECTION OPTIONS FOR DOMESTIC SERVICES SE14T

LINE CONNECTIONS		FILTER PUMP	TRANSFORMER	LINE AMPS	LEFT SIDE	RIGHT SIDE	
VOLTAGE	WIRE OPTION	P/N	P/N	TOTAL HEATER LESS OPTIONS NOTES 7,8	HTR 1 P/N	HTR 2 P/N	FUSES F5-F10
WIRES & GND		CONNECT	CONNECT-(TAPS)		HEAT KW	HEAT KW	P/N
LOAD TYPE		VOLTAGE/ AMPS	TAP VOLTS		1B-6D WIRE SIZE	1B-6D WIRE SIZE	AMPS
208 3 PHASE 3 WIRE & GND DELTA	7	60130808 BLK-L1, WHT-L2 208V 4.0A 50/60Hz	PP10429 BLK-(2), WHT-(5) 208	L1-47.2 A L2-47.2 A L3-47.2 A	50006601 8.5 KW 14 AWG	50006601 8.5 KW 14 AWG	P5045701 40 A
240 3 PHASE 3 WIRE & GND DELTA	7	60130801 BLK-L1, WHT-L2 230V 3.8A 50/60Hz	PP10429 BLK-(1), WHT-(5) 240	L1-40.9 A L2-40.9 A L3-40.9 A	50006603 8.5 KW 14 AWG	50006603 8.5 KW 14 AWG	P5045701 40 A
480 3PHASE 3 WIRE & GND DELTA	8	6030801 W/SEPRATE POWR CORD 1PH @ 230V 3.8A 50/60Hz	PP10428 BLK-(1), WHT-(5) 480	L1-20.4 A L2-20.4 A L3-20.4 A	50006604 8.5 KW 14 AWG	50006604 8.5 KW 14 AWG	

3 PHASE

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PART NO: NONE
SCALE: NONE SH 4 OF 13
SIZE D DWG NO: 700329 DWG REV A

3 PHASE U.S. AND CANADIAN ELECTRICAL SERVICES SE14T

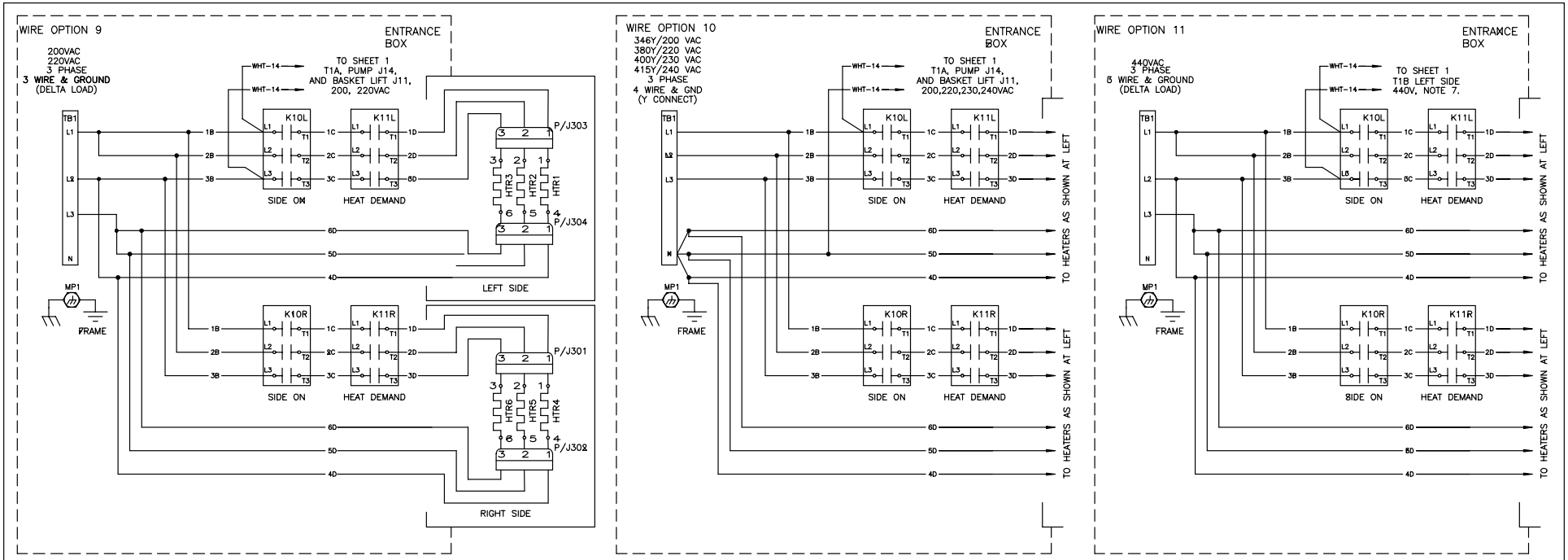

TABLE 5 LINE CONNECTION OPTIONS FOR INTERNATIONAL SERVICES SE14T

VOLTAGE		FILTER PUMP	TRANSFORMER	LINE AMPS	LEFT SIDE	RIGHT SIDE
VOLTAGE WIRES & GND LOAD TYPE	WIRE OPTION	P/N CONNECT PUMP VOLTS/AMPS	P/N CONNECT-(TAP) TAP VOLTS	TOTAL HEATER LESS OPTIONS NOTES 7,8	HTR 1 P/N HEAT KW 1B-3C WIRE SIZE	HTR 2 P/N HEAT KW 1B-3C WIRE SIZE
200 3 PHASE 3 WIRE & GND DELTA	9	60130808 BLK- L1 WHT-L2 200V 4A 50/60Hz	PP10429 L1-(2) L2-(5) 208	L1-45.4 A L2-45.4 A L3-45.4 A	50006601 7.9 KW 14 AWG	50006601 7.9 KW 14 AWG
220 3 PHASE 3 WIRE & GND DELTA	9	60130802 BLK-L1 WHT-L2 220 3.5A 50/60Hz	PP10429 L1-(1) L2-(5) 240	L1-40.8 A L2-40.8 A L3-40.8 A	50006602 8.5 KW 14 AWG	50006602 8.5 KW 14 AWG
346Y/200 3PHASE 3 WIRE & GND WYE	10	6013008 BLK-L1 WHT-N 200V 4A 50/60Hz	PP10429 L1-(2) N-(5) 208	L1-26.2 A L2-26.2 A L3-26.2 A	50006601 7.9 KW 14 AWG	50006601 7.9 KW 14 AWG
380Y/220 3PHASE 3 WIRE & GND WYE	10	60130802 BLK-L1 WHT-N 220 3.5A 50Hz	PP10429 L1-(1) N-(5) 240	L1-23.6 A L2-23.6 A L3-23.6 A	50006602 8.5 KW 14 AWG	50006602 8.5 KW 14 AWG
400Y/230 3PHASE 3 WIRE & GND WYE	10	60130802 BLK-L1 WHT-N 240 3.5A 50/60Hz	PP10429 L1-(1) N-(5) 240	L1-24.5 A L2-24.5 A L3-24.5 A	50006614 8.5 KW 14 AWG	50006614 8.5 KW 14 AWG
415Y/240 3PHASE 3 WIRE & GND WYE	10	60130802 BLK-L1 WHT-N 240 3.5A 50Hz	PP10429 L1-(1) N-(5) 240	L1-25.8 A L2-25.8 A L3-25.8 A	50006603 8.5KW 14 AWG	50006603 8.5 KW 14 AWG
440 3 PHASE 3 WIRE & GND DELTA	11	6030801 W/SEPRATE POWR CORD 1PH @ 230V 3.8A 50/60Hz	PP10428 L1-(2) L3-(5) 440	L1-18.7 A L2-18.7 A L3-18.7 A	50006604 7.1 KW 14 AWG	50006604 7.1 KW 14 AWG

3 PHASE

3 PHASE INTERNATIONAL SERVICES SE14T

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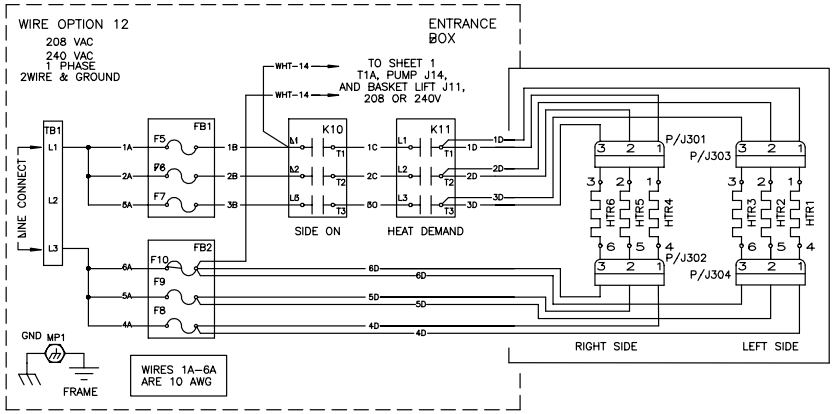

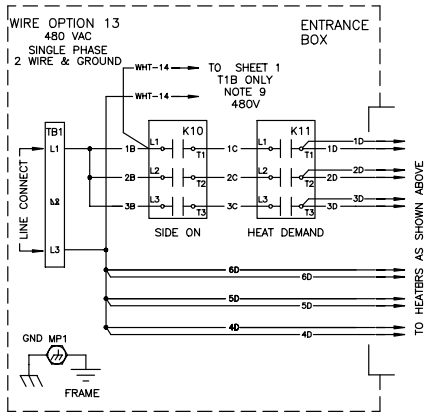

TABLE 6 LINE CONNECTION OPTIONS FOR U.S. AND CANADIAN SERIVCES (SINGLE PHASE) SE14X, SE14, SE14R

LINE CONNECTIONS		FILTER PUMP	TRANSFORMER	MODEL SE14X			MODEL SE14			MODEL SE14R		
VOLTAGE / PHASES / WIRES & GND	WIRE OPTION	P/N / CONNECT / VOLTAGE/ AMPS	500066 / CONNECT-(TAP) / TAP VOLTS	LINE AMPS NOTES 9,10	HTR1, HTR2 P/N / TOTAL HEAT KW / 1A-3C WIRE SIZE	FUSES F5-F10 P/N / AMPS	LINE AMPS NOTES 9,10	HTR1, HTR2 P/N / TOTAL HEAT KW / 1A-3C WIRE SIZE	FUSES F5-F10 P/N / AMPS	LINE AMPS NOTES 9,10	HTR1, HTR2 P/N / TOTAL HEAT KW / 1A-3C WIRE SIZE	FUSES F5-F10 P/N / AMPS
208 1 PHASE 2 WIRE & GND	12	B6730808 BLK-L1, WHT-N 208V 4.2A 50/60Hz	PP10429 BLK-(2), WHT-(5) 208	L-67.3 A	50006609 14.0 KW 10 AWG	P5045701 40 A	L-81.7 A	50006601 17.0 KW 10 AWG	P5045701 40 A	L-106 A	50006605 22.0 KW 10 AWG	P5045701 40 A
240 1 PHASE 2 WIRE & GND	12	B6730801 BLK-L1, WHT-N 230V 3.8A 50/60Hz	PP10429 BLK-(1), WHT-(5) 240	L-58.3 A	50006612 14.0 KW 10 AWG	P5045701 40 A	L-70.8 A	50006603 17.0 KW 10 AWG	P5045701 40 A	L-92 A	50006607 22.0 KW 10 AWG	P5045701 40 A
480 1 PHASE 2 WIRE & GND	13	6030801 W/SEPRATE POWR CORD 1PH @ 230V 3.8A 50/60Hz	PP10428 BLK-(1), WHT-(5) 480	L-29.2 A	50006613 14.0 KW 14 AWG		L-35.4 A	50006604 17.0 KW 14 AWG		L-45.8 A	50006608 22.0 KW 14 AWG	

TABLE 6A LINE CONNECTION OPTIONS FOR U.S. AND CANADIAN SERIVCES (SINGLE PHASE) SE18, SE18R

LINE CONNECTIONS		FILTER PUMP	TRANSFORMER	MODEL SE18X			MODEL SE18			MODEL SE18R		
VOLTAGE / PHASES / WIRES & GND	WIRE OPTION	P/N / CONNECT / VOLTAGE/ AMPS	P/N / CONNECT-(TAP) / TAP VOLTS	LINE AMPS NOTES 9,10	HTR1, HTR2 P/N / TOTAL HEAT KW / 1A-3C WIRE SIZE	FUSES F5-F10 P/N / AMPS	LINE AMPS NOTES 9,10	HTR1, HTR2 P/N / TOTAL HEAT KW / 1A-3C WIRE SIZE	FUSES F5-F7 P/N / AMPS	LINE AMPS NOTES 9,10	HTR1, HTR2 P/N / TOTAL HEAT KW / 1A-3C WIRE SIZE	FUSES F5-F7 P/N / AMPS
208 1 PHASE 2 WIRE & GND	12	B6730808 BLK-L1, WHT-N 200V 4.0A 50/60Hz	PP10429 BLK-(2), WHT-(5) 208	L-67.3 A	50006609 14.0 KW 10 AWG	P5045701 40 A	L-81.7 A	50006601 17.0 KW 10 AWG	P5045701 40 A	L-106 A	50006605 22.0 KW 10 AWG	P5045701 40 A
240 1 PHASE 2 WIRE & GND	12	B6730801 BLK-L1, WHT-N 230V 3.8A 50/60Hz	PP10429 BLK-(1), WHT-(5) 240	L-58.3 A	50006612 14.0 KW 10 AWG	P5045701 40 A	L-70.8 A	50006603 17.0 KW 10 AWG	P5045701 40 A	L-91.7 A	50006607 22.0 KW 10 AWG	P5045701 40 A
480 1 PHASE 2 WIRE & GND	13	B6730801 W/SEPRATE POWR CORD 1PH @ 230V 3.8A 50/60Hz	PP10428 BLK-(1), WHT-(5) 480	L-29.2 A	50006613 14.0 KW 14 AWG		L-35.4 A	50006604 17.0 KW 14 AWG		L-45.8	50006608 22.0 KW 14 AWG	

SINGLE PHASE

SINGLE PHASE U.S. AND CANADIAN ELECTRICAL SERVICES
FOR MODELS SE14X, SE14, SE14R, SE18X, SE18, SE18R

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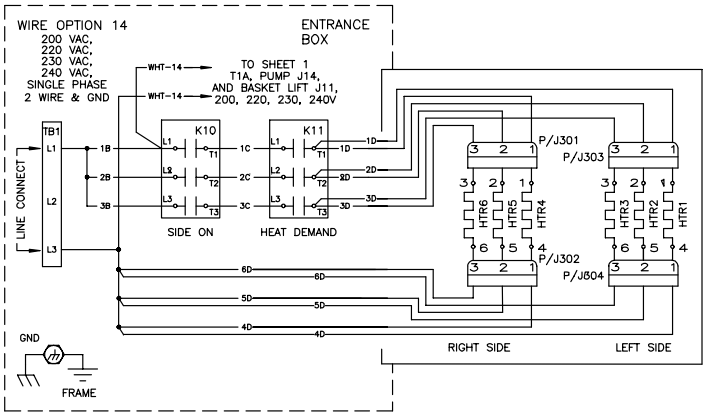
PART NO:	NONE	
SCALE:	NONE	SH 6 OF 13
SIZE	DWG NO:	DWG REV
D	700329	A



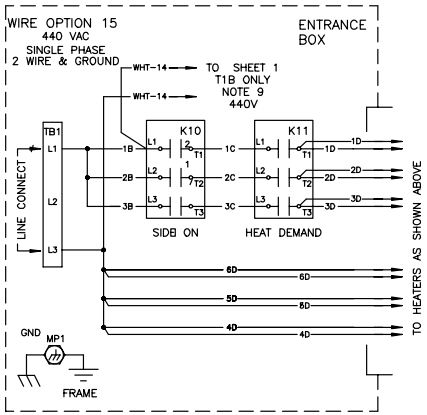


TABLE 6 LINE CONNECTION OPTIONS FOR INTERNATIONAL SERVICES (SINGLE PHASE) SE14X, SE14, SE14R

LINE CONNECTIONS		FILTER PUMP	TRANSFORMER	MODEL SE14X		MODEL SE14		MODEL SE14R	
VOLTAGE / PHASES / WIRE & GND	WIRE OPTION	P/N / CONNECT / PUMP VOLTS/AMPS	P/N / CONNECT–(TAP) / TAP VOLTS	LINE AMPS NOTES 9,10	HTR1, HTR2 P/N / TOTAL HEAT KW / 1A–3C WIRE SIZE	LINE AMPS NOTES 9,10	HTR1, HTR2 P/N / TOTAL HEAT KW / 1A–3C WIRE SIZE	LINE AMPS NOTES 9,10	HTR1, HTR2 P/N / TOTAL HEAT KW / 1A–3C WIRE SIZE
200 1 PHASE 2 WIRE & GND	14	60130808 BLK– L1 WHT–N 208V 4A 50/60Hz	PP10429 L1–(2) N–(5) 208	L–64.7 A	50006609 12.9 KW 10 AWG	L–78.6 A	50006601 15.7 KW 10 AWG	L–102 A	50006605 20.3 KW 10 AWG
220 1 PHASE 2 WIRE & GND	14	60130801 BLK–L1 WHT–N 230V 3.8A 50/60Hz	PP10429 L1–(1) N–(5) 240	L–63.6 A	50006610 14.0 KW 10 AWG	L–77.3 A	50006602 17.0 KW 10 AWG	L–100 A	50006606 22.0 KW 10 AWG
230 1 PHASE 2 WIRE & GND	14	60130801 BLK–L1 WHT–N 230V 3.8A 50/60Hz	PP10429 L1–(1) N–(5) 240	L–60.9 A	50006611 14.0 KW 10 AWG	L–73.9 A	50006614 17.0 KW 10 AWG	L–95.7 A	50006615 22.0 KW 10 AWG
240 1 PHASE 2 WIRE & GND	14	60130802 BLK–L1 WHT–N 240V 3.5A 50Hz	PP10429 L1–(1) N–(5) 240	L–58.3 A	50006612 14.0 KW 14 AWG	L–70.8 A	50006603 17.0 KW 14 AWG	L–91.7 A	50006607 22.0 KW 14 AWG
440 1 PHASE 2 WIRE & GND	15	60130801 W/SEPRATE POWR CORD 1PH @ 230V 3.8A 50/60Hz	PP10428 L1–(2) N–(5) 440	L–26.7 A	50006613 11.8 KW 14 AWG	L–32.5 A	50006604 14.3 KW 14 AWG	L–42.0 A	50006608 18.5 KW 14 AWG

TABLE 6A LINE CONNECTION OPTIONS FOR INTERNATIONAL SERVICES (SINGLE PHASE) SE18X, SE18, SE18R

LINE CONNECTIONS		FILTER PUMP	TRANSFORMER	MODEL SE18X		MODEL SE18		MODEL SE18R	
VOLTAGE / PHASES / WIRE & GND	WIRE OPTION	P/N / CONNECT / PUMP VOLTS/AMPS	P/N / CONNECT–(TAP) / TAP VOLTS	LINE AMPS NOTES 9,10	HTR1, HTR2 P/N / TOTAL HEAT KW / 1A–3C WIRE SIZE	LINE AMPS NOTES 9,10	HTR1, HTR2 P/N / TOTAL HEAT KW / 1A–3C WIRE SIZE	LINE AMPS NOTES 9,10	HTR1, HTR2 P/N / TOTAL HEAT KW / 1A–3C WIRE SIZE
200 1 PHASE 2 WIRE & GND	14	60130808 BLK– L1 WHT–N 208V 4A 50/60Hz	PP10429 L1–(2) N–(5) 208	L–64.7 A	50006609 12.9 KW 10 AWG	L–78.6 A	50006601 15.7 KW 10 AWG	L–102 A	50006605 20.3 KW 10 AWG
220 1 PHASE 2 WIRE & GND	14	60130801 BLK–L1 WHT–N 230V 3.8A 50/60Hz	PP10429 L1–(1) N–(5) 240	L–63.6 A	50006610 14.0 KW 10 AWG	L–77.3 A	50006602 17.0 KW 10 AWG	L–100 A	50006606 22.0 KW 10 AWG
230 1 PHASE 2 WIRE & GND	14	60130801 BLK–L1 WHT–N 230V 3.8A 50/60Hz	PP10429 L1–(1) N–(5) 240	L–60.9 A	50006611 14.0 KW 10 AWG	L–73.9 A	50006614 17.0 KW 10 AWG	L–95.7 A	50006615 22.0 KW 10 AWG
240 1 PHASE 2 WIRE & GND	14	60130802 BLK–L1 WHT–N 240V 3.5A 50Hz	PP10429 L1–(1) N–(5) 240	L–58.3 A	50006612 14.0 KW 14 AWG	L–70.8 A	50006603 17.0 KW 14 AWG	L–91.7 A	50006607 22.0 KW 14 AWG
440 1 PHASE 2 WIRE & GND	15	60130801 W/SEPRATE POWR CORD 1PH @ 230V 3.8A 50/60Hz	PP10428 L1–(2) N–(5) 440	L–26.7 A	50006613 11.8 KW 14 AWG	L–32.5 A	50006604 14.3 KW 14 AWG	L–42.0 A	50006608 18.5 KW 14 AWG

SINGLE PHASE

SINGLE PHASE INTERNATIONAL ELECTRICAL SERVICES
FOR MODELS SE14X, SE14, SE14R, SE18X, SE18, SE18R

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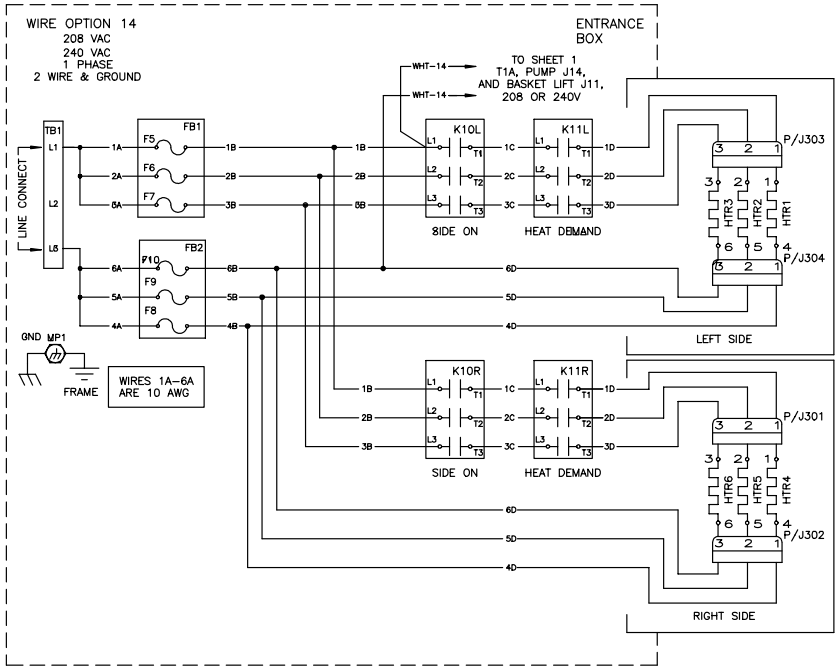
PART NO: NONE
SCALE: NONE SH 7 OF 13
SIZE D | DWG NO: 700329 | DWG REV A



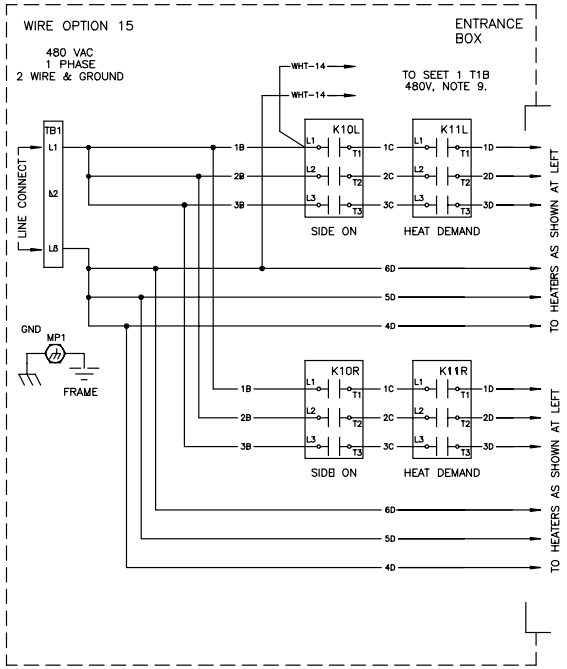


TABLE 8 LINE CONNECTION OPTIONS FOR DOMESTIC SERVICES (SINGLE PHASE) SE14T

LINE CONNECTIONS		FILTER PUMP	TRANSFORMER	LINE AMPS	LEFT SIDE	RIGHT SIDE	FUSES
VOLTAGE	WIRE OPTION	P/N	P/N	TOTAL HEATER LESS OPTIONS NOTES 9,10	HTR 1 P/N	HTR 2 P/N	F5-F10 P/N AMPS SLOW BLOW
WIRES & GND		CONNECT	CONNECT-(TAPS)		HEAT KW	HEAT KW	
LOAD TYPE		VOLTAGE/ AMPS	TAP VOLTS		1B-6D WIRE SIZE	1B-6D WIRE SIZE	
208 1 PHASE 2 WIRE & GND	14	60130808 BLK-L1, WHT-N 200V 4.0A 50/60Hz	PP10429 BLK-(2), WHT-(5) 208	L-81.7 A	50006601 8.5 KW 14 AWG	50006601 8.5 KW 14 AWG	P5045701 40 A
240 1 PHASE 2 WIRE & GND	14	60130801 BLK-L1, WHT-N 230V 3.8A 50/60Hz	PP10429 BLK-(1), WHT-(5) 240	L-70.8 A	50006603 8.5 KW 14 AWG	50006603 8.5 KW 14 AWG	P5045701 40 A
480 3PHASE 2 WIRE & GND	15	6030801 W/SEPRATE POWR CORD 1PH @ 230V 3.8A 50/60Hz	PP10428 BLK-(1), WHT-(5) 480	L-35.4 A	50006604 8.5 KW 14 AWG	50006604 8.5 KW 14 AWG	

SINGLE PHASE

SINGLE PHASE U.S. AND CANADIAN ELECTRICAL SERVICES SE14T

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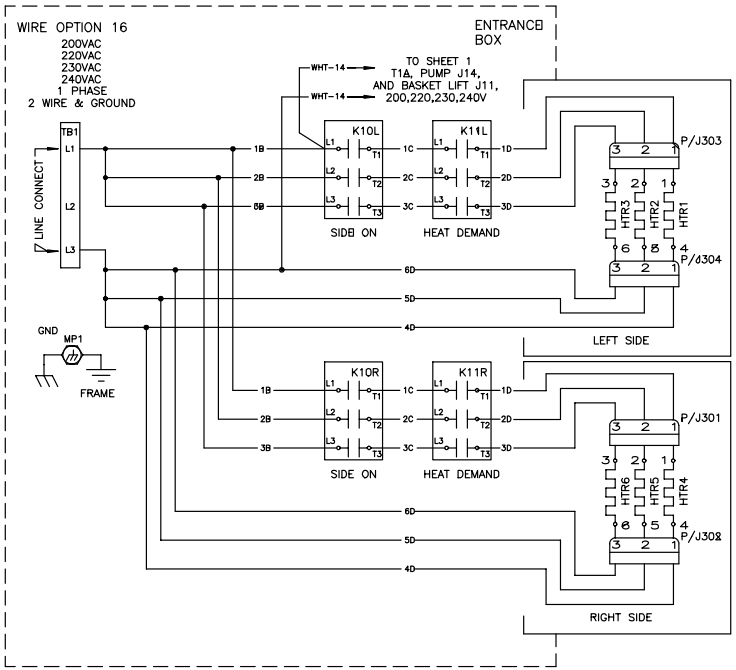
PART NO: NONE
SCALE: NONE | SH 8 OF 13
SIZE D | DWG NO: 700329 | DWG REV A



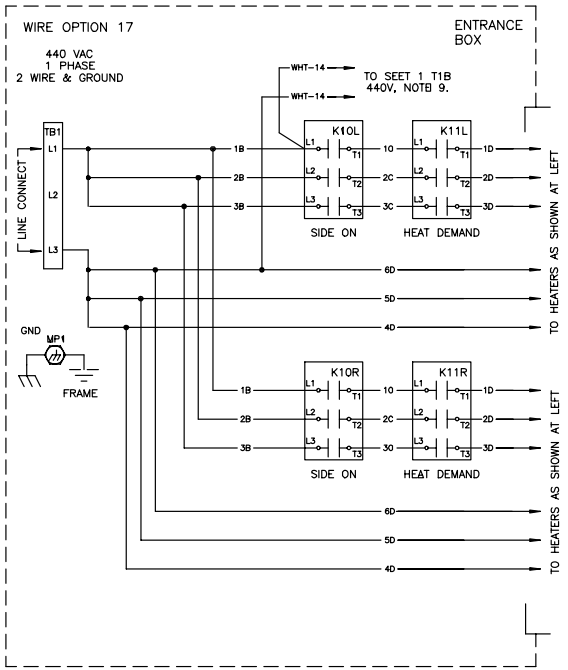


TABLE 9 LINE CONNECTION OPTIONS FOR INTERNATIONAL SERVICES (SINGLE PHASE) SE14T

VOLTAGE		FILTER PUMP	TRANSFORMER	LINE AMPS	LEFT SIDE	RIGHT SIDE
VOLTAGE	WIRE OPTION	P/N	P/N	TOTAL HEATER LESS OPTIONS NOTES 9,10	HTR 1 P/N	HTR 2 P/N
PHASES		CONNECT	CONNECT-(TAP)		HEAT KW	HEAT KW
WIRES & GND		PUMP VOLTS/AMPS	TAP VOLTS		1B-6D WIRE SIZE	1B-6D WIRE SIZE
200 1 PHASE 2 WIRE & GND	16	60130808 BLK- L1 WHT-N 208V 4A 50/60Hz	PP10429 L1-(2) N-(5) 208	L-78.6 A	50006601 7.9 KW 14 AWG	50006601 7.9 KW 14 AWG
220 1 PHASE 2 WIRE & GND	16	60130801 BLK-L1 WHT-N 230 3.5A 50/60Hz	PP10429 L1-(2) N-(5) 240	L-77.3 A	50006602 8.5 KW 14 AWG	50006602 8.5 KW 14 AWG
230 1 PHASE 2 WIRE & GND	16	60130801 BLK-L1 WHT-N 230V 3.5A 50/60Hz	PP10429 L1-(2) N-(5) 240	L-73.9 A	50006614 8.5 KW 14 AWG	50006614 8.5 KW 14 AWG
240 1 PHASE 2 WIRE & GND	16	60130802 BLK-L1 WHT-N 240V 3.5A 50Hz	PP10429 L1-(2) N-(5) 240	L-70.8 A	50006603 8.5 KW 14 AWG	50006603 8.5 KW 14 AWG
440 1 PHASE 2 WIRE & GND	17	6030801 W/SEPRATE POWR CORD 1PH @ 230V 3.8A 50/60Hz	PP10428 L1-(2) N-(5) 440	L-32.5 A	50006604 7.1 KW 14 AWG	50006604 7.1 KW 14 AWG

SINGLE PHASE

SINGLE PHASE INTERNATIONAL SERVICES SE14T

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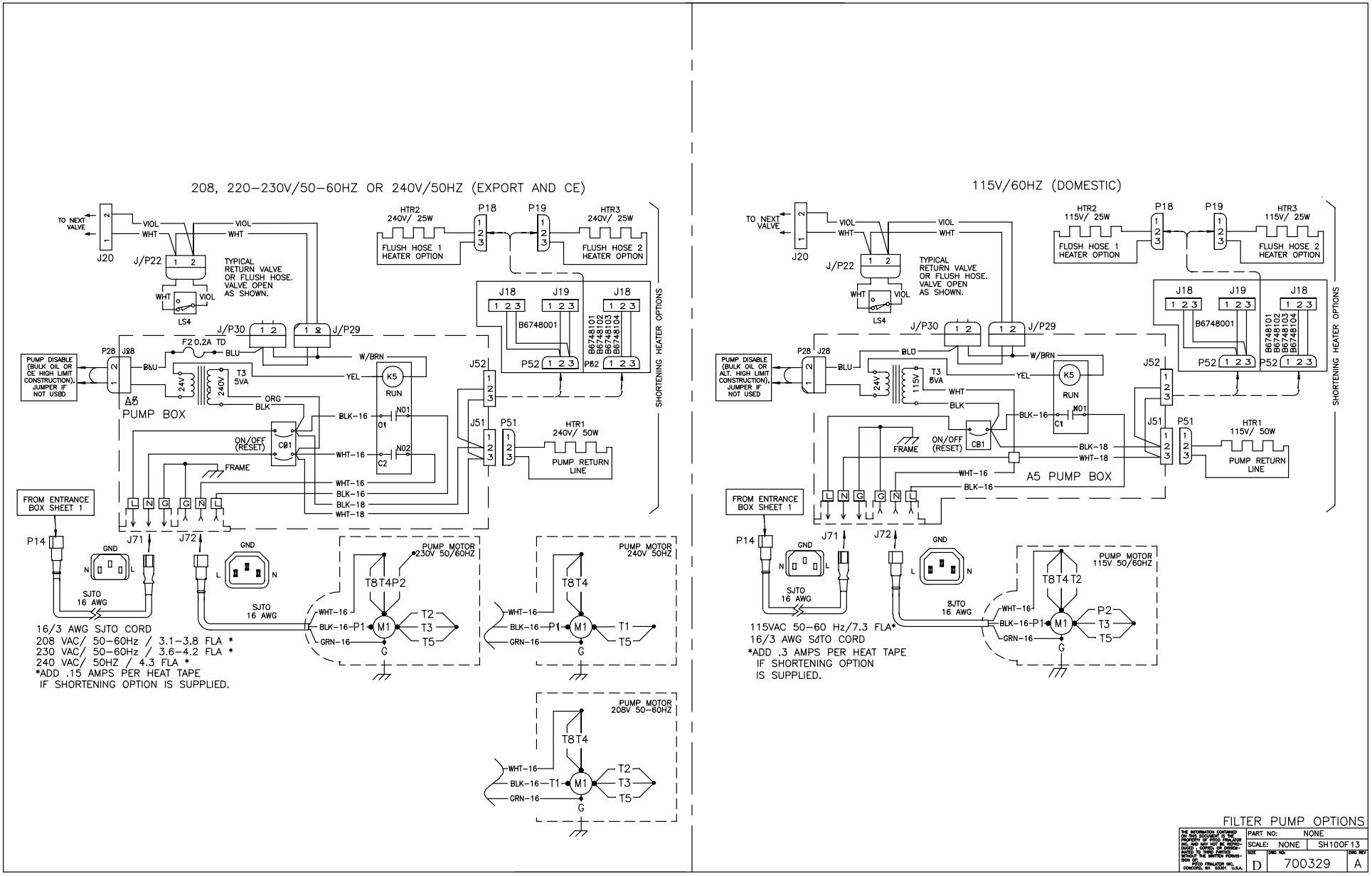
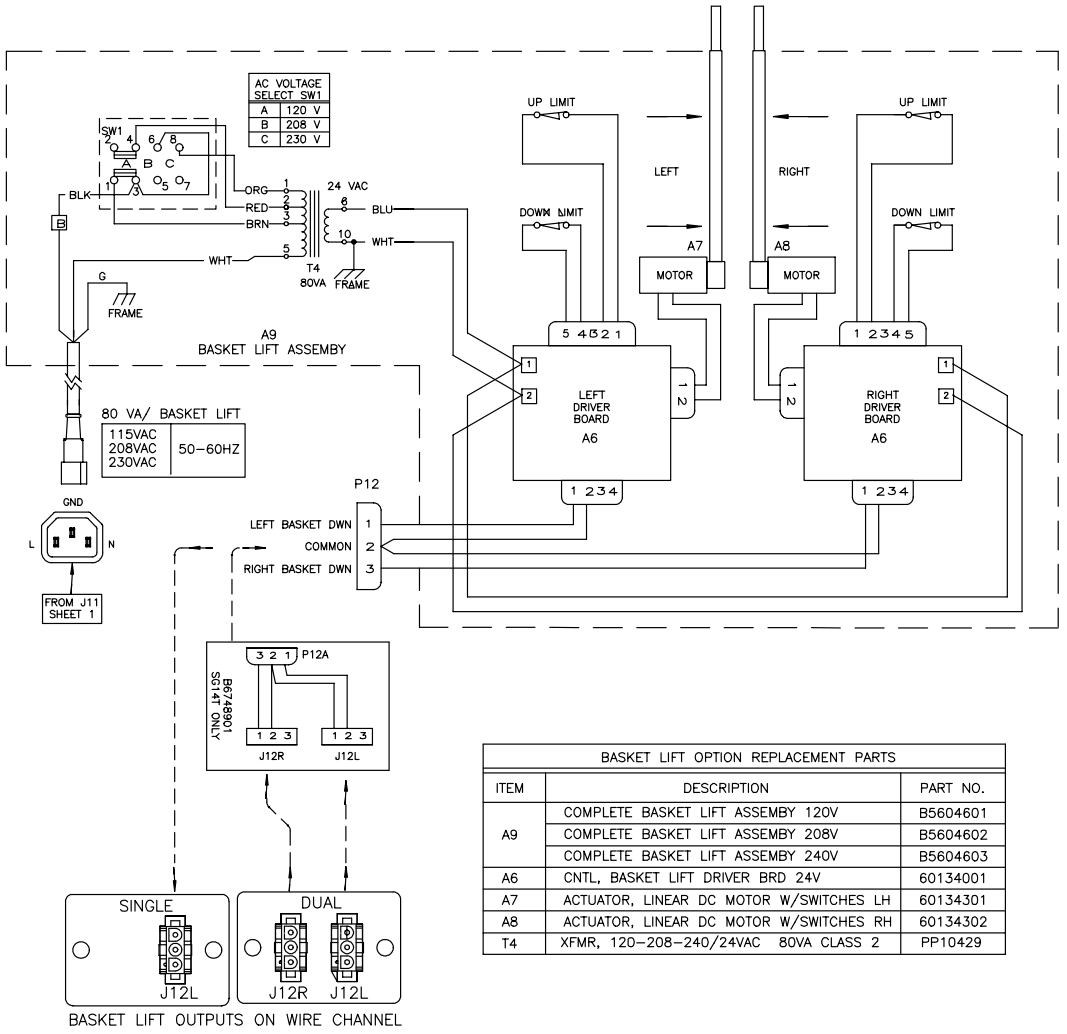
PART NO: NONE
SCALE: NONE
SH 9 OF 13
SIZE D
DWG NO: 700329
DWG REV A


208, 220-230V/50-60HZ OR 240V/50HZ (EXPORT AND CE)
TO NEXT VALVE
J20
J/P22
TYPICAL RETURN VALVE OR FLUSH HOSE. VALVE OPEN AS SHOWN.
LS4
HTR2 240V/ 25W
FLUSH HOSE 1 HEATER OPTION
HTR3 240V/ 25W
FLUSH HOSE 2 HEATER OPTION
P18
P19
J/P30
J/P29
F2 0.2A TD
PUMP DISABLE (BULK OIL OR CE HIGH LIMIT CONSTRUCTION), JUMPER IF NOT USED
P28
J28
T3 5VA
K5
RUN
A8 PUMP BOX
ON/OFF (RESET)
CB1
FRAME
HTR1 240V/ 50W
PUMP RETURN LINE
SHORTENING HEATER OPTIONS
B6748001
B6748101
B6748102
B6748103
B6748104
FROM ENTRANCE BOX SHEET 1
P14
J71
J72
GND
SJTO 16 AWG
PUMP MOTOR 230V 50/60HZ
PUMP MOTOR 240V 50HZ
PUMP MOTOR 208V 50-60HZ
16/3 AWG SJTO CORD
208 VAC/ 50-60Hz / 3.1-3.8 FLA *
230 VAC/ 50-60Hz / 3.6-4.2 FLA *
240 VAC/ 50HZ / 4.3 FLA *
*ADD .15 AMPS PER HEAT TAPE IF SHORTENING OPTION IS SUPPLIED.
115V/60HZ (DOMESTIC)
HTR2 115V/ 25W
HTR3 115V/ 25W
A5 PUMP BOX
HTR1 115V/ 50W
PUMP MOTOR 115V 50/60HZ
115VAC 50-60 Hz/7.3 FLA*
16/3 AWG SJTO CORD
*ADD .3 AMPS PER HEAT TAPE IF SHORTENING OPTION IS SUPPLIED.
FILTER PUMP OPTIONS
PART NO: NONE
SCALE: NONE
SH1 OF 1 3
SIZE D
DWG NO 700329
DWG REV A



BASKET LIFT OPTION REPLACEMENT PARTS		
ITEM	DESCRIPTION	PART NO.
A9	COMPLETE BASKET LIFT ASSEMBY 120V	B5604601
	COMPLETE BASKET LIFT ASSEMBY 208V	B5604602
	COMPLETE BASKET LIFT ASSEMBY 240V	B5604603
A6	CNTL, BASKET LIFT DRIVER BRD 24V	60134001
A7	ACTUATOR, LINEAR DC MOTOR W/SWITCHES LH	60134301
A8	ACTUATOR, LINEAR DC MOTOR W/SWITCHES RH	60134302
T4	XFMR, 120-208-240/24VAC 80VA CLASS 2	PP10429

BASKET LIFT OPTION

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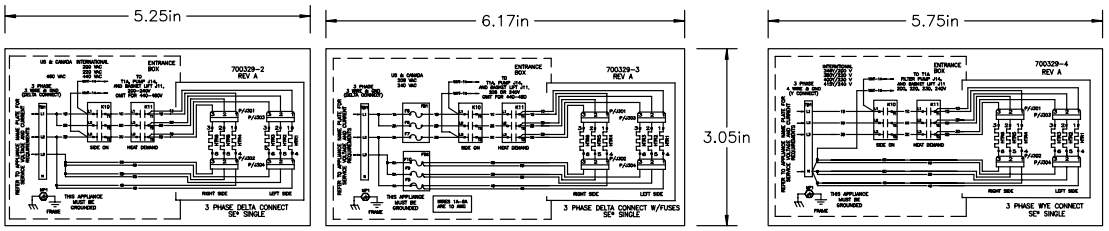
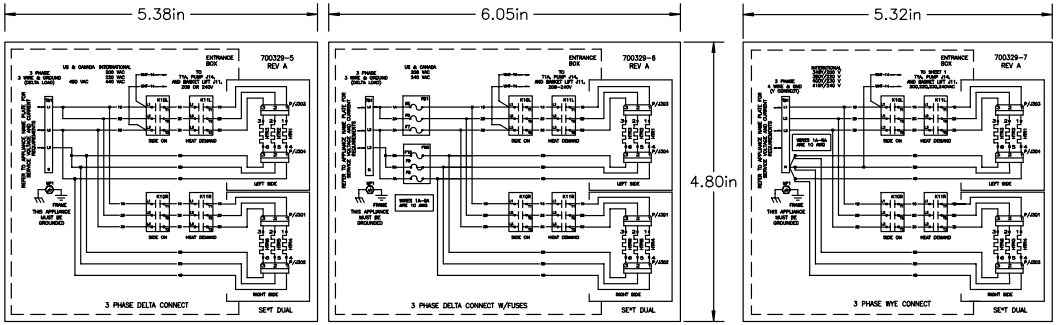
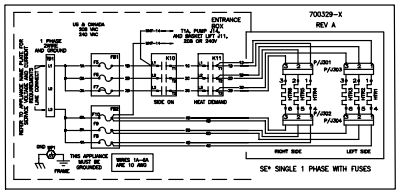
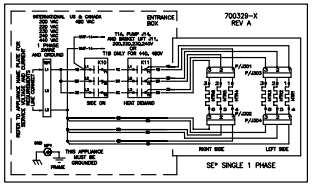
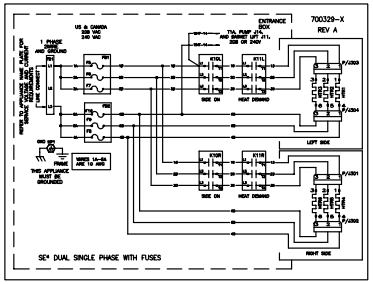
PART NO:	NONE	
SCALE: NONE	SH 1 1 OF 1 3	
SIZE	DWG NO:	DWG REV
D	700329	A

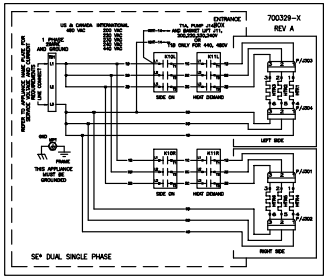












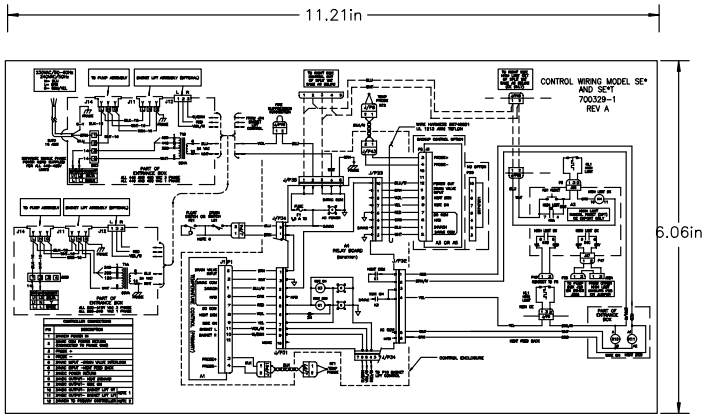


TABLE 1			
PART NO.	DESCRIPTION	P/N REV	P/N ECN
700329	SCHEM. ELECTRIC SE PLATFORM	SEE TITLE BLOCK	
700329-1	LBL, WIRING CNTRL SE*,SE*T	A	11096
700329-2	LBL, 3PH DELTA SE*	A	11096
700329-3	LBL, 3PH DELTA W/FUSES SE*	A	11096
700329-4	LBL, 3PH WYE SE*	A	11096
700329-5	LBL, 3PH DELTA SE*T	A	11096
700329-6	LBL, 3PH DELTA W/FUSES SE*T	A	11096
700329-7	LBL, 3PH WYE SE*T	A	11096
700329-8	LBL, 1PH W/FUSES SE*	A	11096
700329-9	LBL, 1PH SE*	A	11096
700329-10	LBL, 1PH W/FUSES SE*T	A	11096
700329-11	LBL, 1PH SE*T	A	11096
LBL, WIRING FLTR PUMP 208/230V/240V MG2, MEII		USE 700334-2	
LBL, WIRING FLTR PUMP 115V/50-60HZ MG2, MEII		USE 700334-3	

APPROVED MFR:
WALLACE 31 ST. JAMES ST. BOSTON, MA 02116 617 338-0982 617 482-0247

LABEL NOTES:

1. MATERIAL: 2 MIL WHITE MYLAR WITH 1 MIL CLEAR CAP.
2. ALL LETTERING, LINES AND SYMBOLS TO BE BLACK IN COLOR.
3. LABEL BACK TO HAVE PRESSURE SENSITIVE L-23 ADHESIVE WITH SPLIT LINER.

EQUIPMENT LABELS

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PART NO:	NONE	
SCALE: NONE	SH1 2OF 13	
SIZE	DWG NO:	DWG REV
D	700329	A

FILTER PUMP REPLACEMENT PARTS			
ITEM	VOLTAGE	DESCRIPTION	PART NO.
M1 (5GPM)	208V–50/60Hz	MOTOR AND PUMP 1/3HP 5GPM	60130810
	120V–50/60Hz	MOTOR AND PUMP 1/3HP 5GPM	60130806
	230V–50/60Hz		
	240V/50Hz	MOTOR AND PUMP 1/3HP 8GPM	60130807
M1 (8GPM)	208V–50/60Hz	MOTOR AND PUMP 1/3HP 8GPM	60130808
	120V–50/60Hz	MOTOR AND PUMP 1/3HP 8GPM	60130801
	230V–50/60Hz		
	240V/50Hz	MOTOR AND PUMP 1/3HP 8GPM	60130802
CB1 SEPARATE CORD NOTES 7,9	120V–50/60Hz	CKT BRKR,10 AMP SINGLE POLE	60077901
	230V–50/60Hz	CKT BRKR, 5 AMP TWO POLE	60078502
	240V/50Hz		
CB1 MAINS CONNECT NOTES 8,10	220–240V 50/60Hz	CKT BRKR, 7 AMP TWO POLE UL 489 BCP	NEW
T3	120V–50/60Hz	XFMR, 120/24VAC 5VA	60130301
	230V–50/60Hz	XFMR, 240/24 VAC 5VA	60130302
	240V–50Hz		
K5	120V–50/60Hz	RELAY, 24VAC, 30A SPST	PP11058
	230V–50/60Hz	RELAY, 24VAC, 30A DPST	60104701
	240V–50Hz		
F2	ALL	FUSE 0.2A 250V TIME DELAY CERAMIC	60132701
FH2		FUSE HOLDER, IN LINE, .25 X 1.25	PP10765

SHORTENING HEATER OPTIONS REPLACEMENT PARTS			
ITEM	VOLTAGE	DESCRIPTION	PART NO.
HTR1	120–50/60Hz	HEATER TAPE 1/2X 72", 50W	60133503
	230–50/60Hz	HEATER TAPE 1/2X 72", 50W	60133504
	240/50Hz		
HTR2,3	120–50/60Hz	HEATER TAPE 1/2X 33", 25W	60133501
	230–50/60Hz	HEATER TAPE 1/2X 33", 25W	60133502
	240/50Hz		

FRYER REPLACEMENT PARTS		
REF	DESCRIPTION	PART NO.
A1 (OPT)	DIGITAL TEMPERATURE CNTRL SINGLE	60126601
A1 (OPT)	DIGITAL TEMPERATURE CNTRL DUAL	60126701
A1 (OPT)	COMPUTER COOKING CNTRL SINGLE	60126801
A1 (OPT)	COMPUTER COOKING CNTRL DUAL	60126802
A3 (OPT)	BACKUP SSTC, W/MELT & DVI	60126401
A4	RELAY BOARD, 24VAC CLASS 2	60127301
A5	SOLID STATE TEMP CNTRL, W/MELT&DVI (PRIM)	60126301
K4	RELAY, 24VAC, 3PDT, 10A	60126001
HL1	SWITCH, HIGH LIMIT (DOMESTIC)	60141201
A2 (CE EXPORT)	HIGH LIMIT W/RESET ASSEMBLY CE	NEW
RT1 (NO BACKUP)	PROBE, NTC THERMISTOR PROBE	60140601
RT1,2 (W/BACKUP)	PROBE, NTC THERMISTOR DUAL PROBE	60141601
A10	POWER ON RESET CKT, 24VAC	60143301
LS1, LS4 (TYPICAL)	SWITCH PROXIMITY MAGNETIC	PP10262
	SWITCH ACTUATOR MAGNETIC	PP10263
FS1	SWITCH, FLOAT (OPTIONAL)	P5047217
T1	XFMR, 120–208–240/24VAC 80VA CLASS 2	PP10428
	XFMR, 380–440–480/24VAC 80VA CLASS 2	PP10429
F1	FUSE 1.5A 250V TIME DELAY CERAMIC	60132702
K10	CONTACTOR, 40A RES, 24VAC COIL, TABS	PP10560
K11	CONTACTOR, 3 POLE, 50A 690V, IEC	60139201
HTR1–3, 4–6	HTR, ELEMENT 7.0 KW, 208V	50006609
	HTR, ELEMENT 8.5 KW, 208V	50006601
	HTR, ELEMENT 11 KW, 208V	50006605
	HTR, ELEMENT 7.0 KW, 220V	50006610
	HTR, ELEMENT 8.5 KW, 220V	50006602
	HTR, ELEMENT 11 KW, 220V	50006606
	HTR, ELEMENT 7.0 KW, 230V	50006611
	HTR, ELEMENT 7.0 KW, 240V	50006612
	HTR, ELEMENT 8.5 KW, 240V	50006603
	HTR, ELEMENT 11 KW, 240V	50006607
	HTR, ELEMENT 7.0 KW, 480V	50006613
	HTR, ELEMENT 8.5 KW, 480V	50006604
	HTR, ELEMENT 11 KW, 480V	50006608

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PART NO: NONE
SCALE: NONE | SH1 3OF 13
SIZE: D | DRG NO: 700329 | DRG REV: A

Exploded Drawings and Parts Lists

Parts Listing

Fryer Electrical Components:

Part Number	Description
50006609	208V Element
50006610	220V Element
50006611	230V Element
50006612	240V Element
50006613	480V Element
60068304	Tank/Element O-ring
60141201	Hi Limit Switch
A3342802	Upper Hi Limit Bracket
A3342902	Lower Hi Limit Bracket
PP10429	120/208/240V Transformer
PP10560	Side On Contactor
60139201	Heat Demand Contactor
P5045282	4 Post Terminal Block
P5047301	3 Post Terminal Block
B6700605-C	Temperature Probe
A3342502	Front Probe Bracket
A3342504	Rear Probe Bracket
60137301	24VDC Hood Relay
60126001	24VAC Hi Limit Relay (CE)
B2004201-C	Solid State Control
B2004202-C	Back-up SolidState Control
60126601	Digital Control
60126701	Dual Digital Control
60126801	Computer Control
60126802	Dual Computer Control
B3631304	Front Panel Bezel
60132702	1.5A Time Delay Fuse
60127301	Relay Board
60132901	Relay Board Insulation
B5305001	DVI/Return Switch
PP10263	DVI/ReturnActuator

Filter Components:

Part Number	Description
60130806	115/220V Pump & Motor
60130807	240V Pump & Motor
60130810	208V Pump & Motor
60130803	115/220V Motor
60130804	240V Motor
60130809	208V Motor
PP10417	5 GPM Pump
60077901	10A Circuit Breaker (120V)
60078502	5A Circuit Breaker(208-240V)
60130301	120/24V Transformer
60130302	230-240/24V Transformer
60130303	208/24V Transformer
PP11058	24VAC SPST Relay (120V)
60104701	24VAC DPDT Relay (208-240V)
60132701	0.2A Time Delay Fuse
60133503	120V Heat Tape (Pump)
60133504	230/240V Heat Tape (Pump)
60133501	120V Heat Tape (Flush Hose)
60133502	230/240V Heat Tape (Flush Hose)
PP11104	1” Viton O-ring
60138701	Full/LH Non Locking Drain Valve
60138702	RH Non Locking Drain Valve
60138703	Full/LH Locking Drain Valve
60138704	RH Locking Drain Valve
60059302	Drain Line Gasket
60127702	Drain Line Clamp
B6665101	Drain Elbow
B6665201	Drain Tee Full
A7022407	Drain Line Tube Full/Full
A7022409	Drain Line Tube Split/Full
A7022411	Drain Line Tube Split/Split
A7022101	Drain Tee Ferrule
A7022201	Drain Tee Flange
B6664701	Drain Down Spout Full/Full
B6673301	Drain Down Spout Split
B5305001	DVI/Return Switch
PP10263	DVI/ReturnActuator
B6671201	Strainer Cap
B4004802	Full/RH Return Handle
B4004801	LH Twin Return Handle
60131801	Return Valve
A7008302	Paper Support
B6673801	Filter Pan

Miscellaneous

Part Number	Description
A4500601	Full Vat Tube Rack
B4512401	Split Vat Tube Rack
A3342104	Basket Hanger
60138101	Basket Hanger Stud
A4108302	Splash Back
P6071409	Nylon Cleaning Brush
A3301001	Cleanout Rod
B2304602	LH/RH Door
B3801901	RH Hinge Kit
B3801902	LH Hinge Kit
B3902101	9” Caster Set (4)
A1908202	Channel Strip
B2101503	Full/Twin Tank Cover

Table 1
Element and Tank Components

Item#	Part#	Part Description
1	A3342102	Basket Hanger w/Capping
	A3342104	Basket Hanger w/o Capping
2	60068304	Element O-ring
3	50006609	Element 208V
	50006610	Element 220V
	50006611	Element 230V
	50006612	Element 240V
	50006613	Element 480V
4	60088003	Bolt, Element 1/4”x20x3/4” SS
5	60141201	Hi Limit Switch
6	A3342902	Lower Hi Limit Bracket
7	PP11366	Screw, 10-24 X 5/8 PHH SS TF
8	A3342802	Upper Hi Limit Bracket
9	PP10665	Screw, 10-24 X 3/8
10	B6700605-C	Temperature Probe
11	A3342504	Rear Probe Bracket
12	A4108302	Splash Back
13	A3342502	Front Probe Bracket
14	60138101	Basket Hanger Stud
	60118201	Bolt,Hex 1/4-20 X 3/4

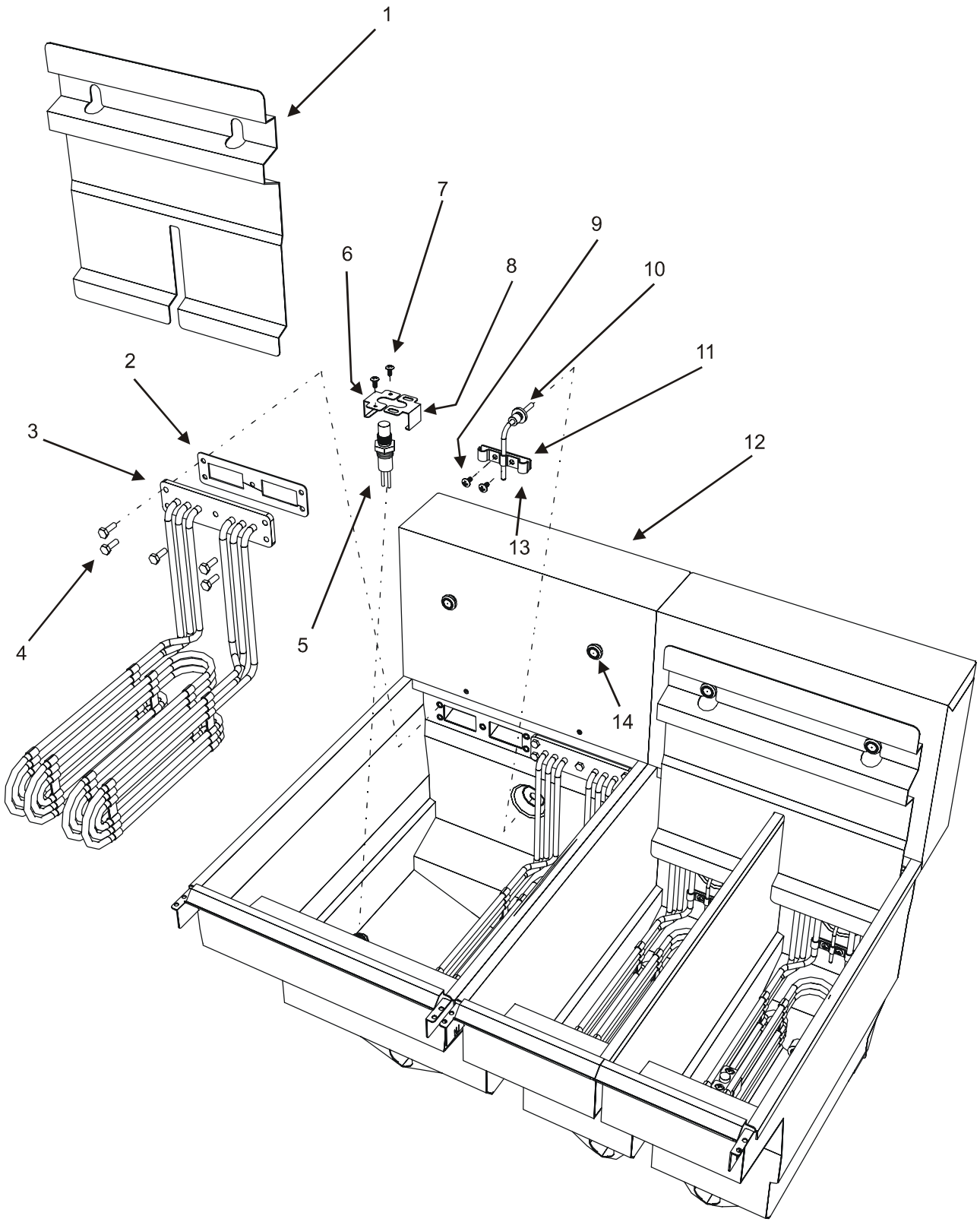


Figure 1

Table 2
Pump Box and Drain Manifold

Item#	Part#	Part Description
1	60130301	120/24V Transformer
	60130302	230-240/24VAC Transformer
	60130303	208VAC Transformer
2	60077901	10A Circuit Breaker (120V)
	60078502	5A Circuit Breaker (208V-240V)
3	PP11058	24VAC SPST Relay (120V)
	60104701	24VAC DPDT Relay (208-240V)
4	60130701	Conn, Pwr In & Out IEC320
5	60138701	Drain Valve, Full/Right Split, W/Non-locking Handle
	60138703	Drain Valve, Full/Right Split, W/Locking Handle
6	A7021701	Drain Valve Nipple
7	A7022201	Drain Flange
8	A7022101	Drain Ferrule
9	B6665101	Drain Elbow
10	60088002	Hex Bolt 3/8”x16x1-1/4”
11	P0082700	Lock Washer 3/8”
12	60127701	Drain Line Clamp
13	60059302	Drain Line Gasket
14	B6664701	Drain Down Spout Full/Full
	B6673301	Drain Down Spout Split
15	60138702	Drain Valve, Left Split, W/Non-locking Handle
	60138704	Drain Valve, Left Split, W/Locking Handle
16	Contact Factory	Drain Line Tube
17	PP10263	DVI Actuator
18	B5305001	DVI Switch Assembly
19	PP10266	Screw, 4-40 X .250 RDH ZN

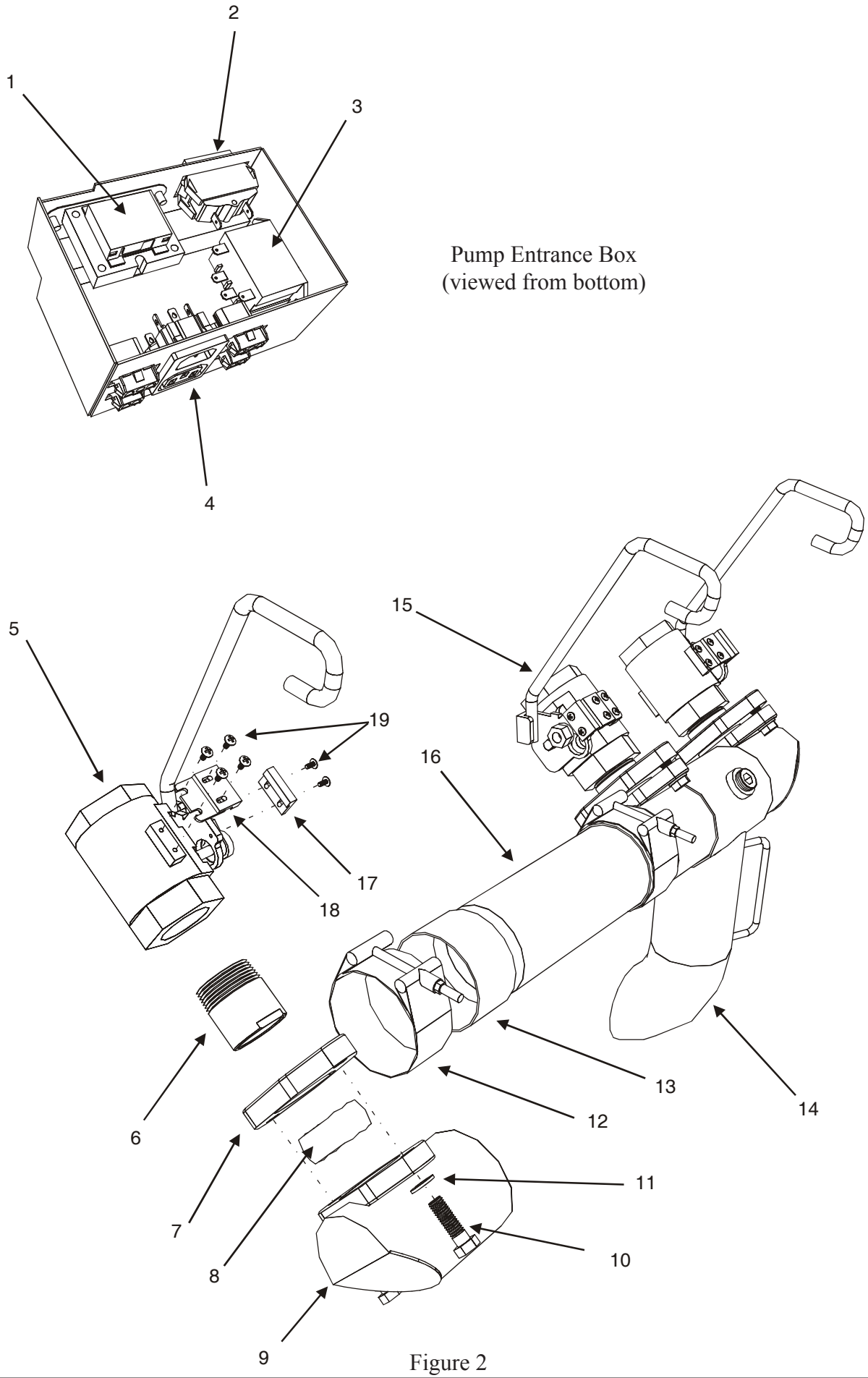

1
2
3
4
Pump Entrance Box
(viewed from bottom)
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19

Figure 2

Table 3
Main Entrance Box

Item#	Part#	Part Description
1	60132702	Relay Board Fuse, 1.5A Time Delay
2	60127301	Relay Board
	60132901	Relay Board Insulation
3	P5047301	3 Post Terminal Block
4	60139201	Heat Demand Contactor
5	PP10560	Side On Contactor
6	PP10429	Transformer 120/208/240VAC
7	60140701	Rcpt,10A-250V IE320F Screw In
8	P5045282	4 Post Terminal Block
9	B5305001	DVI Return Switch
	PP10263	DVI Return Actuator (not shown)

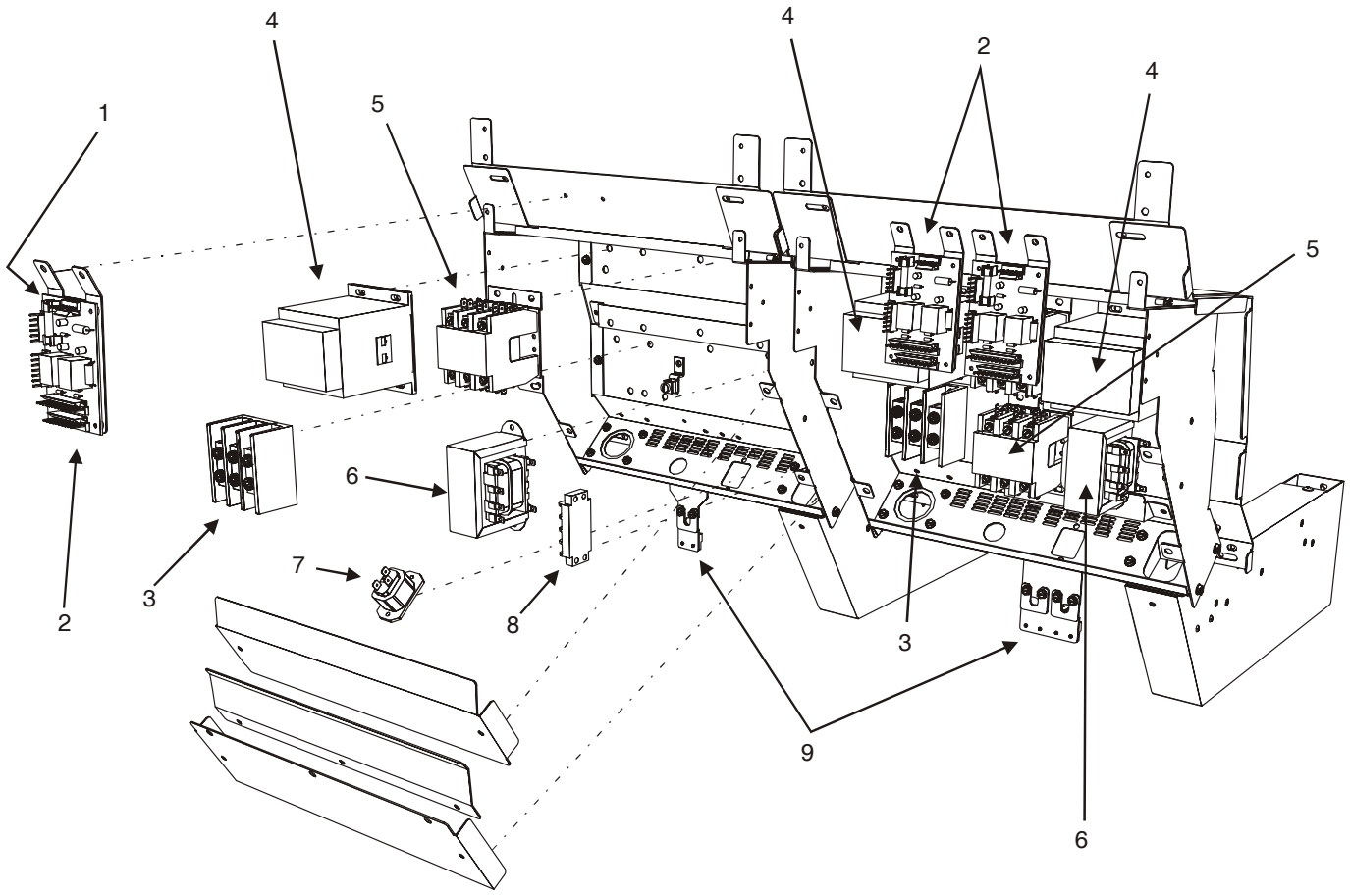


Figure 3

Table 4
Pump Assembly and Filter Pan

Item#	Part#	Part Description
1	B4004802	Full/Right Split Return Handle
	B4004801	Left Split Return Handle
2	P0190200	Cotter Pin 1/16”x3/4”
3	60131901	Washer, Spring 5/8” with 5/16” Hole
4	P0080750	Washer, Flat 5/16”
5	PP10266	4-40 x 1/4” Screw
6	B5305001	DVI Return Switch
7	PP10266	4-40 x 1/4” Screw
8	PP10263	DVI Return Actuator
9	PP10266	4-40 x 1/4” Screw
10	60130806	115/220VAC Pump & Motor Assembly
	60130807	240VAC Pump & Motor Assembly
	60130810	208VAC Pump & Motor Assembly
	60130804	115/220V Motor Only
	60130804	240VAC Motor Only
	60130809	208VAC Motor Only
	PP10417	5 GPM Pump Only
11	P6071516	3/4” x 4” NPT Nipple
12	PP11104	1” x 1.18” viton O-ring (3 required)
13	A7027602	Pickup Tube Receiving Block
14	P7036603	3/4” NPT Coupling
15	60132201	Hose, Fluropolymer Swivel FxMPT
16	60128008	Tbg, Flex Return Line 0.5” x 15.5”
	60128009	Tbg, Flex Return Line 0.5” x 19”
	60128010	Tbg, Flex Return Line 0.5” x 22”
	60128011	Tbg, Flex Return Line 0.5” x 10”
17	60131801	Return Valve
18	60130001	End Cap
19	60130101	Tank Return Fitting
20	B6671201	Pickup Tube Strainer
21	A7008302	Paper Support
22	B6673501	Paper Hold Down
23	60131401	Rigid Caster
24	B6673401	Filter Pan Only (no casters)

Additional Parts Not Shown

PP11273	Filter Paper
60133503	120V Heat Tape (pump)
60133504	230/240V Heat Tape (pump)
60133501	120V Heat Tape (flush hose)
60133502	230/240V Heat Tape (flush hose)

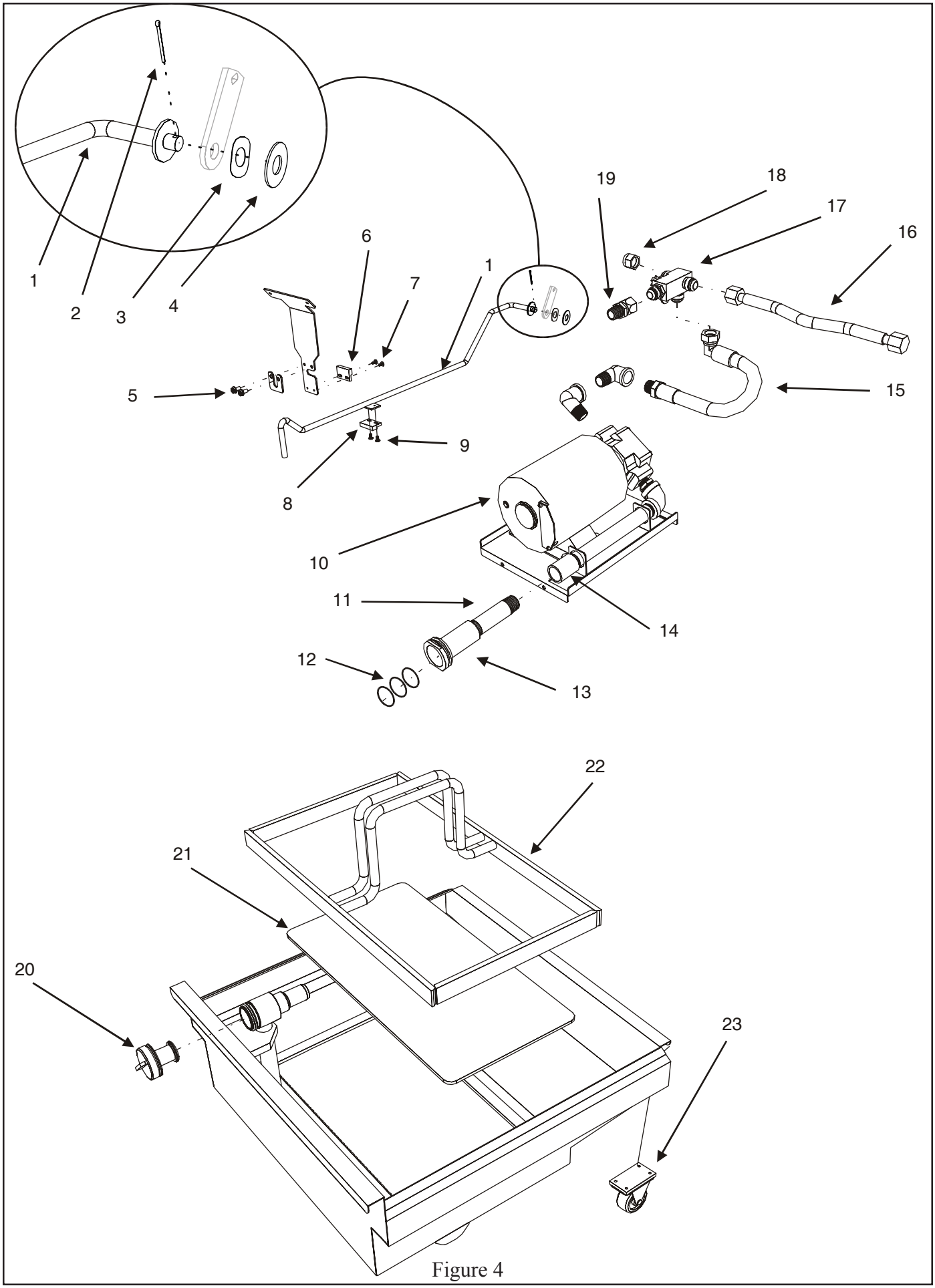


Figure 4

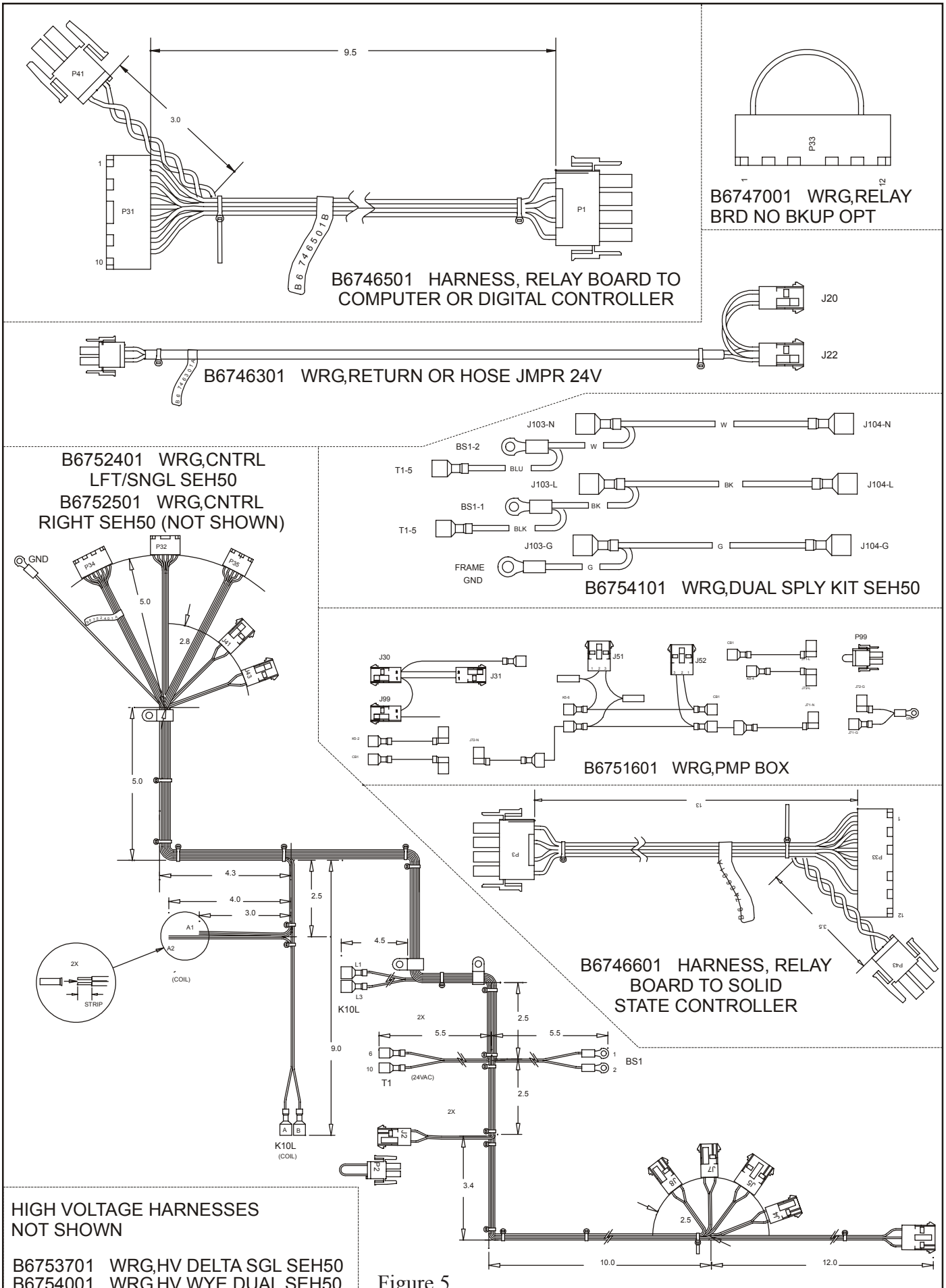
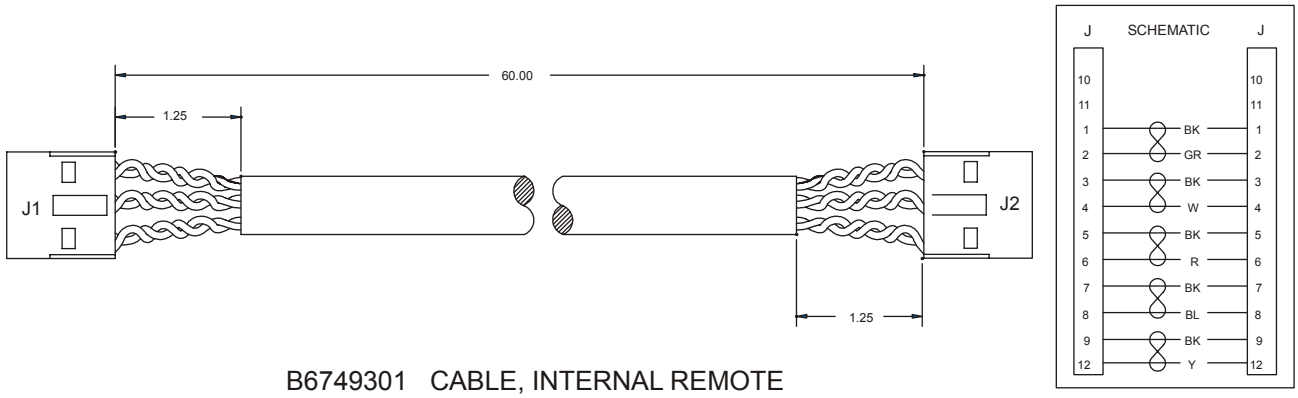
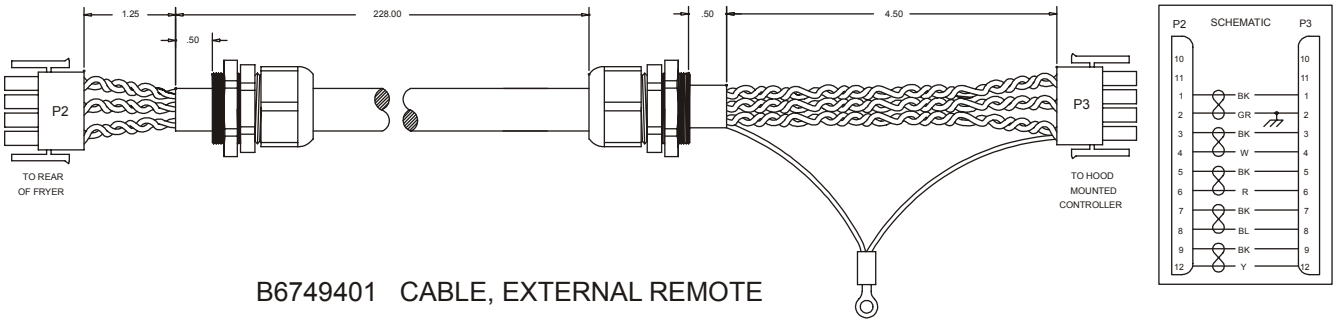

P41
9.5
3.0
P31
P1
B6746501 HARNESS, RELAY BOARD TO COMPUTER OR DIGITAL CONTROLLER
P33
B6747001 WRG,RELAY BRD NO BKUP OPT
J20
J22
B6746301 WRG,RETURN OR HOSE JMPR 24V
B6752401 WRG,CNTRL LFT/SNGL SEH50
B6752501 WRG,CNTRL RIGHT SEH50 (NOT SHOWN)
J103-N
J104-N
BS1-2
T1-5
J103-L
J104-L
BS1-1
J103-G
J104-G
FRAME GND
B6754101 WRG,DUAL SPLY KIT SEH50
GND
P32
P34
P35
5.0
2.8
J30
J31
J99
J51
J52
P99
B6751601 WRG,PMP BOX
4.3
4.0
3.0
2.5
4.5
A1
A2
(COIL)
2X
STRIP
K10L
L1
L3
9.0
5.5
BS1
T1
(24VAC)
P3
P33
P43
B6746601 HARNESS, RELAY BOARD TO SOLID STATE CONTROLLER
K10L
(COIL)
P2
J2
3.4
J8
J7
J5
J1
10.0
12.0
HIGH VOLTAGE HARNESSES NOT SHOWN
B6753701 WRG,HV DELTA SGL SEH50
B6754001 WRG,HV WYE DUAL SEH50

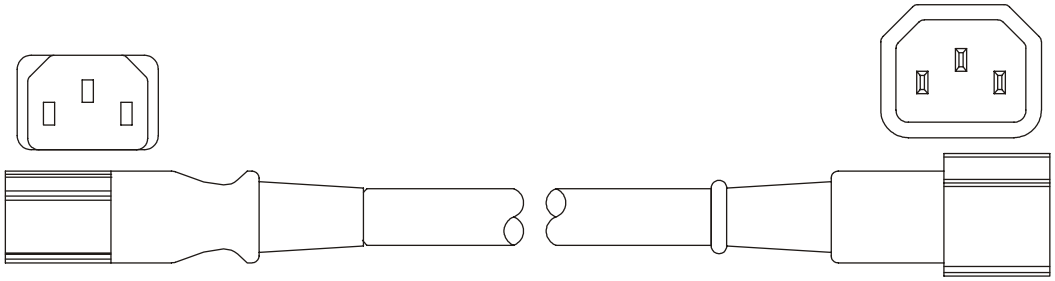
Figure 5



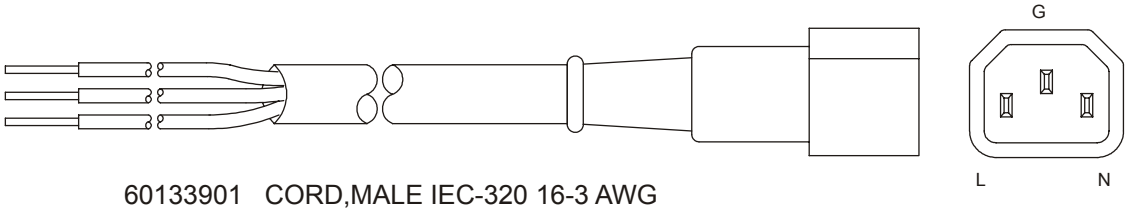
B6749301 CABLE, INTERNAL REMOTE



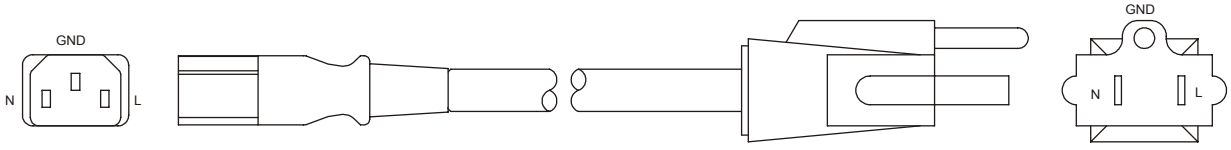
B6749401 CABLE, EXTERNAL REMOTE



60128403 CORD,M-F JUMPER IEC-320X34"



60133901 CORD,MALE IEC-320 16-3 AWG
60133902 CORD,16-3 W/IEC320 MALE 66"



60128501 CORD, FEMALE IEC/NEMA 5-15

Figure 6

In the event of problems with or questions about your order, please contact the Pitco Frialator factory, from 8:00 a.m. - 5:00 p.m., Eastern Standard Time, Monday through Friday at: 1-603-225-6684

In the event of problems with or questions about your order, please contact the Pitco Frialator Authorized Service and Parts representative (ASAP) covering your area, through Pitco at:

1-603-225-6684

L22-238 Rev 2 (10/12)