ALTO-SHAAM

Service Manual

Cook & Hold Ovens
Smoker Ovens

Deluxe Control
Firmware up to 8.12.1

300-TH
500-TH
750-TH
1000-TH
1200-TH
1750-TH
750-SK
1000-SK
1200-SK
1750-SK

MN-46712-EN

REV.03
04/22

EN

Manufacturer’s Information

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Manufacturer

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Original instructions

The content in this manual is written in American English.

Alto-Shaam 24/7 Emergency Repair Service

Call

Call 800-558-8744 to reach our 24-hour emergency service call center for immediate access to local authorized service agencies outside standard business hours. The emergency service access is provided exclusively for Alto-Shaam equipment and is available throughout the United States through Alto-Shaam's toll free number.

Availability

Emergency service access is available seven days a week, including holidays.

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The Meaning of Signal Words

This manual contains signal words where needed. These signal words must be obeyed to reduce the risk of death, personal injury, or equipment damage. The meaning of these signal words is explained below.

DANGER

Danger indicates a hazardous situation which, if not avoided, will result in serious injury or death.

WARNING

Warning indicates a hazardous situation which, if not avoided, could result in serious injury or death.

CAUTION

Caution indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE Notice indicates a situation which, if not avoided, could result in property damage.

NOTE: Note indicates additional information that is important to a concept or procedure.

Safety Precautions

Before you begin

Read and understand all instructions in this manual.

Electrical precautions

Obey these electrical precautions when using the appliance:

- Connect the appliance to a properly grounded outlet. Do not use the appliance if it is not properly grounded. Consult an electrician if there is any doubt that the outlet used is properly grounded.
- Keep the cord away from hot surfaces.
- Do not attempt to service the appliance or its cord and plug.
- Do not operate the appliance if it has a damaged cord or plug.
- Do not immerse the cord or plug in water.
- Do not let the cord hang over the edge of a table or counter.
- Do not use an extension cord.

Usage precautions

Obey these usage precautions when using the appliance:

- Only use this appliance for its intended use of heating or cooking.
- Always keep liquids, or foods that can become liquid when heated, level and at or below eye level where they can be seen.
- Always open the appliance door very slowly. Escaping hot vapors or steam can cause serious injury.
- Use utensils and protective clothing such as dry oven mitts when loading and unloading the appliance.
- Use caution when using the appliance. Floors adjacent to the appliance may become slippery.
- Do not cover or block any of the openings of this appliance.
- Do not cover shelves or any other part of this appliance with metal foil.
- Do not use this appliance near water such as a sink, in a wet location, near a swimming pool, or similar locations.

Maintenance precautions

Obey these maintenance precautions when maintaining the appliance:

- Obey precautions in the manual, on tags, and on labels attached to or shipped with the appliance.
- Only clean the appliance when the oven is disconnected from the power source.
- Do not store the appliance outdoors.
- Do not clean the appliance with metal scouring pads.
- Do not use corrosive chemicals when cleaning the appliance.
- Do not use a hose or water jet to clean the appliance.
- Do not use the appliance cavity for storage.
- Do not leave flammable materials, cooking utensils, or food inside the appliance when it is not in use.

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Operator training

All personnel using the appliance must have proper operator training. Before using the appliance:

- Read and understand the operating instructions contained in all the documentation delivered with the appliance.
- Know the location and proper use of all controls.
- Keep this manual and all supplied instructions, diagrams, schematics, parts lists, notices, and labels with the appliance if the appliance is sold or moved to another location.
- Contact Alto-Shaam for additional training if needed.

Operator qualifications

Only trained personnel with the following operator qualifications are permitted to use the appliance:

- Have received proper instruction on how to use the appliance.
- Have demonstrated their ability with commercial kitchens and commercial appliances.

The appliance must not be used by:

- Persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision concerning use of the appliance by person responsible for their safety.
- People impaired by drugs or alcohol.

- Children should be supervised to ensure that they do not play with the appliance.
- Children shall neither clean nor maintain the appliance.

Condition of appliance

Only use the appliance when:

- All controls operate correctly.
- The appliance is installed correctly.
- The appliance is clean.
- The appliance labels are legible.

Servicing the appliance

- Only trained personnel are permitted to service or repair the appliance. Repairs that are not performed by an authorized service partner or trained technician will void the warranty and relieve Alto-Shaam of all liability.
- To prevent serious injury, death or property damage, have the appliance inspected and serviced at least every twelve (12) months by an authorized service partner or trained technician.
- Contact Alto-Shaam for the authorized service partner in your area.

Personal Protective Equipment (PPE)

Wear the following Personal Protective Equipment (PPE) while cleaning the appliance:

- Protective gloves
- Protective clothing
- Eye protection
- Face protection

Use of restraining devices

A restraining device (tether) must be installed to any appliance that is hard-wired and mounted on casters. The tether must:

- Be secured to the building's structure.
- Limit the movement of the appliance so that no stress is transmitted to the electrical conduit.

A connection point for the tether is located on the back of the appliance.

A tether is not supplied by nor available from the manufacturer.

Service Technician Training

Only trained personnel are permitted to service or repair the appliance. Service technicians must be knowledgeable in current codes and standards as stated by the appropriate agencies, such as:

- The National Fire Protection Association (NFPA)
- National Electrical Code (NEC)
- The Service Technician's employer

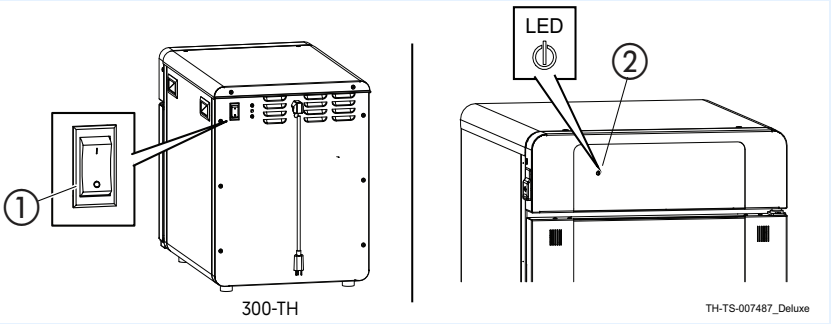
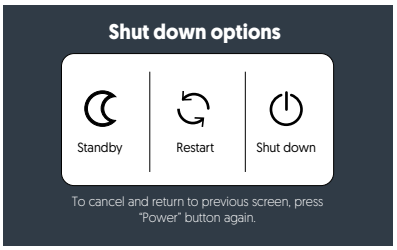
How to Turn On and Turn Off the Oven

Before you begin

The oven must be connected to electric power.

Turning on the oven

To turn on the oven, do the following.

Step	Action
1.	**Set** the power switch ① to the ON position (300-TH only). Touch and hold the ON/OFF button ② for two (2) seconds.  The oven is now on.
2.	To turn off the oven, do the following. **Touch** and hold the ON/OFF button for 5 seconds. The Shut Down Options screen displays.  TH-TS-011417
3.	**Choose** the desired shut-down option. On 300-TH ovens, **set** the power switch to the OFF position.

Result

The oven is now off.

How to View and Set up WiFi Connection

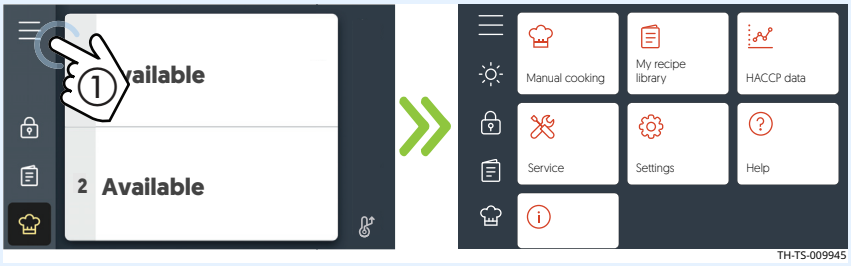
Before you begin

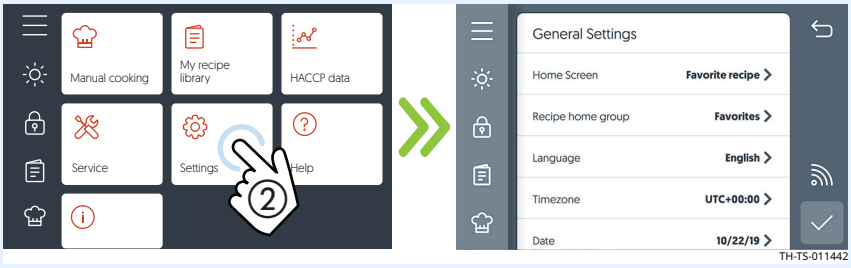
- The facility must have WiFi.
- Do not connect to a guest network.

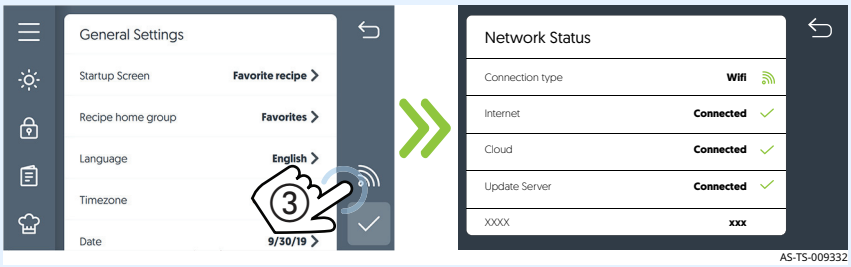
Procedure

To set up WiFi, do the following.

Step	Action
1.	**Touch** the menu icon ①. The menu screen displays.
2.	**Touch** the settings icon ②. The general settings screen displays.
3.	**Touch** the WiFi icon ③. The Network Status screen displays.







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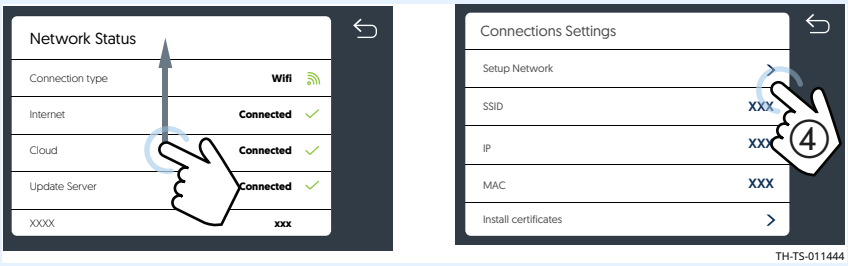
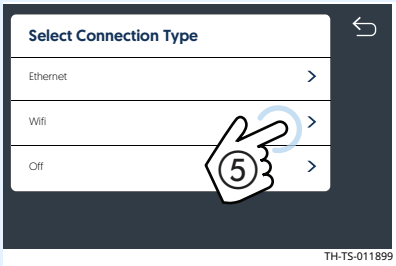
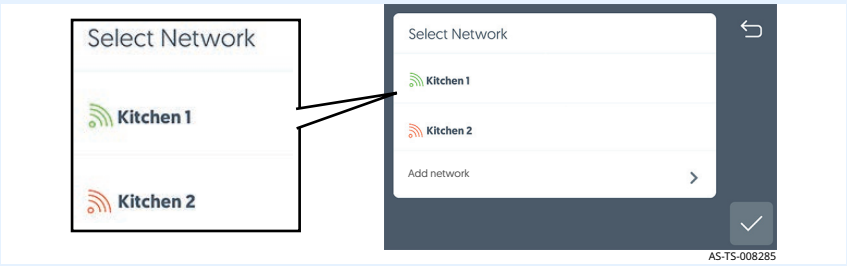
4. **Scroll** to “Connection settings”. **Touch** the Setup Network icon ④.



5. **Touch** the WiFi icon ⑤.



The available networks will show on the screen. The color of the network icon indicates the strength of the signal for each network.
Green = strong
Yellow = medium
Red = weak



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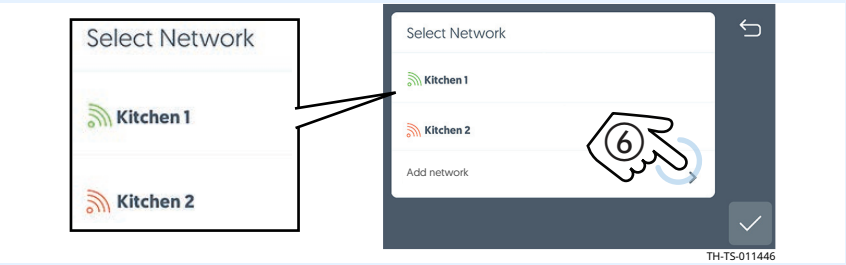
6. If the network is not displayed, **touch** the “Add network” icon ⑥.



Enter the SSID using the keypad. Then, **touch** the arrow key.

Enter the security type. Then, **touch** the check mark.

Enter the password using the keypad. Then, **touch** the arrow key.

Touch the check mark when finished.

Result

The procedure is now complete.

How to Set up an Ethernet Connection

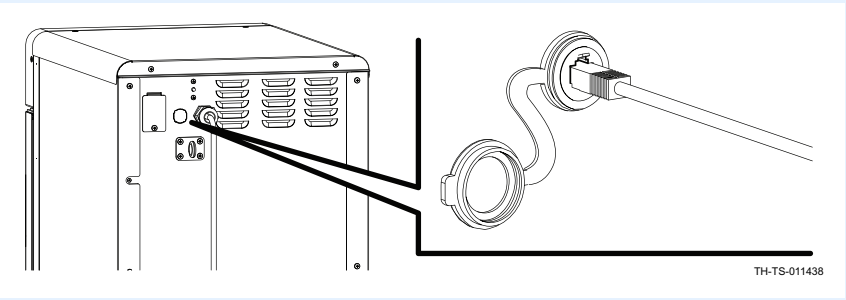
Before you begin

- The facility must have an Ethernet port.
- You will need an Ethernet cable.

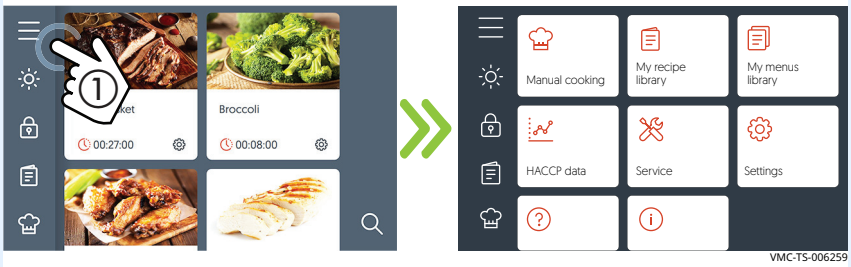
Procedure

To set up an Ethernet connection, do the following.

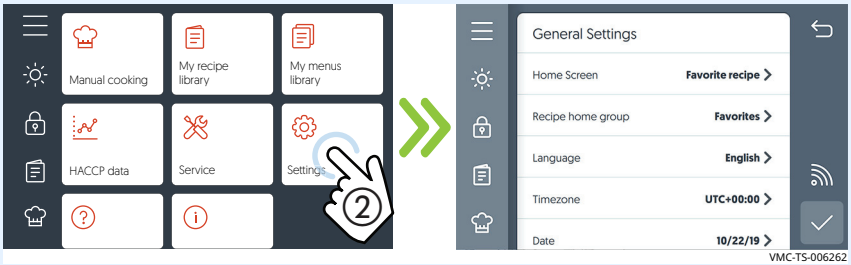
Step	Action
1.	**Plug** the Ethernet cord into the Ethernet port on the oven and the wall outlet.



Step	Action
2.	**Touch** the menu icon ①. The menu screen displays.



Step	Action
3.	**Touch** the settings icon ②. The general settings screen displays.



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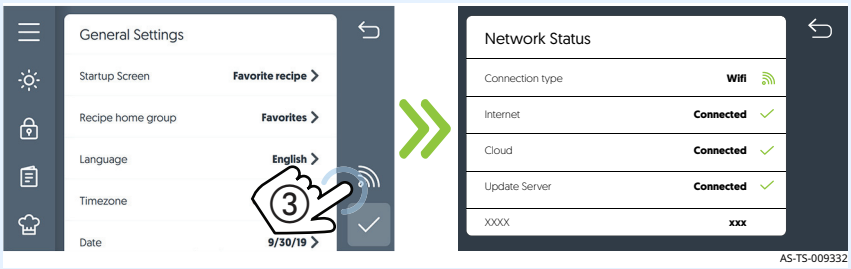
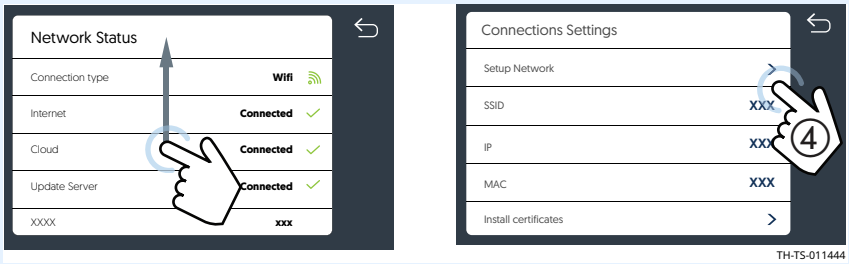
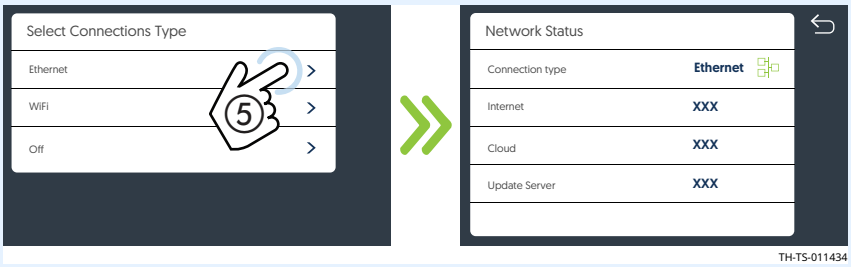
4. **Touch** the WiFi icon ③. The Network Status screen displays.



5. **Scroll** to “Connection settings”. **Touch** the Setup Network icon ④.



6. **Touch** the Ethernet icon ⑤. Follow any prompts.



Result

The Ethernet connection is now set up.

How to Update Software with a USB Drive

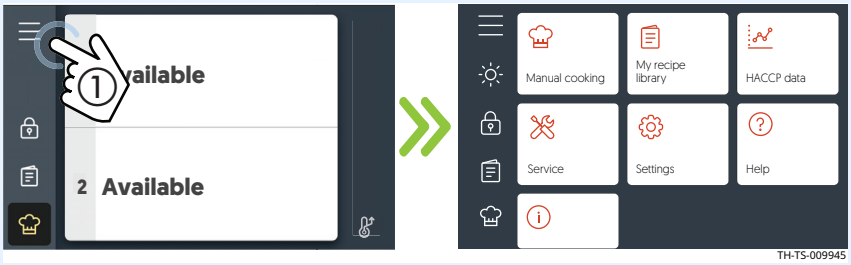
Before you begin

- You will need a USB drive with the updated software. To download the most up to date oven software and register for email notifications when new software versions are released, please visit https://www.alto-shaam.com/en/customer-support/software-downloads.
- Do not remove the USB drive during the update process.

Procedure

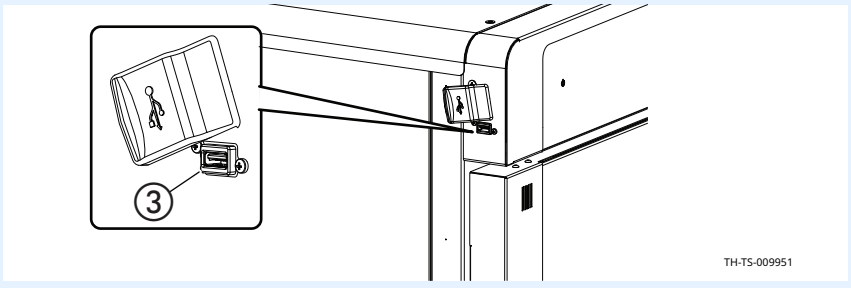
To update the software, do the following.

Step	Action
1.	**Touch** the menu icon ①. The menu screen displays.



2.	**Touch** the Settings icon ②. The general settings screen displays.

3.	**Plug** the USB drive into the port ③.



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4. **Scroll** to System Backup & Update.

   Touch the Update system software ④ setting.

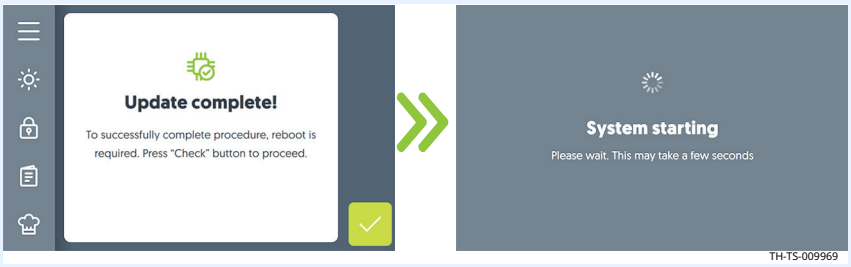
   Touch Control Board (CB) to update the control board. The oven loads the selected software. The oven verifies the file and then updates the CB.

> **NOTICE** Do not remove the USB drive during the update process.

   Touch Front End to update the user interface software. The oven loads the selected software.

   Touch Back End to update the supporting software between the control board (CB) and interface board (IB). The oven loads the selected software.

5. **Touch** the green check mark when the update is complete to restart the oven.



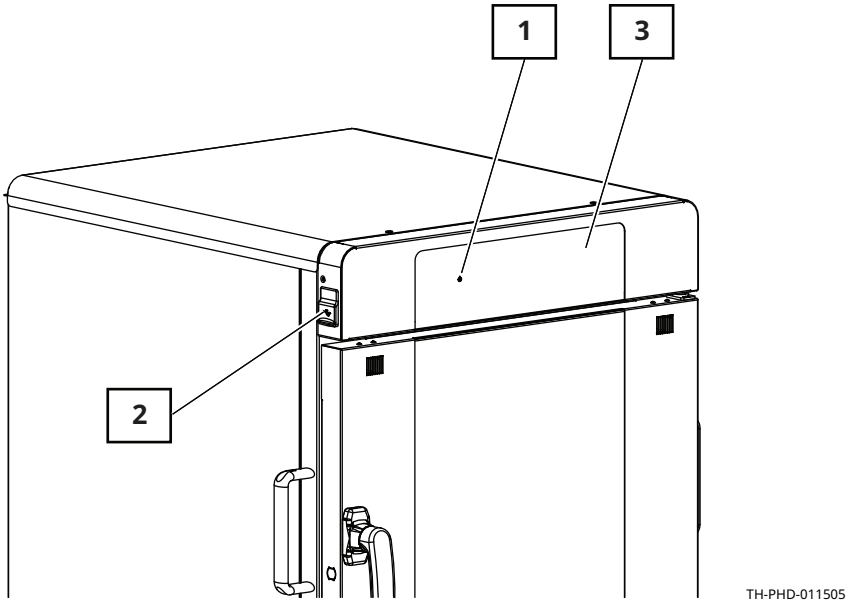
6. **Remove** the USB drive.

Result

The software has now been updated.

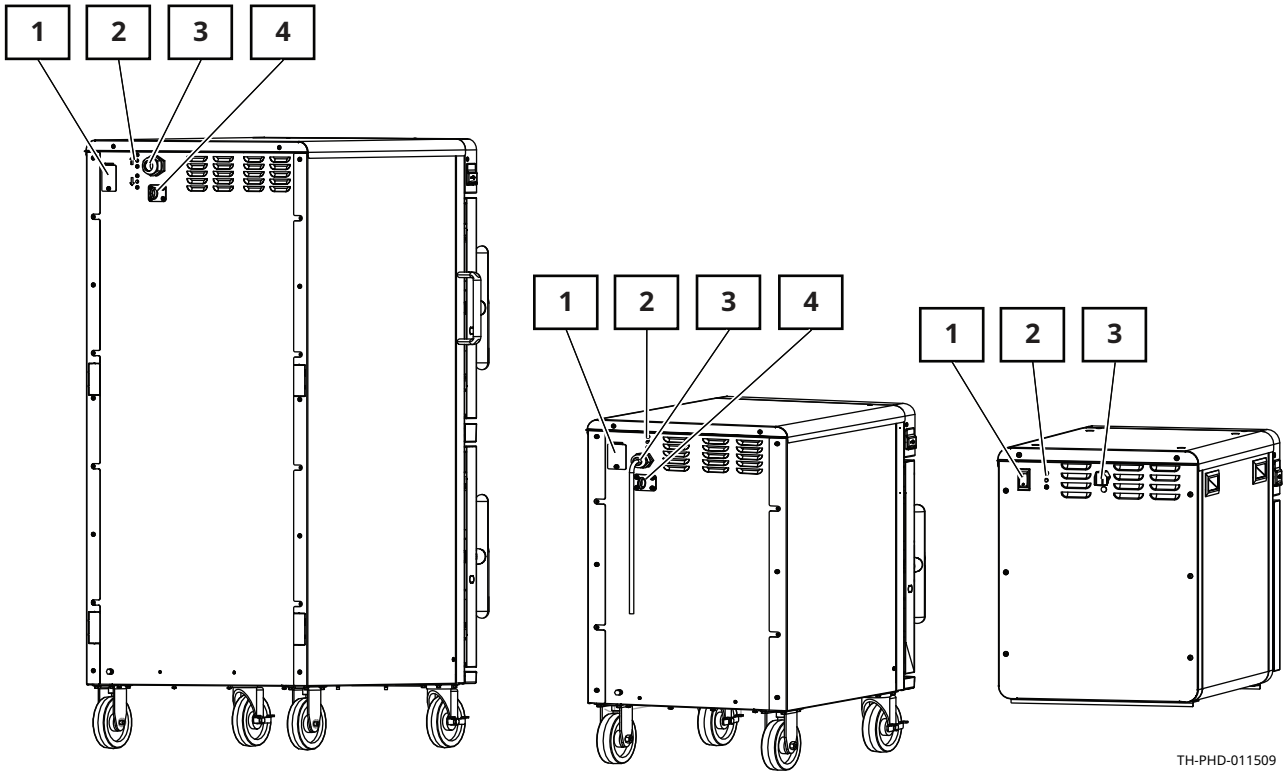
Component Identification

Front Panel Identification



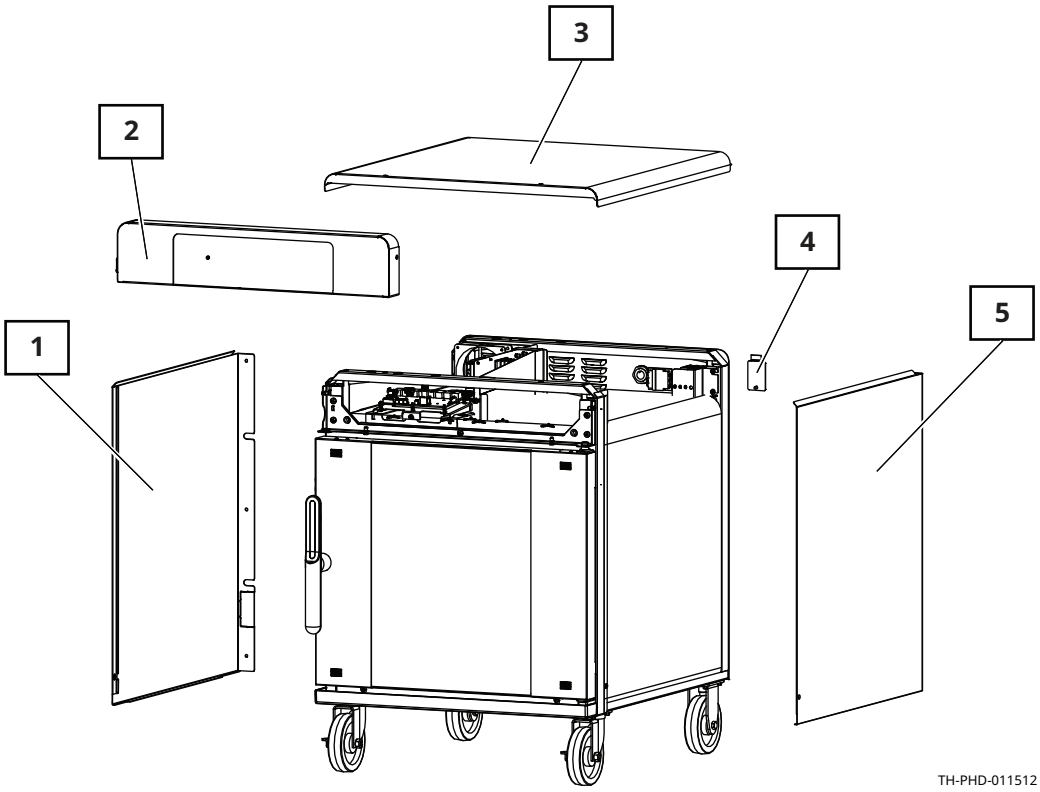
Ref.	Description
1	ON/OFF button
2	USB port
3	Control panel display

Back Panel Identification



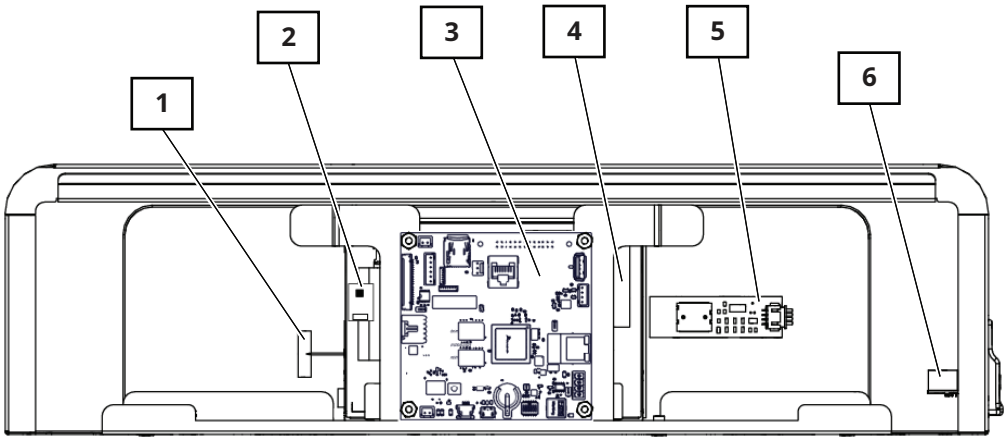
Ref.	Description
1	Circuit breakers
	ON/OFF switch (TH-300 only)
2	High limit(s)
3	Electrical supply
4	Tether ring

Component Access Panels Identification



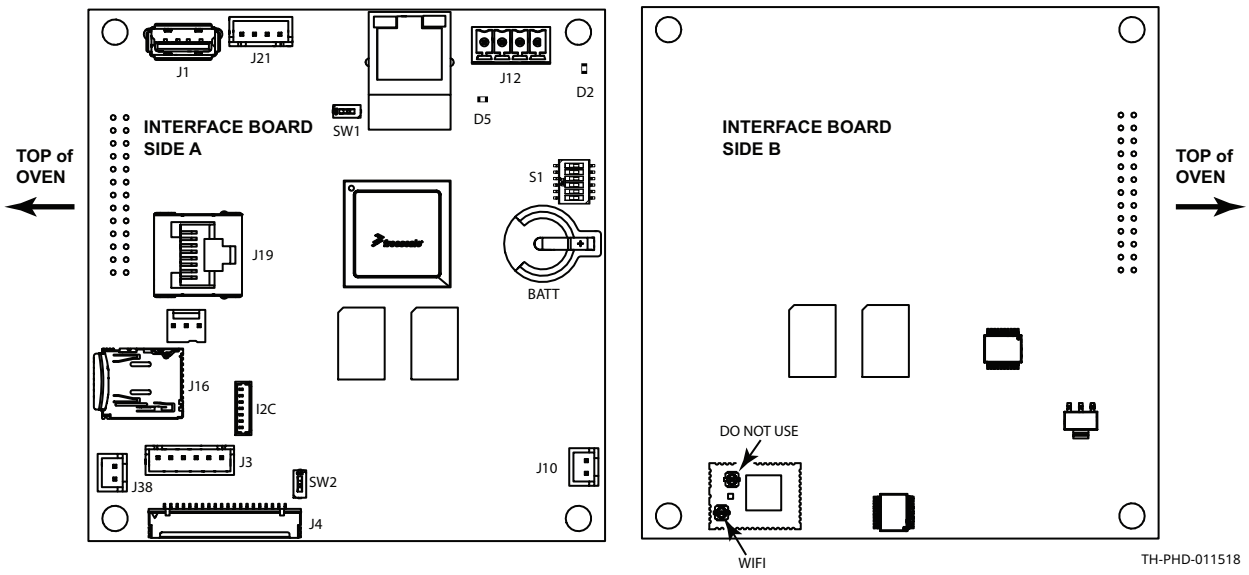
Ref.	Description	Provides access to
1	Left side panel	Door switch (right hand hinge door) Heating element terminal block (500-TH)
2	Control panel	Interface board
3	Top service panel	Electrical components
4	Circuit breaker access panel	Circuit breakers (500-TH and larger)
5	Right side panel	Door switch (left hand hinge door) Heating element terminal blocks (all except the 300-TH)

Control Panel



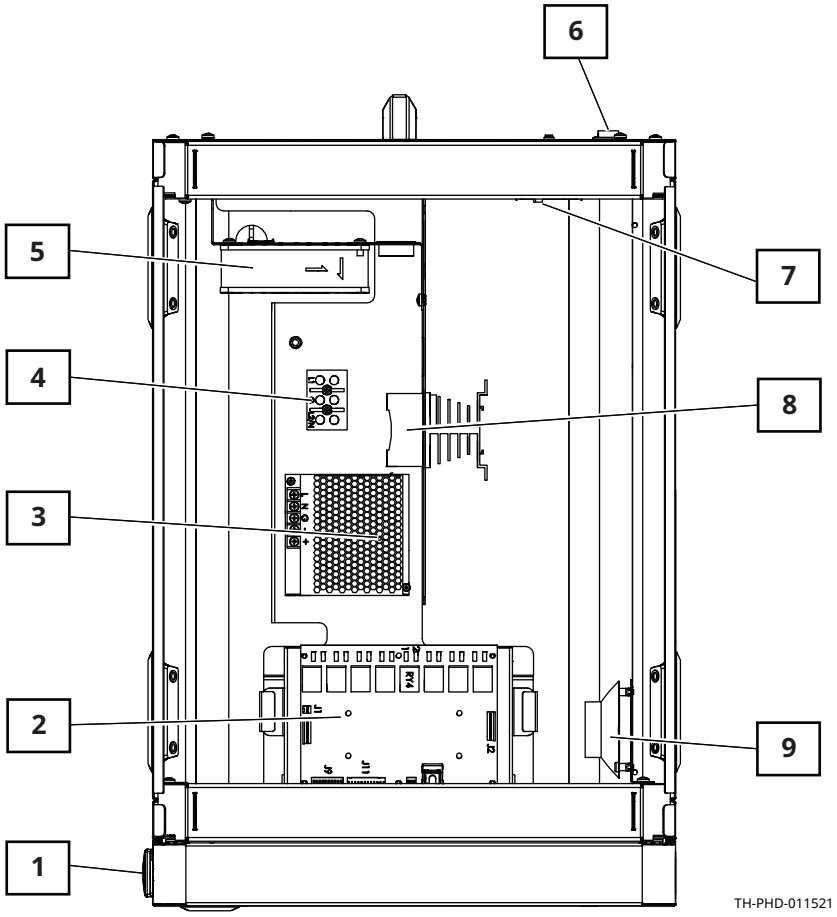
Ref.	Description
1	WIFI antenna (Not serviceable)
2	Capacitive touch controller board (Not serviceable)
3	Interface board
4	Liquid Crystal Display (LCD) (Not serviceable)
5	ON/OFF board (Not serviceable)
6	USB port

Interface Board



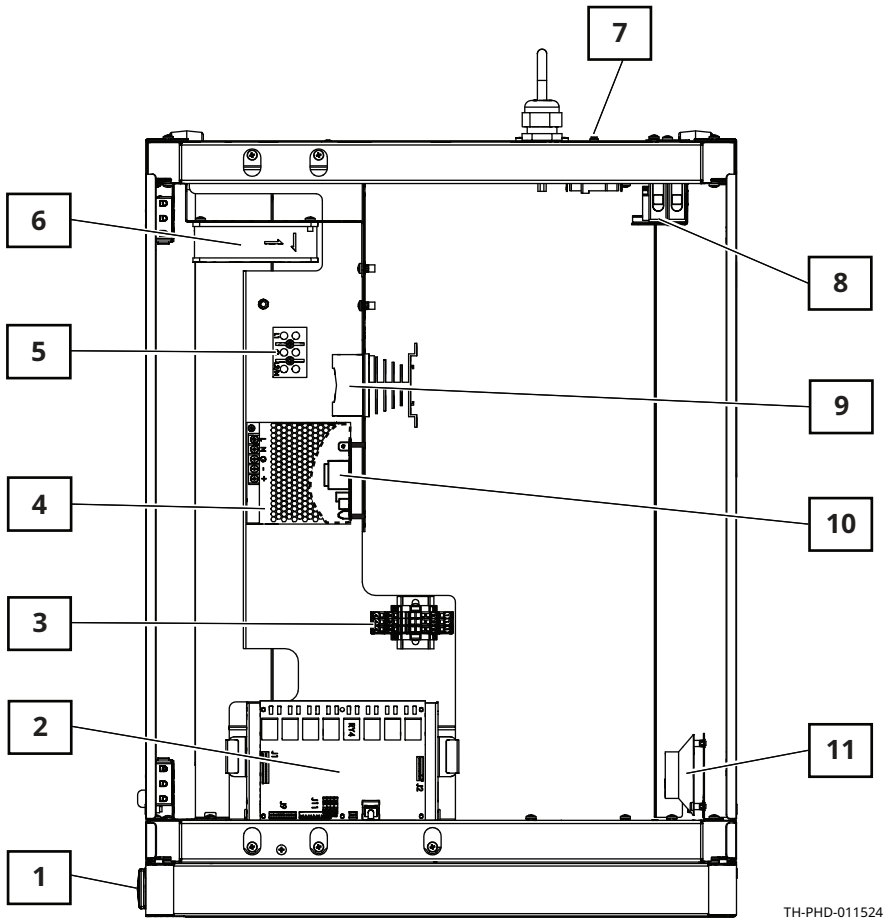
Ref.	Description
BATT	Clock battery
D2	5V IN
D5	12V IN
I2C	Capacitive touch cable
J1	USB connector
J3	Display back light
J4	LCD interface
J10	Speaker
J12	12 VDC power
J16	8 GB micro SD card
J19	Communication to control board
J21	ON/OFF board
J38	Speaker
S1	DIP switches (#4 on)
SW1	DIP switch (off)
SW2	DIP switch (off)
WIFI	WIFI antenna (conductor closest to the edge of the board)

300-TH—Electrical Component Identification



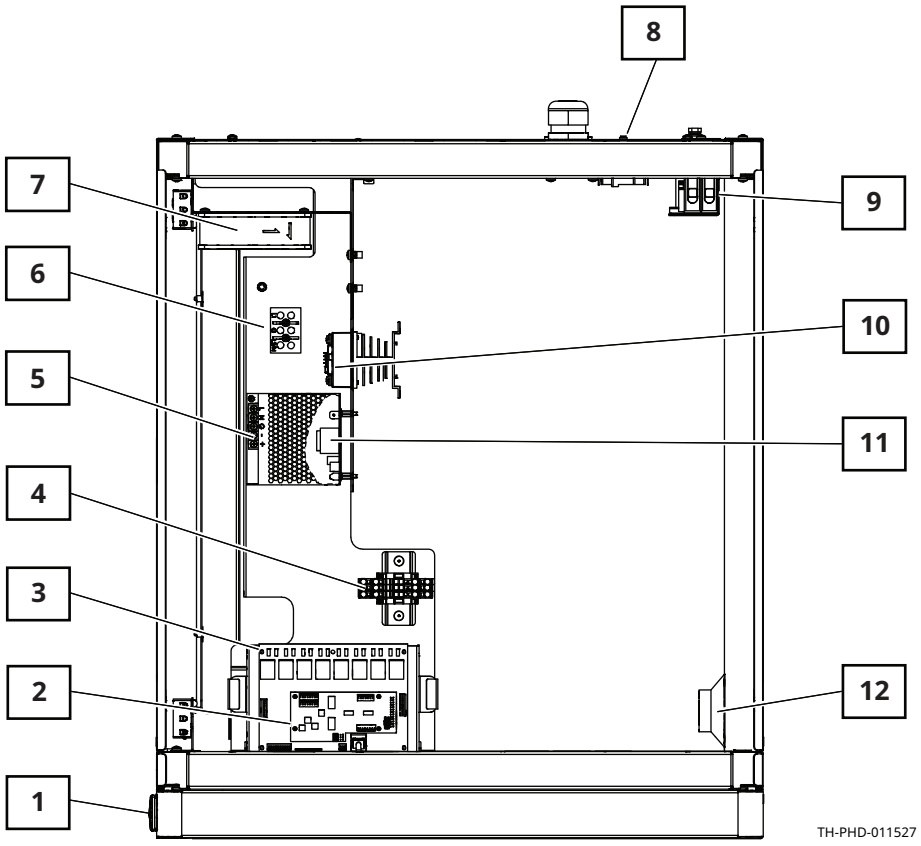
Ref.	Description	Ref.	Description
1	USB port	**6**	ON/OFF switch
2	Control board	**7**	High limit switch
3	12VDC power supply	**8**	Solid State Relay (SSR)
4	Terminal blocks (L1, GND, L2/N)	**9**	Speaker
5	Cooling fan	**—**	—

500-TH/SK, 750-TH/SK, 1000-TH/SK—Electrical Component Identification



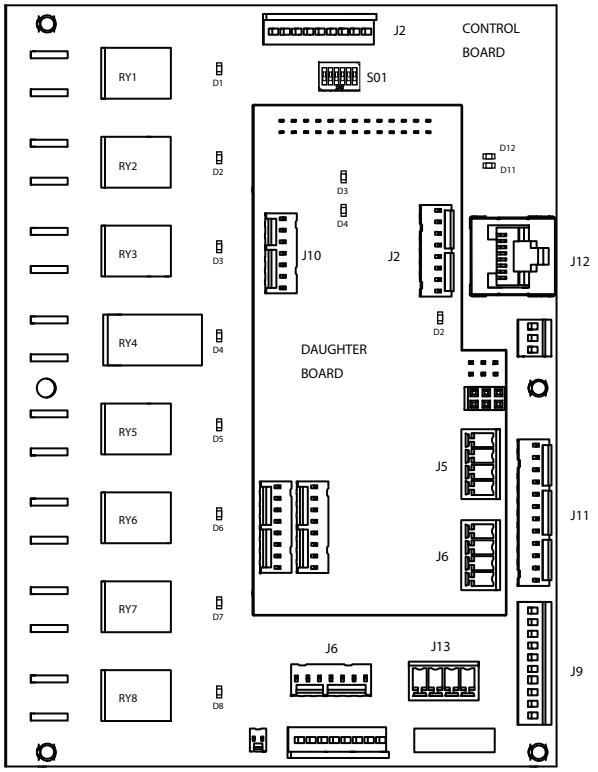
Ref.	Description	Ref.	Description
1	USB port	**7**	High limit switch
2	Control board	**8**	Circuit breakers
3	Terminal blocks	**9**	Solid State Relay (SSR)
4	12VDC power supply	**10**	Voltage monitor
5	Terminal blocks (L1, GND, L2/N)	**11**	Speaker
6	Cooling fan	**—**	—

1250-TH/SK, 1750-TH/SK—Electrical Component Identification



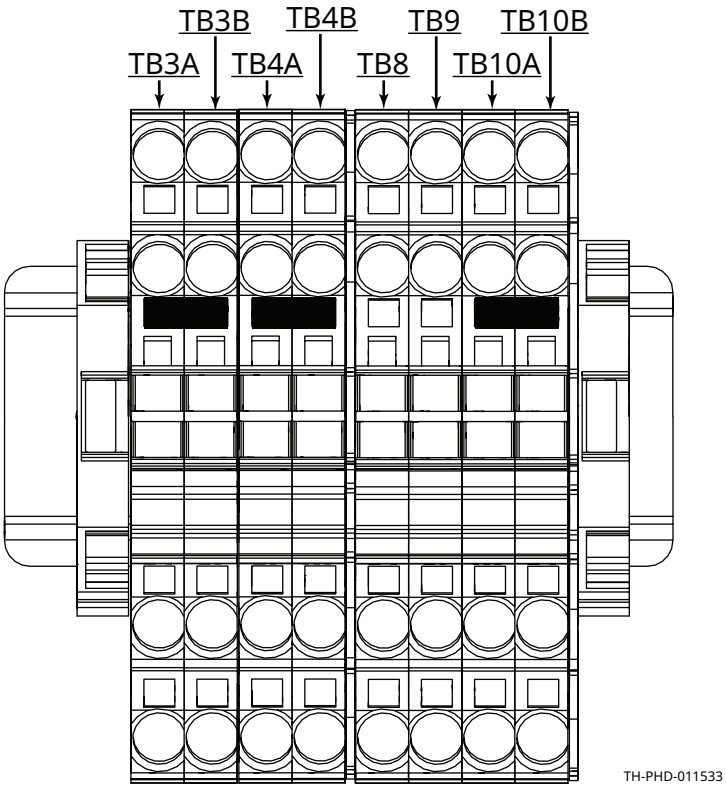
Ref.	Description	Ref.	Description
1	USB port	**7**	Cooling fan
2	Daughter board	**8**	High limit switch(es)
3	Control board	**9**	Circuit breakers
4	Terminal blocks	**10**	Solid State Relay (SSR)
5	12VDC power supply	**11**	Voltage monitor
6	Terminal blocks (L1, GND, L2/N)	**12**	Speaker

Control Board (CB) and Daughter Board (DB)



Ref.	Description (CB)	Ref.	Description (CB)	Ref.	Description (DB)
RY1-D1	Smoker - bottom oven	**D12**	LED	**D2**	5 VDC
RY2-D2	Smoker - top oven	**J1**	Voltage monitor	**J2**	Cooking probes Bottom cavity temperature sensor
RY3-D3	Not used	**J2**	12VDC power supply	**J5**	Door handle lights
RY4-D4	Fan	**J4**	Cooking probes Top cavity temperature sensor	**J6**	Door handle lights
RY5-D5	Lock - bottom oven	**J6**	Cooking probes	**J10**	Cooking probes
RY6-D6	Lock - top oven	**J9**	Door switch(es) High limit(s)	**—**	—
RY7-D7	Not used	**J10**	Cavity lights	**—**	—
RY8-D8	Not used	**J12**	Ethernet - IB	**—**	—
D11	LED	**S01**	DIP switches - ON Pin 1=No probe Pin 2=Dual cavity Pin 3=208–240V Pin 4=Smoker Pin 5=Latch Pin 6=Cavity LED	**—**	—

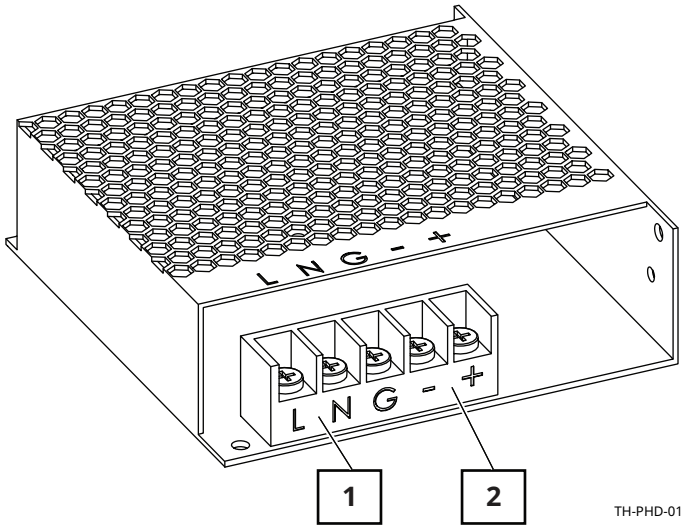
Terminal Blocks



Ref.	Description	Model
TB3A	L1	750, 1000, 1200, 1750
TB3B	Smoker option	1200, 1750
TB4A	L2/N	750, 1000, 1200, 1750
TB4B	Smoker option	1200, 1750
TB8	DC - Lights, top cavity	1200
TB9	DC - Lights, bottom cavity	1200
TB10A	DC + Lights	1000, 1200, 1750
TB10B	DC + Lights	1200

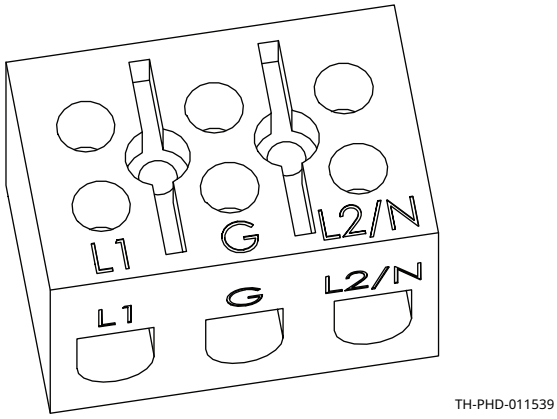
12VDC Power Supply

Supplies DC voltage to the control board and the ON/OFF switch.

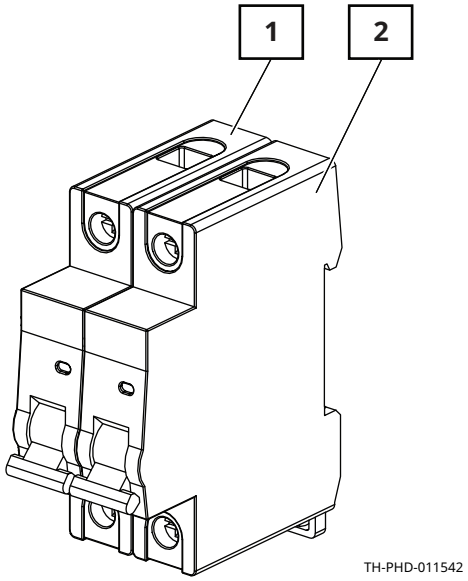


Ref.	Description
1	120–240VAC terminals
2	12VDC terminals

Terminal Blocks (L1, GND, L2/N)



Circuit Breakers

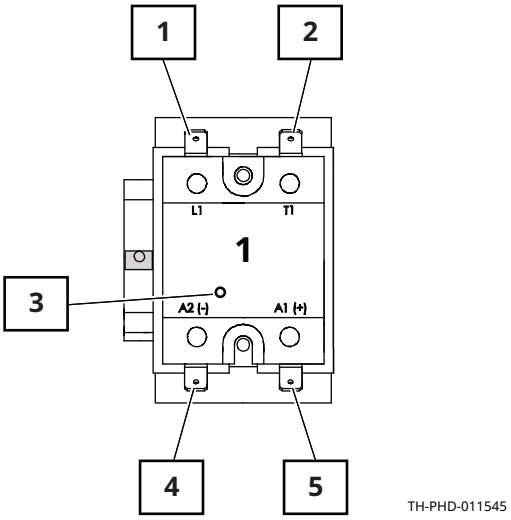


Ref.	Description
1	Circuit breaker L1
2	Circuit breaker L2/N

Solid State Relay (SSR)

Single cavity

Heater element control.



Ref.	Description
1	L1 terminal, AC line voltage into the SSR
2	T1 terminal, AC load voltage to the heating element
3	Call for heat indicator light
4	A2 (-) terminal, DC control voltage from the control board to the SSR
5	A2 (+) terminal, DC control voltage from the control board to the SSR

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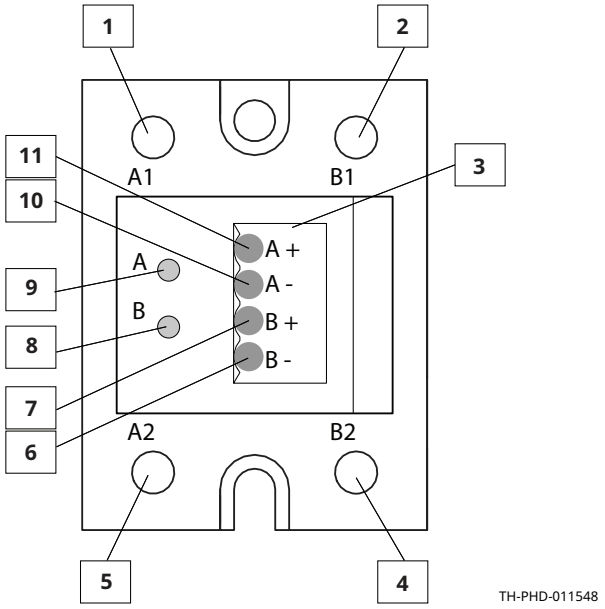
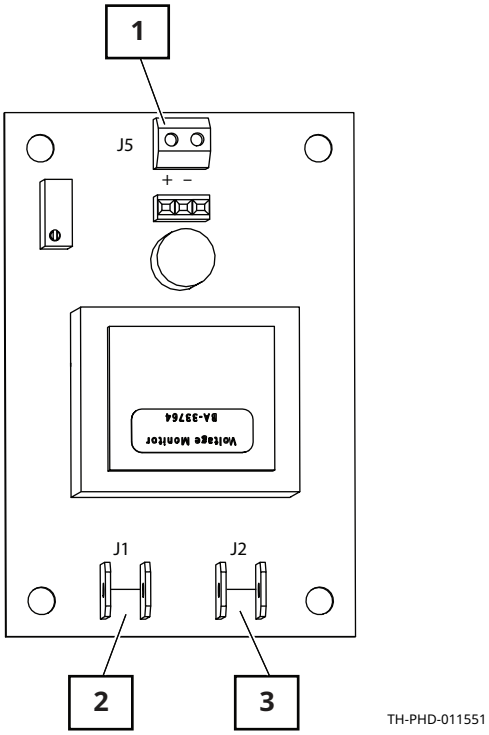
Dual cavity



Ref.	Description
1	Terminal A1 - Circuit A
2	Terminal B1 - Circuit B
3	Connector
4	Terminal B2 - Circuit B
5	Terminal A2 - Circuit A
6	Circuit B DC- from control board
7	Circuit B DC+ from control board
8	Circuit B call for heat indicator
9	Circuit A call for heat indicator
10	Circuit A DC- from control board
11	Circuit A DC+ from control board

Voltage Monitor (208–240V Ovens Only)



TH-PHD-011551

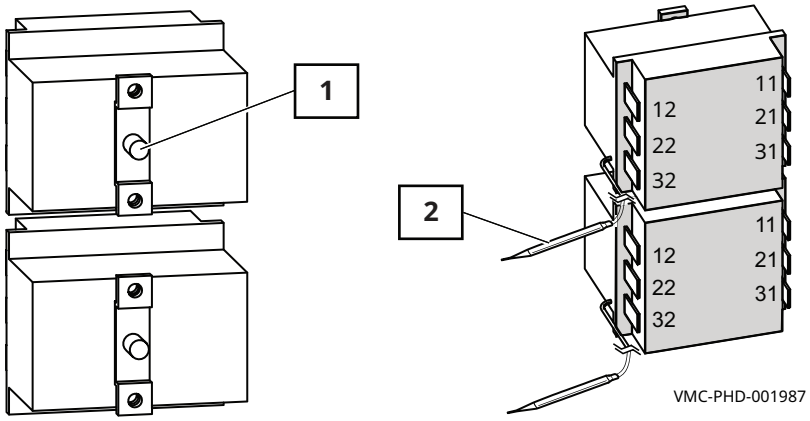
Input	DC Range
200–209	4.58–5.00
210–219	4.17–4.53
220–229	3.82–4.13
230–239	3.51–3.78
240–249	3.22–3.48
250+	3.20

Ref.	Description
1	J5 DC output
2	J1 AC input
3	J2 AC input

High Limit Switches

Resettable

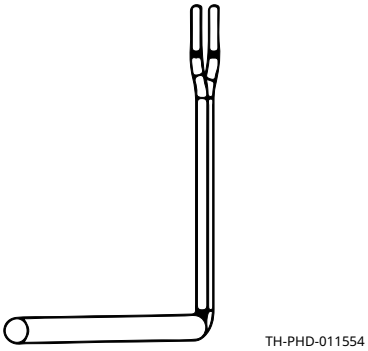
Contacts open at 300°F (149°C)



Ref.	Description
1	Reset button
2	Temperature bulb

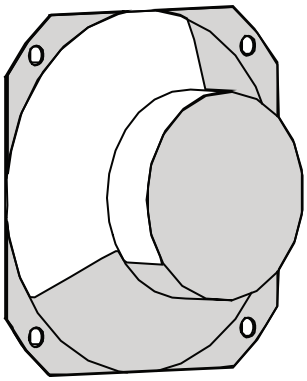
Chamber Air Temperature Probe

100 Ohm at 0°C



Speaker

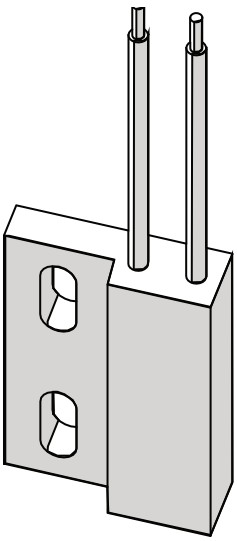
8 Ohms



VMC-PHD-001995

Door Switch

- **Door closed** 0 Ohms; 0 VDC across terminals 1 and 2 (top oven) or 5 and 6 (bottom oven) of connector J9 on the control board.
- **Door open** Infinite Ohms; 8 VDC across terminals 1 and 2 (top oven) or 5 and 6 (bottom oven) of connector J9 on the control board.



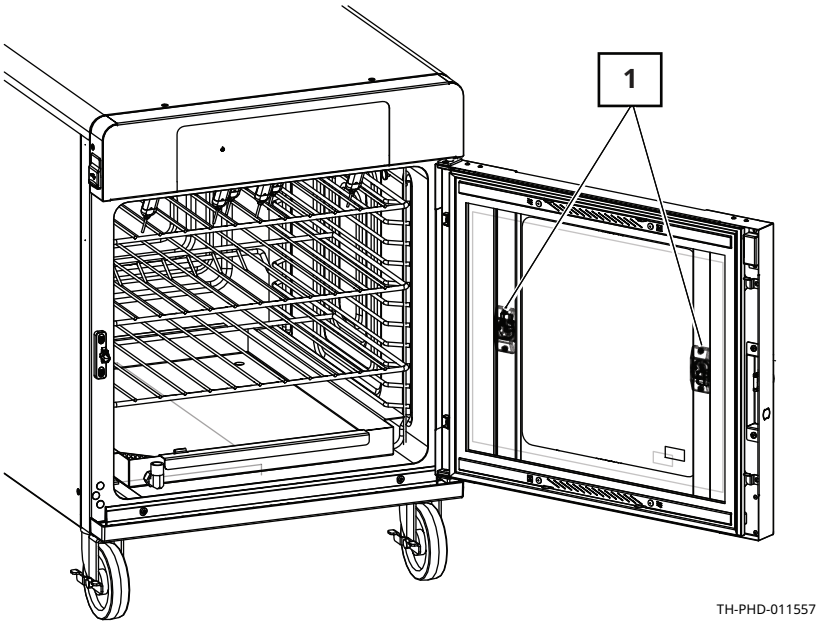
VMC-PHD-001999

Fan

- Impedance protected
- 240 Volt
- 581 Ohm

VMC-PHD-002011

Internal Components Identification

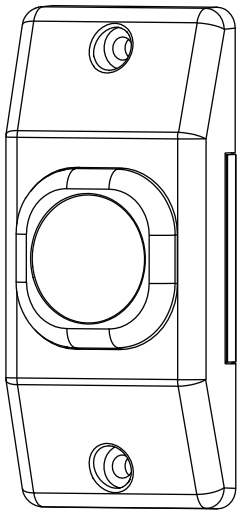


Ref.	Description
1	Cavity lights

Internal Components

Cavity Light

12 VDC



VMC-PHD-007587

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Maintenance Schedule

Requirements

- See topic *How to Clean the Oven*.
- Make sure the oven is cooled down and off—inside of chamber 140°F (60°C) or less.

Daily

For daily maintenance, do the following.

- See topic *How to Clean the Oven*, and follow the Daily Cleaning procedure.
- **Check** the screen for cracking or peeling. Contact Technical Service if needed.

Weekly

For weekly maintenance, do the following.

- See topic *How to Clean the Oven*, and follow the Weekly Cleaning procedure.
- **Check** the oven for any damage or loose parts.

Monthly

For monthly maintenance, do the following.

- **Inspect** door gasket.
- **Inspect** door window gasket for proper seal.
- **Inspect** cavity door vent slides for proper operation.
- **Inspect** side racks, shelves, and shelf supports for damage.
- **Calibrate** the removable product probe (if applicable)
- **Clean** the cooling fan intake area and exhaust vents.
- **Inspect** door handle screws and tighten if necessary.
- **Inspect** the smoke element (if applicable). If any deformation, cracks or breaks are seen, remove the oven from service and contact a factory authorized service technician.

Yearly

For yearly maintenance, do the following.

> **NOTE:** Must be performed by a qualified professional.

- **Check and tighten** all wire connections.
- **Inspect** the smoke element and smoke element wiring.
- **Measure** the current draw of each cavity. Operate with smoker on if applicable.
- **Test** the heating elements for electrical short to ground.
- **Inspect** the condition of the cord and plug.

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- **Check and tighten** the cord connection inside of the appliance control area.
- **Inspect** the control cooling fans (if applicable).
- **Measure** the site voltage.
- **Inspect and adjust** voltage monitor board if needed.
- **Inspect** and test the product probe and product probe receptacle.
- **Inspect** and test the control and control functions.

- **Inspect** the cavity for structural integrity.
- **Inspect** the door gaskets for correct shape and seal. Replace/repair as needed.
- **Inspect** the door handle and hinges. Replace/repair as needed.
- **Inspect** the full perimeter bumper.
- **Inspect** the casters.
- **Do** a cavity temperature calibration procedure per manufacturer's recommendations.

How to Clean the Oven

Before you begin

WARNING: Electric shock hazard.

Set the power switch to the OFF position and unplug the oven before cleaning it.

CAUTION: Burn hazard.

Allow the oven, drip pans, and racks to cool before cleaning.

CAUTION: Corrosive materials hazard.

Wear eye protection and hand protection when cleaning.

NOTICE

Using improper cleaning procedures will damage the oven and void the warranty.

Only use spray cleaner when the electric power is completely removed from the oven.

Do not use steel pads, wire brushes, or scrapers when cleaning.

Daily cleaning procedure

To clean the oven daily, do the following.

Step	Action
1.	**Make sure** the oven is turned off and cool—cavity is less than 140°F (60°C).
2.	**Remove** all detachable items such as wire shelves, side racks, drip pan, and drip tray and clean these items separately.
3.	**Remove** any spills with disposable paper wipes or a damp cloth.
4.	**Wipe** the outside of the oven and the drip tray holder with a damp cloth.
5.	**Wipe** the control panel, door vents, door handles and door gaskets with a non-abrasive nylon scrub pad.
6.	If oven has an optional glass door, **clean** each side of the window pane with an all-purpose glass cleaner.
7.	**Wipe** probe, cable assembly, and probe prongs with a non-abrasive nylon scrub pad. Wipe probes with disposable alcohol pad or sanitizing solution recommended for food contact surfaces.
8.	**Wipe** the outside of the oven with a stainless steel cleaner.

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Weekly cleaning procedure

To clean the oven weekly, do the following.

Step	Action
1.	**Set** the power switch to the OFF position and unplug the appliance.
2.	**Wipe** the exterior areas of the oven with a non-abrasive nylon scrub pad.
3.	**Spray** the exterior areas of the oven with stainless steel polish. **NOTICE** Use only non-caustic cleaners. Do not spray directly into the fan openings on the back of the oven. Do not use cleaners that contain sodium hydroxide (lye) or phosphorus.
4.	**Spray** the interior areas of the oven with oven cleaner. Let the cleaner work for 3–5 minutes.
5.	**Wipe** the interior of the oven with a non-abrasive nylon scrub pad.
6.	**Clean** the door gasket with a warm water and detergent solution.
7.	If oven has an optional glass door, **clean** each side of the window pane with an all-purpose glass cleaner.
8.	**Plug** the appliance in and set the power switch to the ON position when complete.

Result

The oven is now clean.

Error Codes

DELUXE CONTROL			
Code	**Description**	**Cause**	**Remedy**
E-10	Cavity probe shorted	Short circuit detected on sensor wires.	1. Sensor connection 2. Sensor 3. Control Board
E-30	Unit under temperature	Cavity temperature remains 25°F (14°C) below target for more than 90 minutes.	Troubleshoot heating element
E-31	Unit over temperature	Cavity temperature is 50°F (28°C) above max allowable cook temperature of 325°F (163°C).	1. Cooling fan not operating 2. Installation clearance requirements not met
E-78	Under voltage	Supply voltage falls below 200V (error doesn't show on screen).	Correct the supply voltage
E-79	Over voltage	Supply voltage exceeds 250V (error doesn't show on screen).	Correct the supply voltage
E-94	Communication	No signal transfer for more than 5 seconds between the Interface Board and the Control Board.	1. Connection of Modbus Cable 2. Modbus Cable 3. Control Board 4. Interface Board
E-108	Check fans	Insufficient internal cooling airflow.	1. Cooling fan filters dirty 2. Cooling fans not operating 3. Installation clearance requirements not met
E-109	High Limit NOTE: Any oven experiencing this error should be investigated by an authorized Alto-Shaam service provider.	Open circuit detected across High Limit Switch	1.Heat Relay(s) stuck closed 2.Connection between High Limit Switch and Control Board 3.High Limit Switch

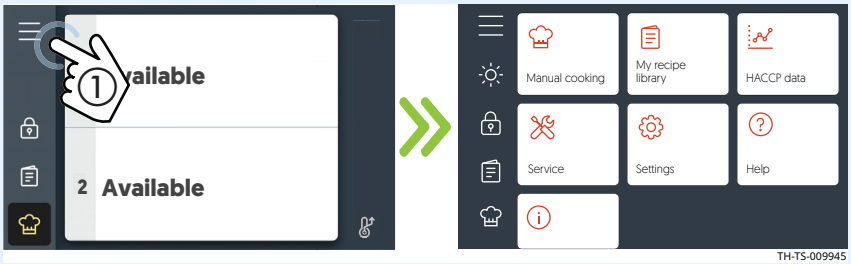
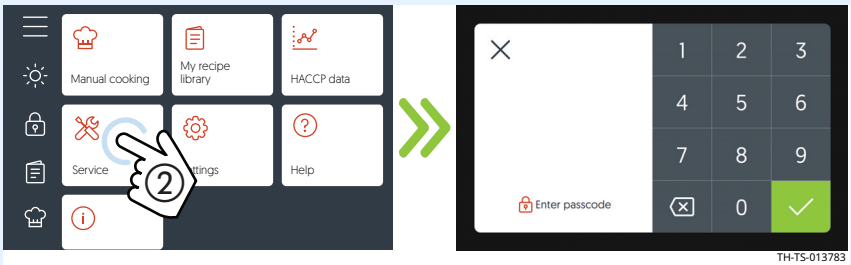
How to Calibrate a Chamber Thermocouple

Before you begin

- The oven must be connected to electric power.
- Make sure you have a multimeter with a thermocouple attachment.
- The oven thermocouple needs to be calibrated in the “Hold” mode and the “Cook” mode.
- You will need to know the service pass code.

Procedure

To calibrate a chamber thermocouple, do the following.

Step	Action
1.	**Insert** the thermocouple from the multimeter into the heated oven. Allow the multimeter to stabilize. **Compare** the reading from the multimeter’s thermocouple with the temperature sensor reading displayed on the screen.
2.	**Calibrate** the offset number. Subtract the smaller value from the larger value. This is the offset. If the value measured by the multimeter was the larger value, the offset will be negative “+”. If the value measured by the multimeter was the smaller value, the offset will be positive “–”.
3.	**Touch** the menu icon ①. The user menu screen displays. 
4.	**Touch** the service icon ②. The enter pass code screen displays. 

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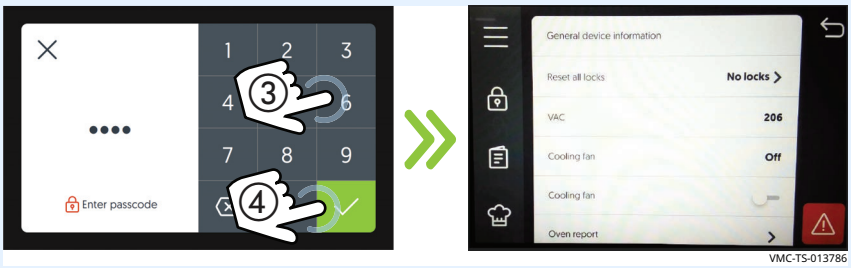
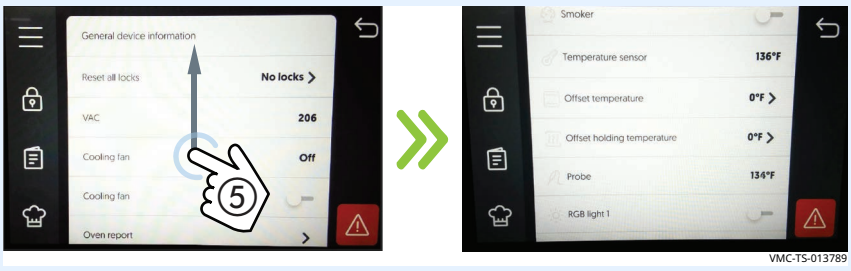
5. **Enter** the pass code 6702 ③.

   Touch the check mark ④. The general device information screen displays.



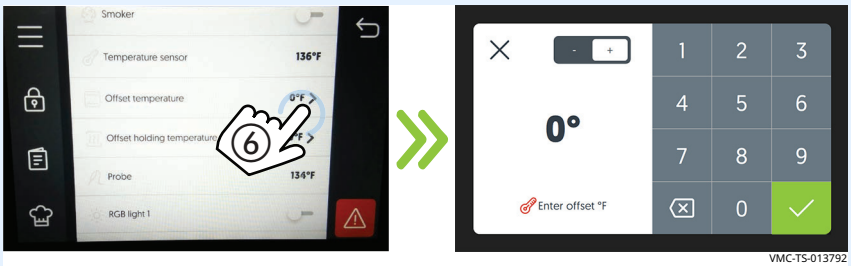
VMC-TS-013786

6. **Scroll** ⑤ to the chamber selection buttons.



VMC-TS-013789

7. **Touch** the > button ⑥ of the Offset Temperature. The enter Offset screen displays.



VMC-TS-013792

8. **Touch** the "-" icon ⑦ to change to the negative number. **Enter** the offset value. **Touch** the check mark.

VMC-TS-013795

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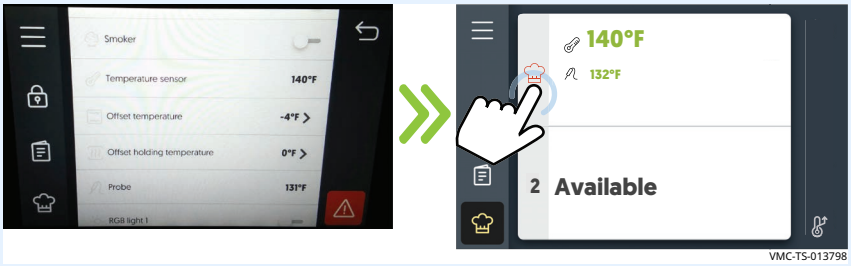
9.	The temperature sensor value should match the multimeter value. Return to the manual cooking screen. **Touch** the manual cook icon. The temperature value should match the multimeter value.



10.	**Repeat** the procedure for the HOLDING offset.
11.	**Cool** the oven.

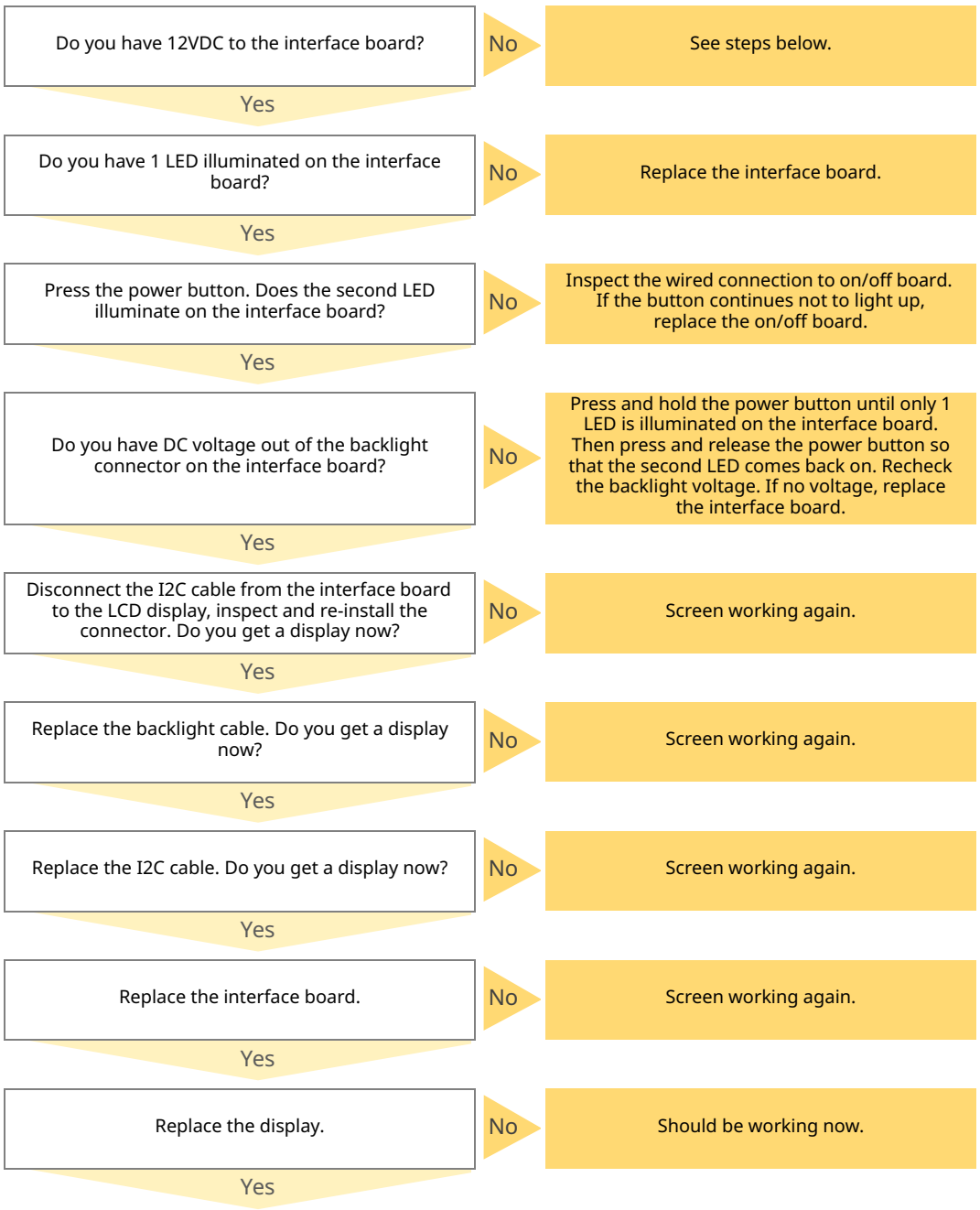
Result

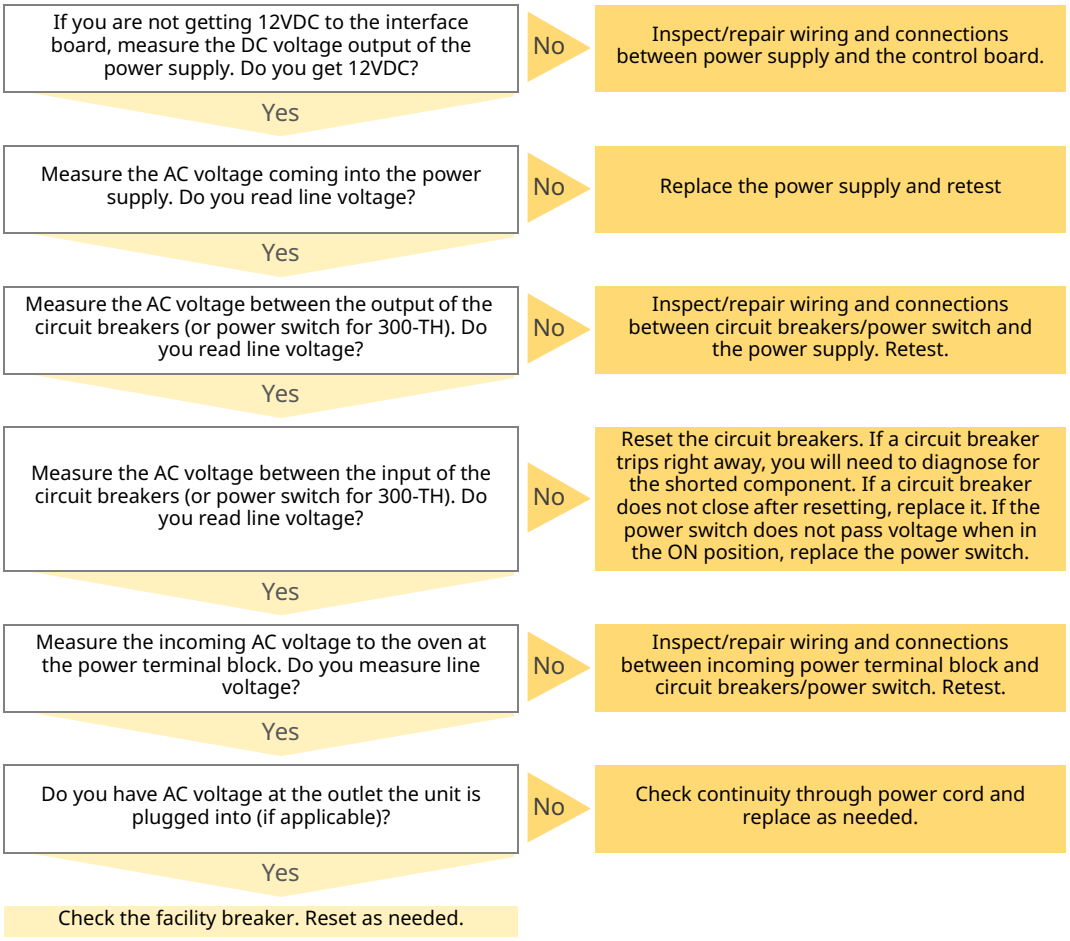
The cavity thermocouple has now been calibrated.

High Limit Alarm

The Display does not Illuminate

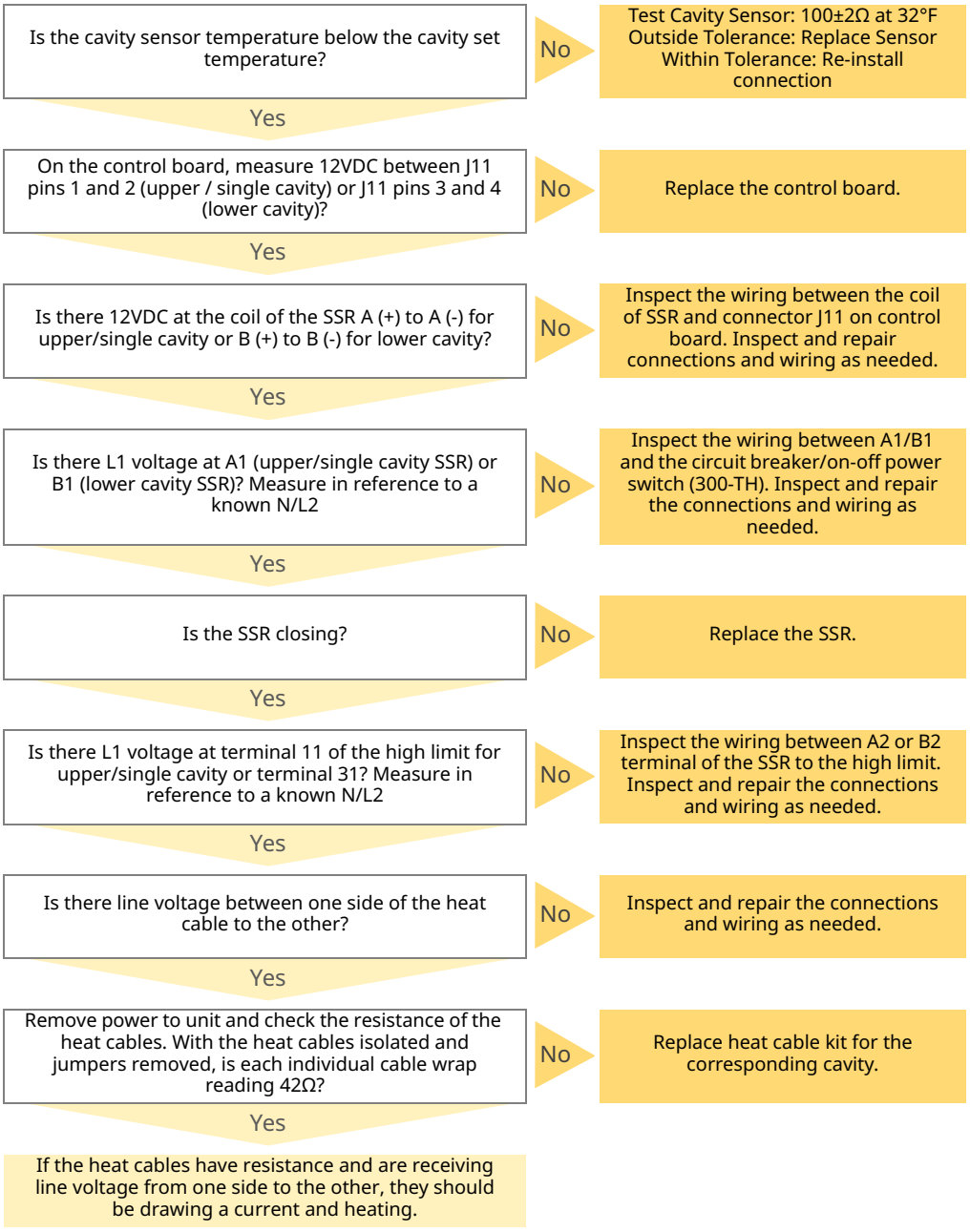
WARNING: Electric shock and arc flash hazard.
Use caution when measuring line voltage.
Wear Personal Protective Equipment (PPE).



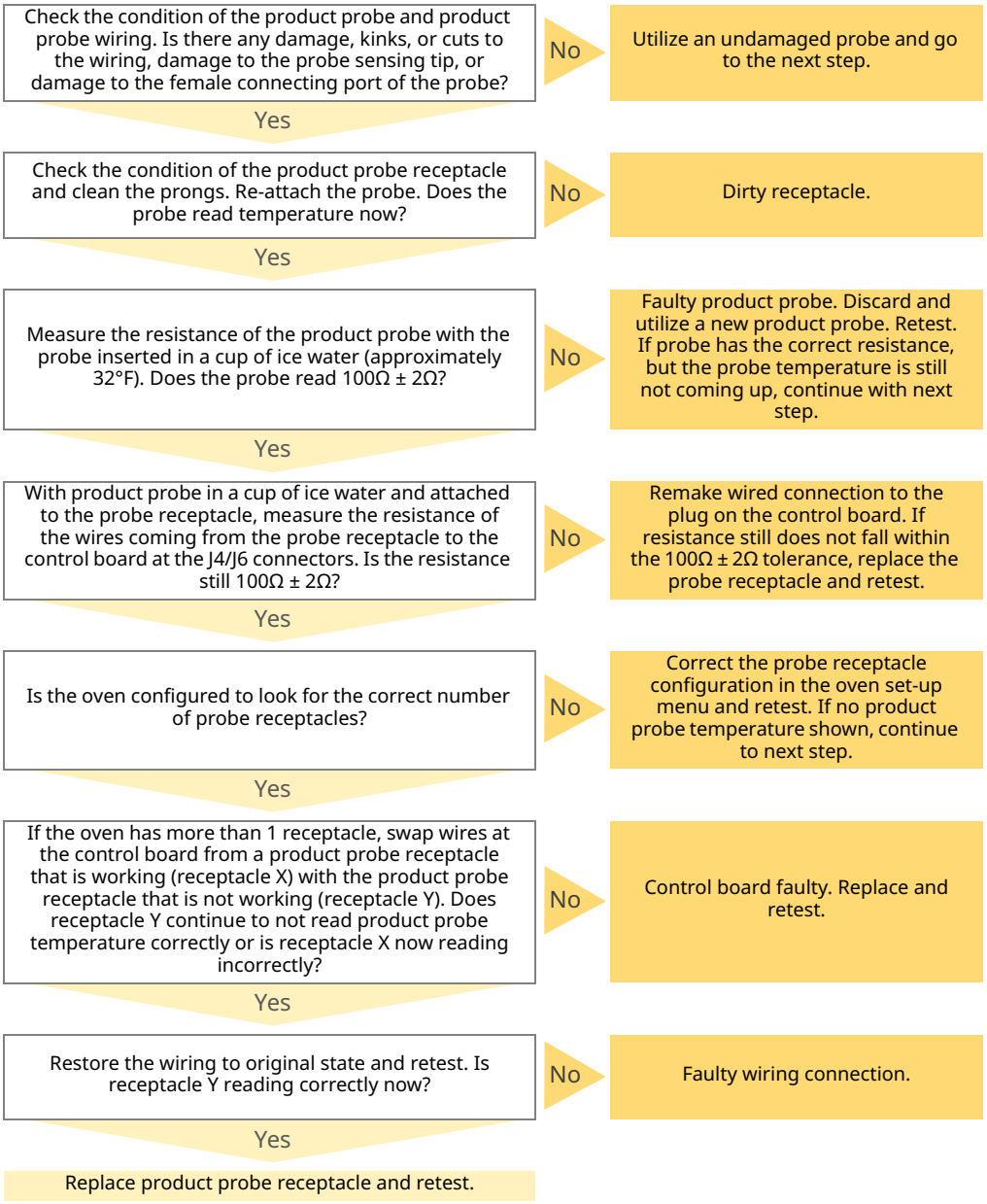

If you are not getting 12VDC to the interface board, measure the DC voltage output of the power supply. Do you get 12VDC?
No
Inspect/repair wiring and connections between power supply and the control board.
Yes
Measure the AC voltage coming into the power supply. Do you read line voltage?
No
Replace the power supply and retest
Yes
Measure the AC voltage between the output of the circuit breakers (or power switch for 300-TH). Do you read line voltage?
No
Inspect/repair wiring and connections between circuit breakers/power switch and the power supply. Retest.
Yes
Measure the AC voltage between the input of the circuit breakers (or power switch for 300-TH). Do you read line voltage?
No
Reset the circuit breakers. If a circuit breaker trips right away, you will need to diagnose for the shorted component. If a circuit breaker does not close after resetting, replace it. If the power switch does not pass voltage when in the ON position, replace the power switch.
Yes
Measure the incoming AC voltage to the oven at the power terminal block. Do you measure line voltage?
No
Inspect/repair wiring and connections between incoming power terminal block and circuit breakers/power switch. Retest.
Yes
Do you have AC voltage at the outlet the unit is plugged into (if applicable)?
No
Check continuity through power cord and replace as needed.
Yes
Check the facility breaker. Reset as needed.

The Oven does not Heat

WARNING: Electric shock and arc flash hazard.
Use caution when measuring line voltage.
Wear Personal Protective Equipment (PPE).

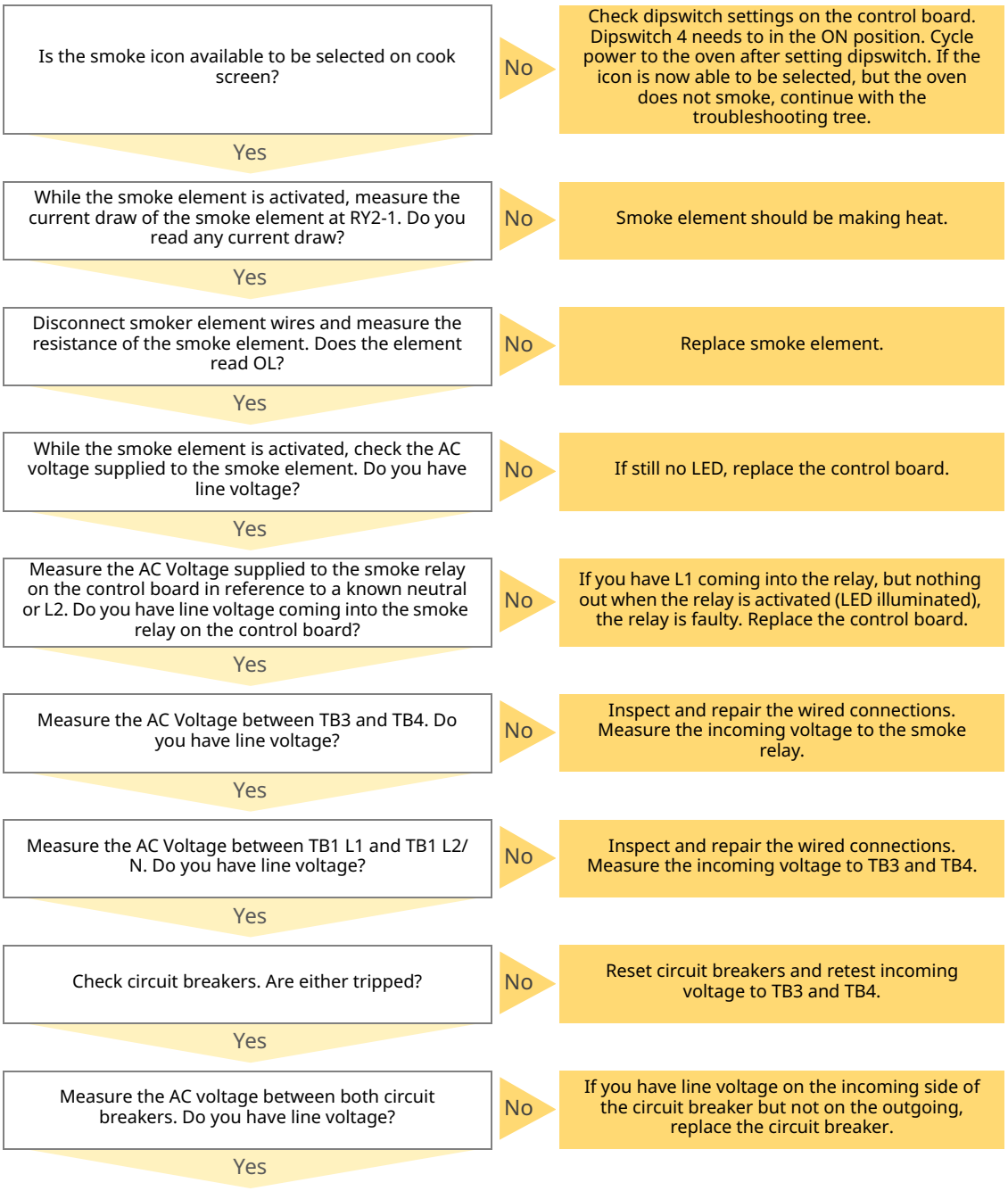


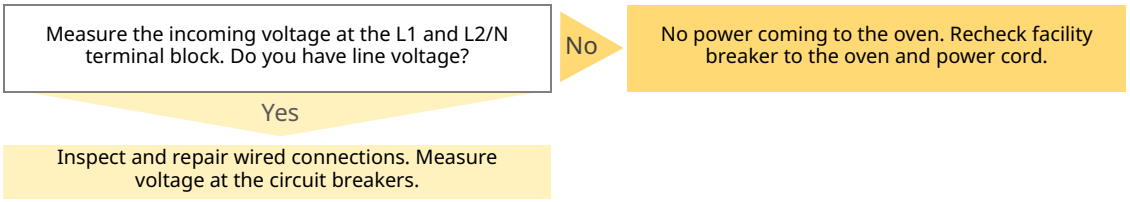
The Product Probe does not Work



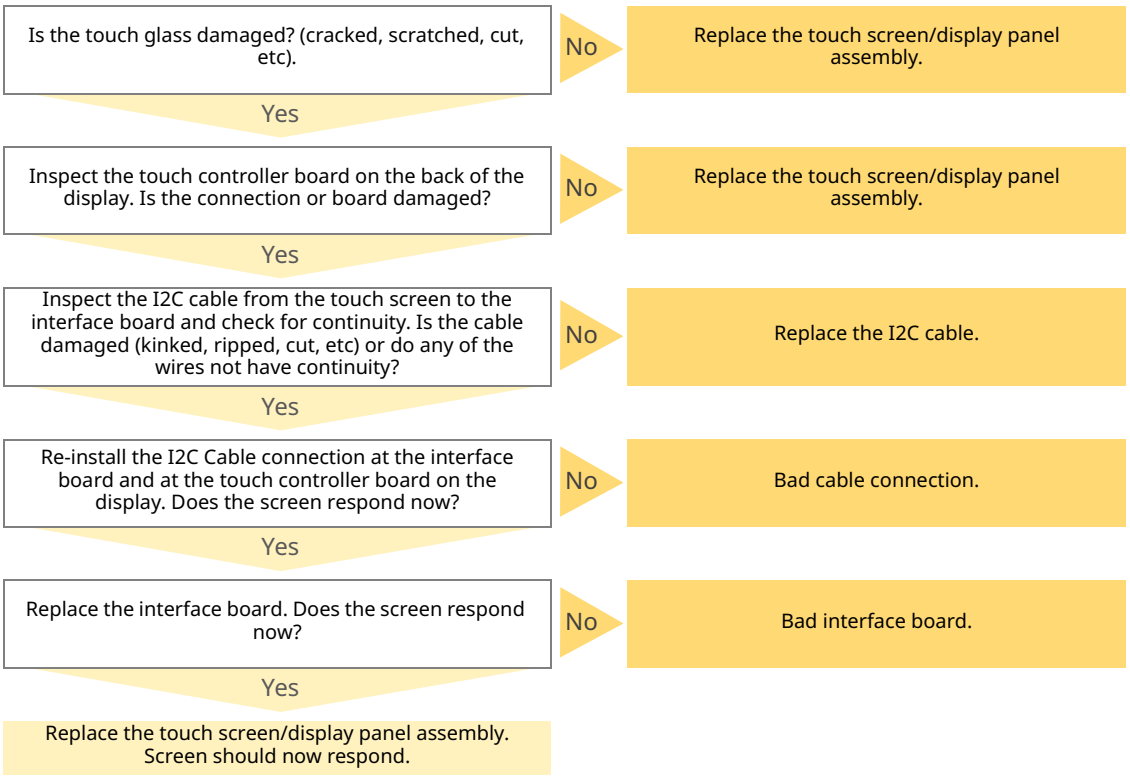
The Smoke Function does not Operate

WARNING: Electric shock and arc flash hazard.
Use caution when measuring line voltage.
Wear Personal Protective Equipment (PPE).



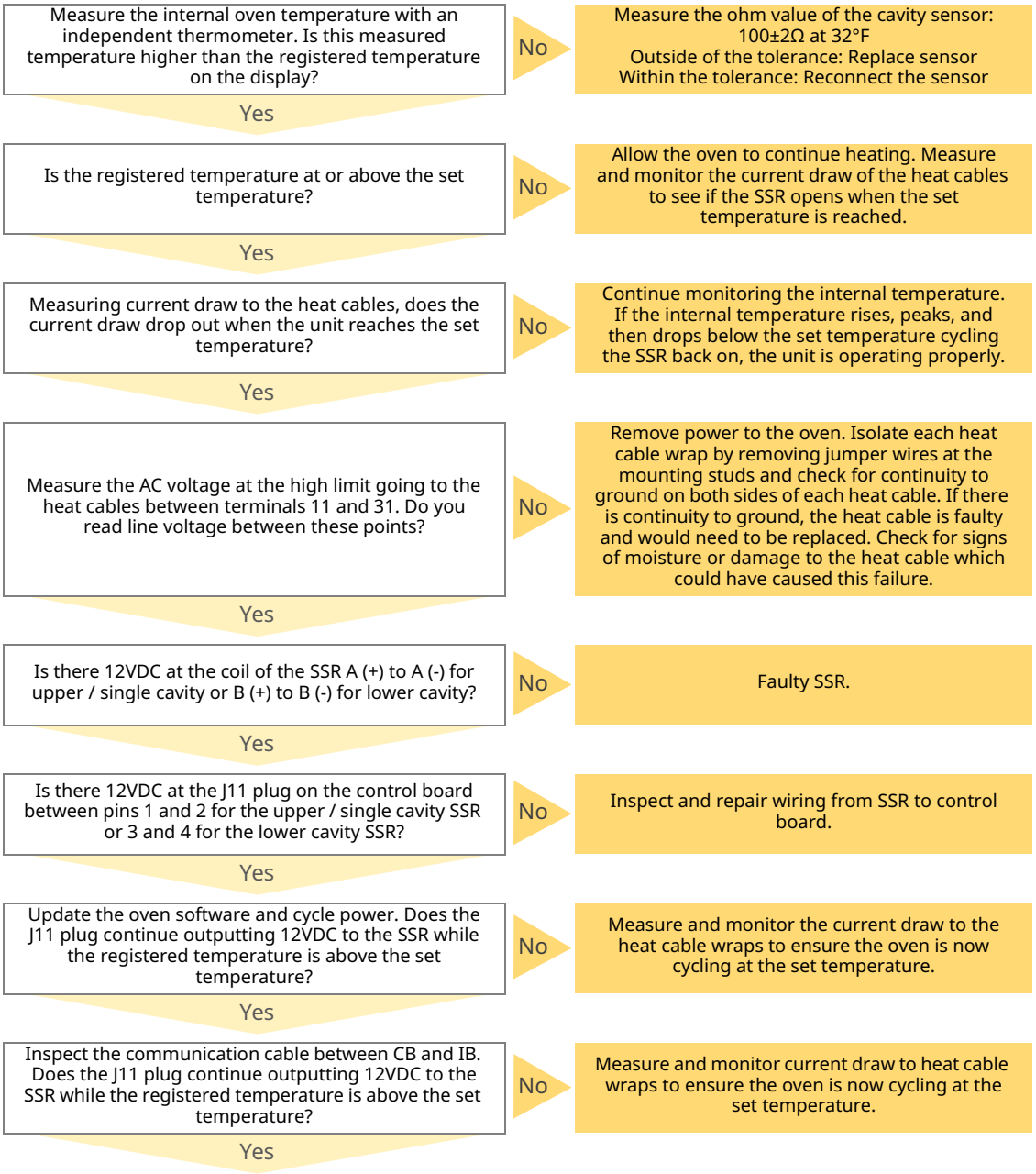

Measure the incoming voltage at the L1 and L2/N terminal block. Do you have line voltage?
No
No power coming to the oven. Recheck facility breaker to the oven and power cord.
Yes
Inspect and repair wired connections. Measure voltage at the circuit breakers.

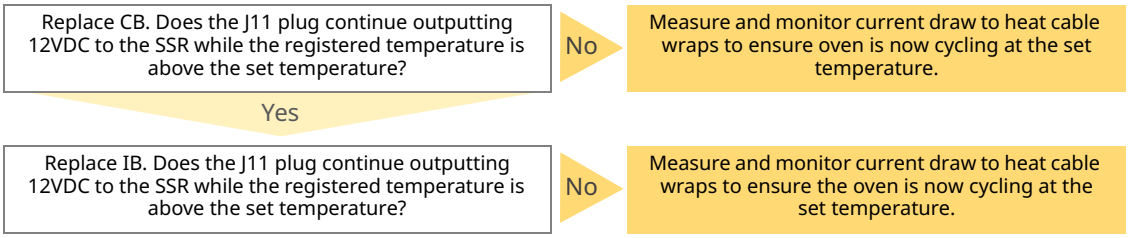
The Screen is not Responsive/Incorrect Response to the Selected Icon



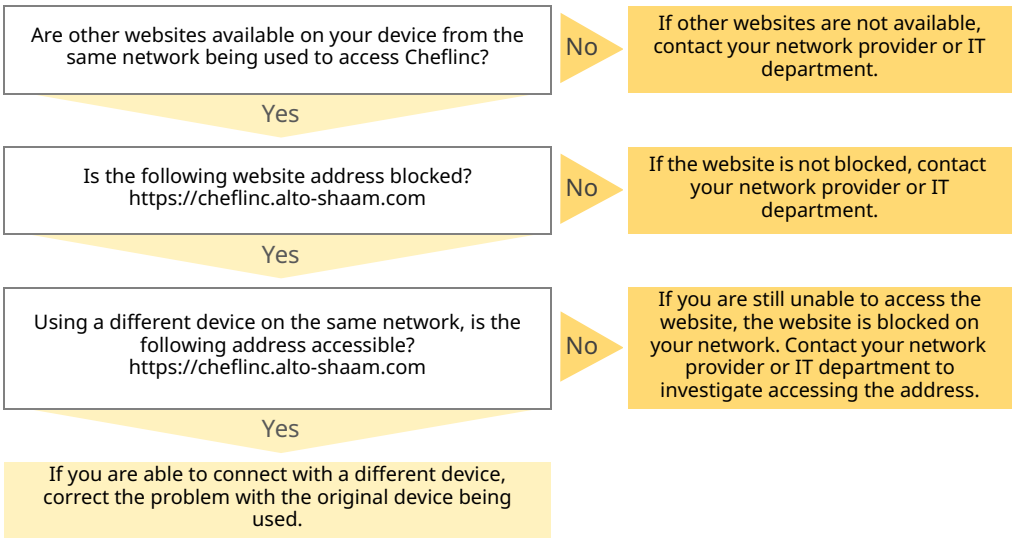
The Oven Overheats

WARNING: Electric shock and arc flash hazard.
Use caution when measuring line voltage.
Wear Personal Protective Equipment (PPE).

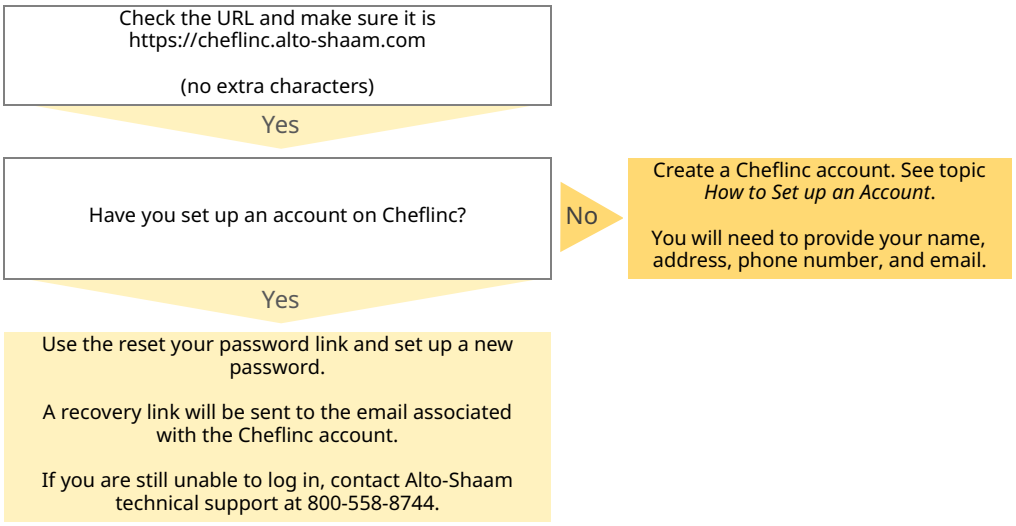



Replace CB. Does the J11 plug continue outputting 12VDC to the SSR while the registered temperature is above the set temperature?
No
Measure and monitor current draw to heat cable wraps to ensure oven is now cycling at the set temperature.
Yes
Replace IB. Does the J11 plug continue outputting 12VDC to the SSR while the registered temperature is above the set temperature?
No
Measure and monitor current draw to heat cable wraps to ensure the oven is now cycling at the set temperature.

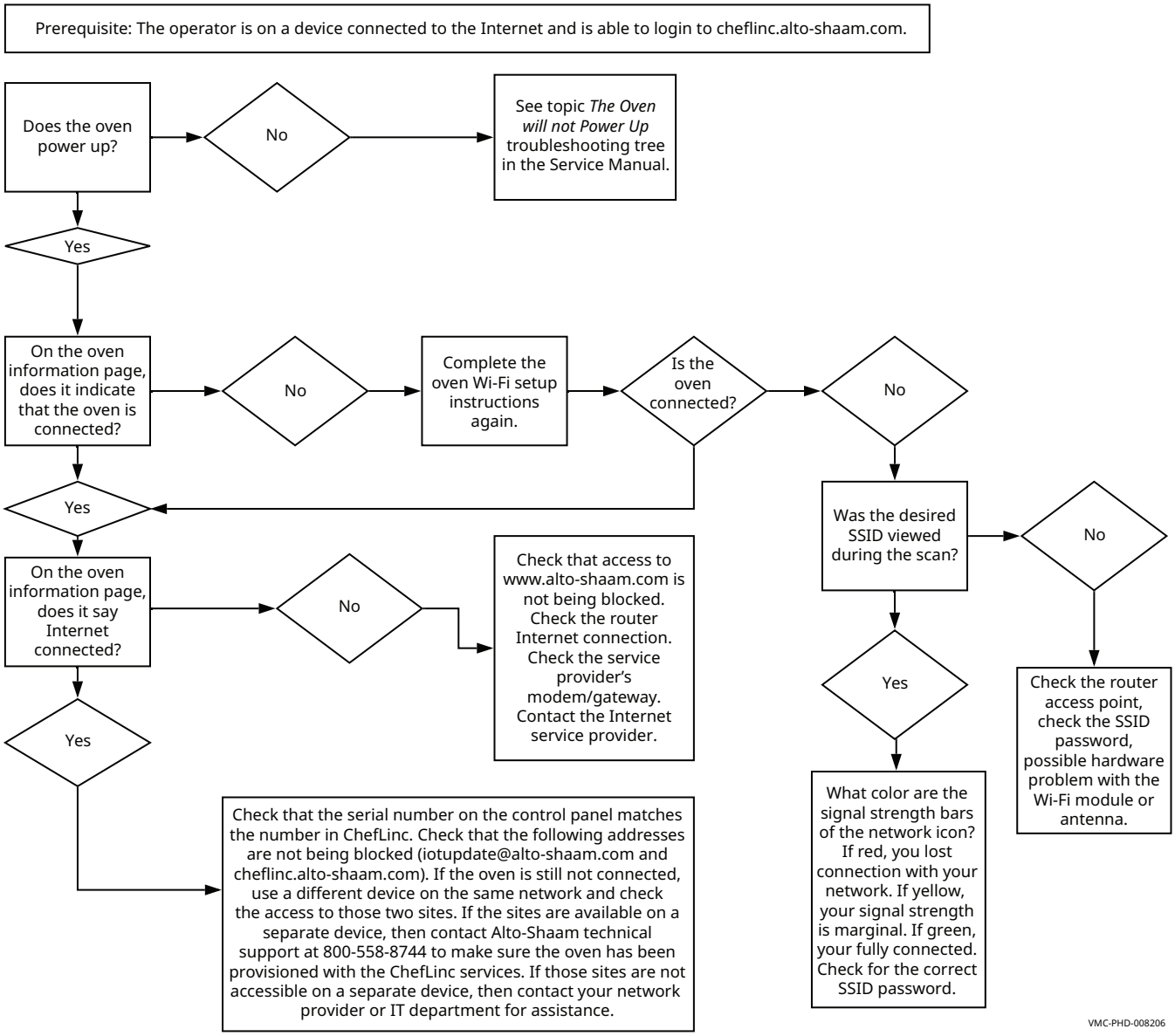
Cheflinc.alto-shaam.com is Not Available on Your Device



Cannot Connect to cheflinc.alto-shaam.com



The Oven is not Displayed on the Dashboard



Unable to Assign Recipes from the Dashboard to Ovens in the Field

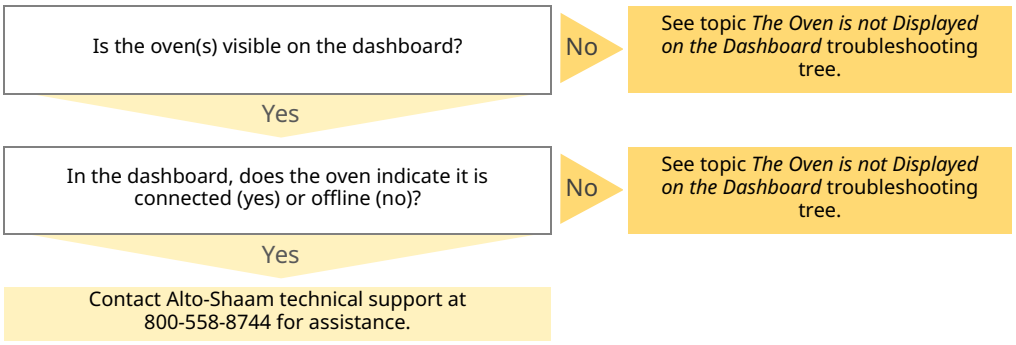


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TABLE OF CONTENTS

300 TH	PG 02
500 TH	PG 03
750 TH	PG 04
1000 TH	PG 05
1200 TH	PG 06
1750 TH	PG 07
1750/1200 TH 380V	PG 08
CONTROL CB	PG 09
DELUXE CONTROL	PG 10
SIMPLE CONTROL	PG 11

REV.	DATE	NAME	ECO	CHANGES
8	1/20/2021	montev	182095	Switch 2006 and 2007 location on high limit
7	11/11/2020	montev	182040	Adding two wrap 750 & 1000 SK
6	10/3/2020	montev	181497	Ethernet option
5	3/16/2020	montev	181489	Remove page 2 and 8 adding EMI filter for CE units, add gnd simple control
4	1/10/2020	montev		Change Dip Switch 6 to LED,

77667 ALL COOK & HOLD	ASi	REVISION 8
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ALTO-SHAAM®

enthermics®

SOLIDWORKS Electrical

Document realized with version : 2017.0.5.7

300 TH
120V & 208-240V & 230V

TERMINAL BLOCK

ON/OFF SWITCH

100

200

L1 L2 N GND

TB1 L1 TB1 L2/N

GRND TERMINAL

401

600 — TO CB J9-7

601 — TO CB J9-8

HIGH LIMIT 1

1003

11 12 21 22 31 32

2000

FROM ELEMENT

800W ELEMENT

FROM ELEMENT

208-240V ONLY SEE CUT SHEET NOTE 5019139

VOLTAGE MONITOR

INPUT	DC RANGE
200-209	4.58-5.00
210-219	4.17-4.53
220-229	3.82-4.13
230-239	3.51-3.78
240-249	3.22-3.48
250----	3.20

1005

2003

J1 J2 J5

800 — TO CB J1-1

700 — TO CB J1-2

1008

2004

120V WIRE CONNECT TO POWER SUPPLY (N)

2003

TO CB RY4-2

2010

1005

120V WIRE CONNECT TO POWER SUPPLY (L)

POWER SUPPLY

706 — TO IB J12 0VDC (-)

701 — TO CB J2-2

806 — TO IB J12 12VDC (+)

801 — TO CB J2-1

1009

COOLING FAN

A1 A2

2005 — TO CB RY4-1

SSR

1001

T1 A1(+)

UPPER

L1 A2(-)

3000 — TO CB J11-2

1002 — TO CB J11-1

CORCOM FILTER

VM J2-2	2004	2038	POWER SUPPLY N
VM J1-2	1008	1038	POWER SUPPLY L

LINE LOAD

CE MODEL

REFER TO 5019148

REF 120V "5019156"

REF 208-240V, 230V "5019157"

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500 TH
120V & 208-240V & 230V

BREAKER
40A
40A
100
200
L1 L2 N GND

TERMINAL BLOCK
TB1 L1
TB1 L2/N
GRND TERMINAL
401

600 → TO CB J9-7
601 → TO CB J9-8

HIGH LIMIT 1
11 12 21 22 31 32
1003
1004
2000
2001

REF 5019137
208-240V, 230V
1050
38.22Ω/wrap
1050

REF 5019142
120V
22.24Ω/wrap
1051 1051 1051 1051

208-240V, 230V ONLY
VOLTAGE MONITOR
J1 J2 J5

INPUT	DC RANGE
200-209 ------	4.58-5.00
210-219 ------	4.17-4.53
220-229 ------	3.82-4.13
230-239 ------	3.51-3.78
240-249 ------	3.22-3.48
250---- ------	3.20

1005
2003
1008
2004
800 → TO CB J1-1
700 → TO CB J1-2

120V WIRE CONNECT TO POWER SUPPLY (N)
2003
TO CB RY4-2
2010
1005
120V WIRE CONNECT TO POWER SUPPLY (L)

706 → TO IB J12 0VDC (-)
701 → TO CB J2-2
806 → TO IB J12 12VDC (+)
801 → TO CB J2-1
GND (-)
12VDC (+)
N
L
1009
POWER SUPPLY
COOLING FAN
A1 A2
2005 → TO CB RY4-1

SSR
T1 L1 A1(+) A2(-)
1001
UPPER
3000 → TO CB J11-2
1002 → TO CB J11-1

CORCOM FILTER
VM J2-2 — 2004 — LINE — LOAD — 2038 — POWER SUPPLY N
VM J1-2 — 1008 — 1038 — POWER SUPPLY L
CE MODEL
REFER TO 5019148

REF 120V "5019131"
REF 208-240V, 230V "5019147"

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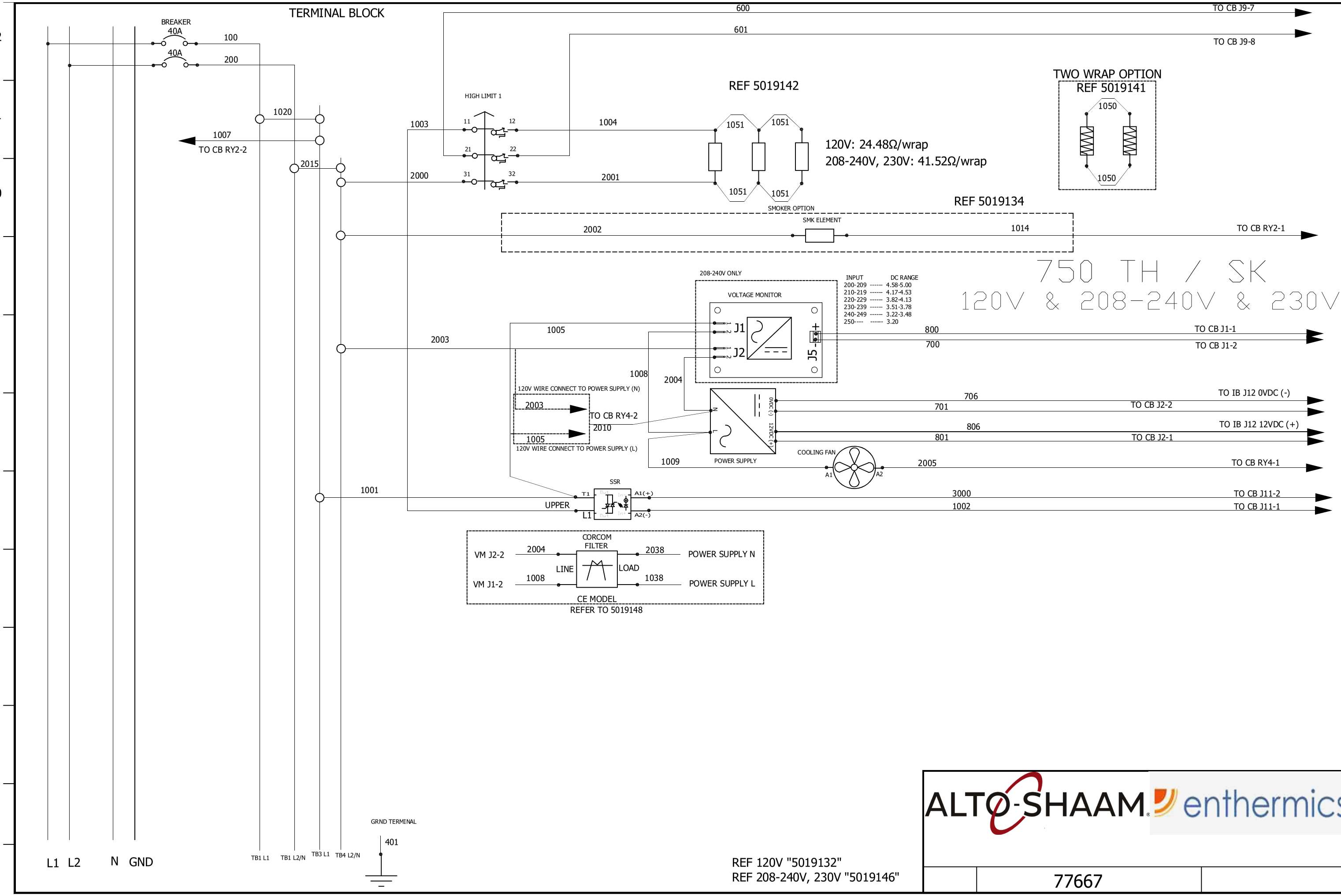
TERMINAL BLOCK
BREAKER
40A
100
40A
200
1020
1007
TO CB RY2-2
2015
600
TO CB J9-7
601
TO CB J9-8
HIGH LIMIT 1
11
12
21
22
31
32
1003
1004
2000
2001
REF 5019142
1051
1051
1051
1051
120V: 24.48Ω/wrap
208-240V, 230V: 41.52Ω/wrap
TWO WRAP OPTION
REF 5019141
1050
1050
SMOKER OPTION
REF 5019134
SMK ELEMENT
2002
1014
TO CB RY2-1
750 TH / SK
120V & 208-240V & 230V
208-240V ONLY
VOLTAGE MONITOR
INPUT DC RANGE
200-209 ----- 4.58-5.00
210-219 ----- 4.17-4.53
220-229 ----- 3.82-4.13
230-239 ----- 3.51-3.78
240-249 ----- 3.22-3.48
250---- ----- 3.20
J1
J2
J5
1005
2003
800
700
TO CB J1-1
TO CB J1-2
1008
2004
120V WIRE CONNECT TO POWER SUPPLY (N)
2003
TO CB RY4-2
2010
1005
120V WIRE CONNECT TO POWER SUPPLY (L)
706
701
TO IB J12 0VDC (-)
TO CB J2-2
806
801
TO IB J12 12VDC (+)
TO CB J2-1
1009
POWER SUPPLY
COOLING FAN
A1
A2
2005
TO CB RY4-1
SSR
1001
T1
A1(+)
UPPER
L1
A2(-)
3000
1002
TO CB J11-2
TO CB J11-1
CORCOM
FILTER
VM J2-2
2004
2038
POWER SUPPLY N
LINE
LOAD
VM J1-2
1008
1038
POWER SUPPLY L
CE MODEL
REFER TO 5019148
L1
L2
N
GND
TB1 L1
TB1 L2/N
TB3 L1
TB4 L2/N
GRND TERMINAL
401
REF 120V "5019132"
REF 208-240V, 230V "5019146"
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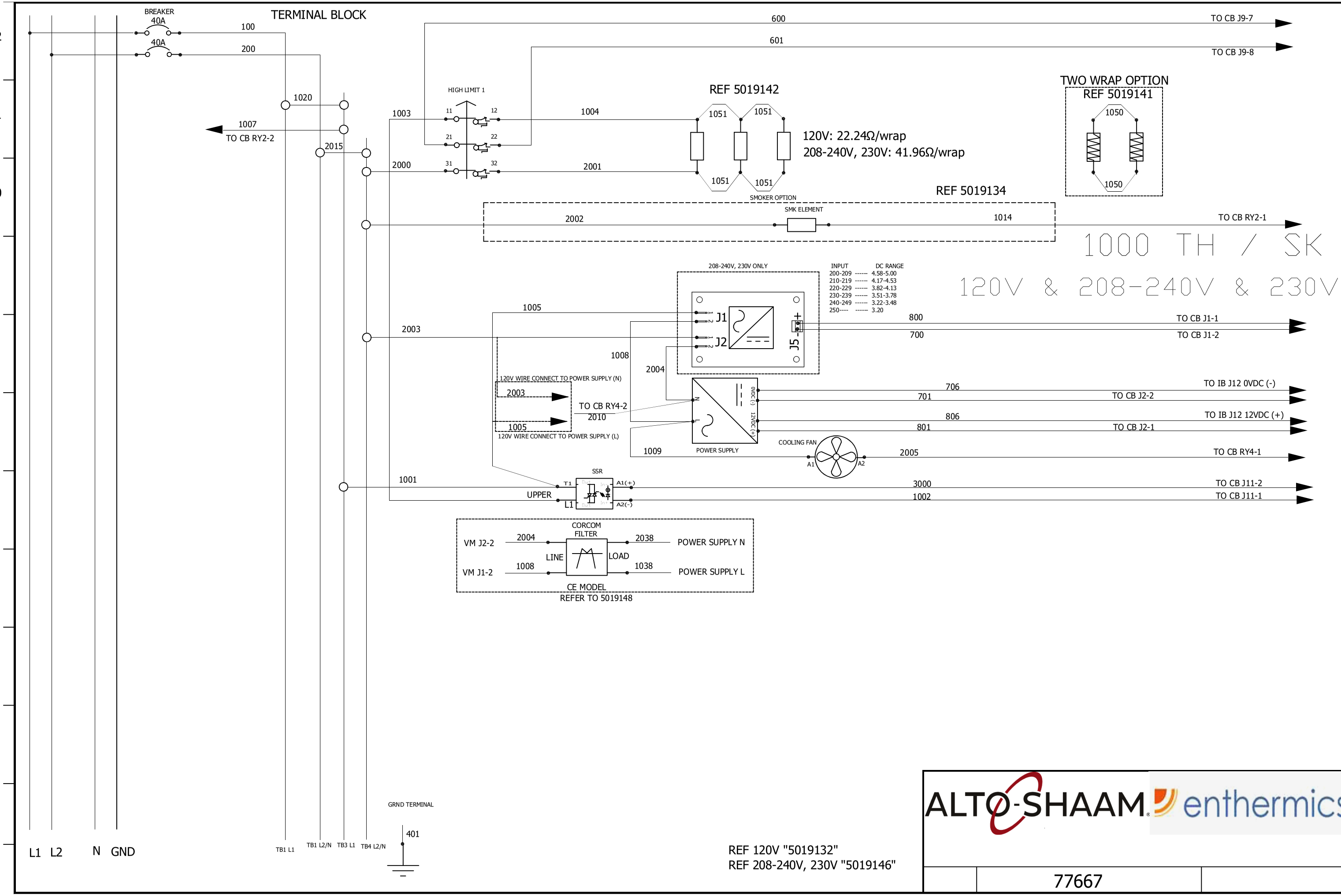

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TERMINAL BLOCK

BREAKER
40A
40A

100
200

2015

1020

1001

1010

1015

1007
TO CB RY2-2

TO CB RY1-2
1013

L1 L2 GND

TB1 L1 TB1 L2/N TB3 L1 TB4 L2/N

GRND TERMINAL
401

UPPR HIGH LIMIT
11 12
21 22
31 32

1003
2000
1004
2001

UPPER
REF 5019142
1051 1051
1051 1051
41.96Ω/wrap

TWO WRAP OPTION
REF 5019141
1050
1050

600
TO CB J9-7
601
TO CB J9-8

SMOKER OPTION
REF SMK OPTION 5019134
SMK ELEMENT
2002
2 1
1014
TO CB RY2-1

1200 TH / SK
208-240V / 230V

INPUT DC RANGE
200-209 ----- 4.58-5.00
210-219 ----- 4.17-4.53
220-229 ----- 3.82-4.13
230-239 ----- 3.51-3.78
240-249 ----- 3.22-3.48
250---- ----- 3.20

VOLTAGE MONITOR
J1
J2
J5
800
TO CB J1-1
700
TO CB J1-2

2003
1005

CORCOM FILTER
2004 2038
1008 1038
CE MODEL
REFER TO 5019148

DOMESTIC MODEL
2004
TO CB RY4-2
2010
1008

706
TO IB J12 0VDC (-)
701
TO CB J2-2
806
TO IB J12 12VDC (+)
801
TO CB J2-1

1009
POWER SUPPLY

COOLING FAN
A1 A2
2005
TO CB RY4-1

SSR
A1 A2
A (+) A (-)
B (+) B (-)
3000
TO CB J11-2
1002
TO CB J11-1
3001
TO CB J11-4
1011
TO CB J11-3

LOWER
REF 5019142
LWR HIGH LIMIT
11 12
21 22
31 32
1016
2006
2007
1051 1051
1051 1051
41.96Ω/wrap

TWO WRAP OPTION
REF 5019141
1050
1050

SMOKER OPTION
REF SMK OPTION 5019135
SMK ELEMENT
2008
2 1
1012
TO CB RY1-1

603
TO CB J9-9
602
TO CB J9-10

REF 5019133

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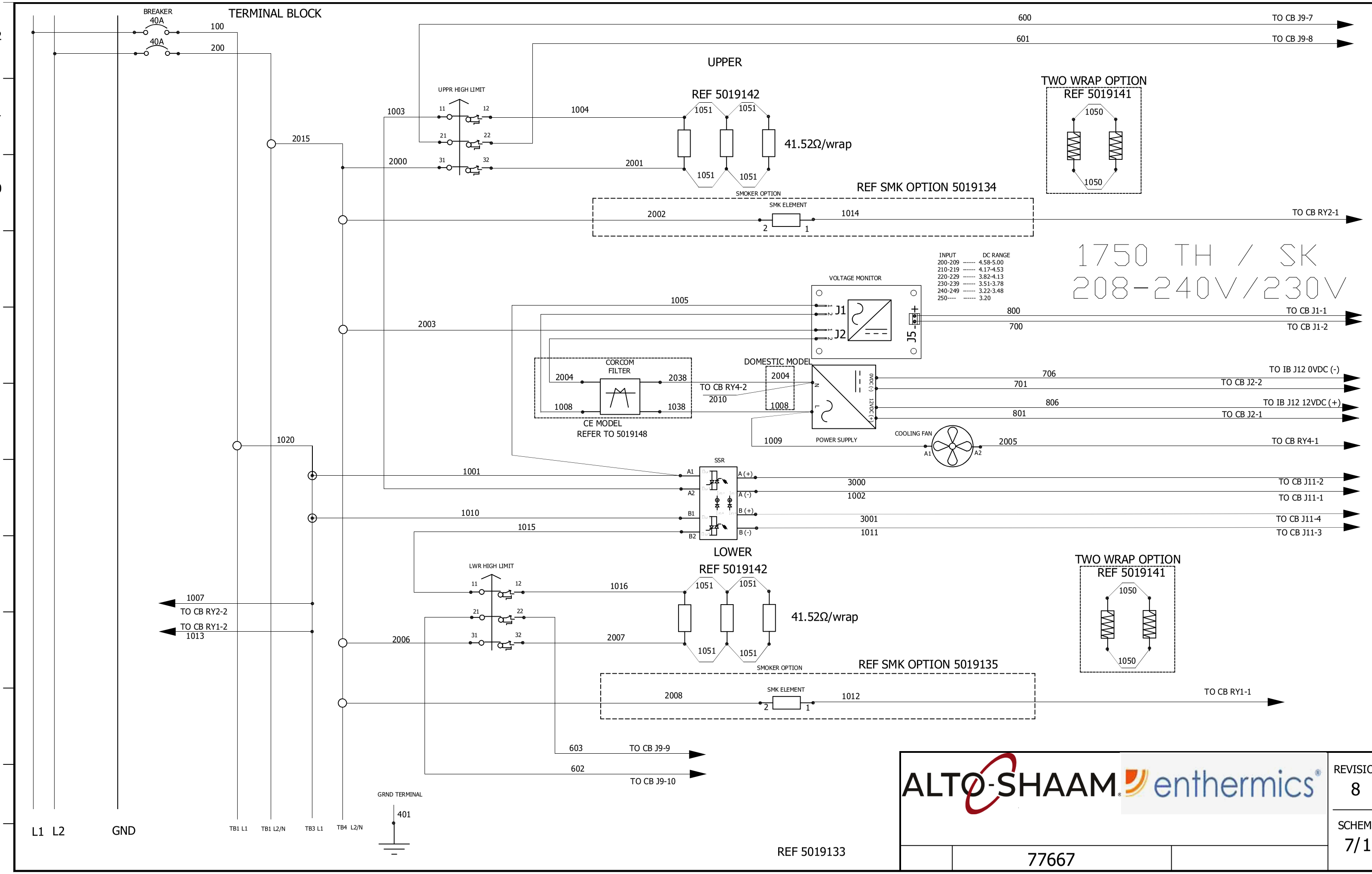
TERMINAL BLOCK
BREAKER
40A
40A
100
200
L1 L2 GND
TB1 L1
TB1 L2/N
TB3 L1
TB4 L2/N
GRND TERMINAL
401
600
TO CB J9-7
601
TO CB J9-8
UPPER
UPPR HIGH LIMIT
1003
1004
2015
2000
2001
REF 5019142
1051
41.52Ω/wrap
TWO WRAP OPTION
REF 5019141
1050
SMOKER OPTION
REF SMK OPTION 5019134
SMK ELEMENT
2002
1014
TO CB RY2-1
1750 TH / SK
208-240V/230V
INPUT DC RANGE
200-209 ----- 4.58-5.00
210-219 ----- 4.17-4.53
220-229 ----- 3.82-4.13
230-239 ----- 3.51-3.78
240-249 ----- 3.22-3.48
250---- ----- 3.20
VOLTAGE MONITOR
1005
2003
J1
J2
J5
800
TO CB J1-1
700
TO CB J1-2
CORCOM FILTER
2004
2038
1008
1038
CE MODEL
REFER TO 5019148
TO CB RY4-2
2010
DOMESTIC MODEL
2004
1008
706
TO IB J12 0VDC (-)
701
TO CB J2-2
806
TO IB J12 12VDC (+)
801
TO CB J2-1
1009
POWER SUPPLY
COOLING FAN
A1
A2
2005
TO CB RY4-1
1020
SSR
1001
1010
1015
A1
A2
B1
B2
A (+)
A (-)
B (+)
B (-)
3000
1002
3001
1011
TO CB J11-2
TO CB J11-1
TO CB J11-4
TO CB J11-3
LOWER
REF 5019142
LWR HIGH LIMIT
1016
2006
2007
1007
TO CB RY2-2
TO CB RY1-2
1013
41.52Ω/wrap
TWO WRAP OPTION
REF 5019141
1050
SMOKER OPTION
REF SMK OPTION 5019135
SMK ELEMENT
2008
1012
TO CB RY1-1
603
TO CB J9-9
602
TO CB J9-10
REF 5019133
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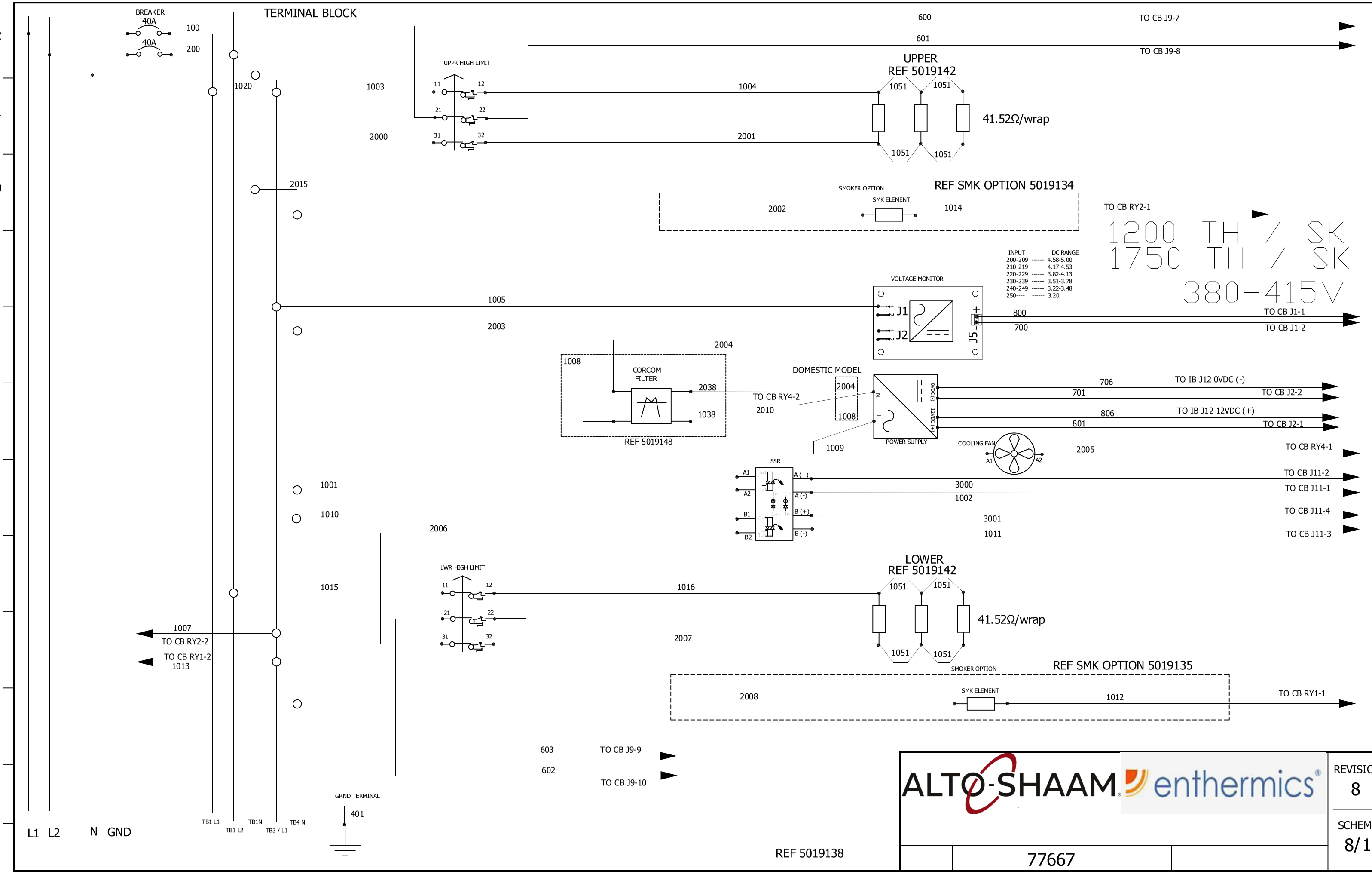
TERMINAL BLOCK
BREAKER
40A
100
40A
200
1020
600
TO CB J9-7
601
TO CB J9-8
UPPR HIGH LIMIT
1003
1004
UPPER
REF 5019142
1051
41.52Ω/wrap
2000
2001
2015
SMOKER OPTION
REF SMK OPTION 5019134
SMK ELEMENT
2002
1014
TO CB RY2-1
1200 TH / SK
1750 TH / SK
380-415V
INPUT DC RANGE
200-209 ----- 4.58-5.00
210-219 ----- 4.17-4.53
220-229 ----- 3.82-4.13
230-239 ----- 3.51-3.78
240-249 ----- 3.22-3.48
250---- ----- 3.20
VOLTAGE MONITOR
1005
2003
J1
J2
J5
800
TO CB J1-1
700
TO CB J1-2
2004
1008
CORCOM
FILTER
2038
1038
REF 5019148
TO CB RY4-2
2010
DOMESTIC MODEL
2004
1008
706
TO IB J12 0VDC (-)
701
TO CB J2-2
806
TO IB J12 12VDC (+)
801
TO CB J2-1
POWER SUPPLY
1009
COOLING FAN
2005
TO CB RY4-1
SSR
1001
1010
2006
A1
A2
B1
B2
A (+)
A (-)
B (+)
B (-)
3000
1002
3001
1011
TO CB J11-2
TO CB J11-1
TO CB J11-4
TO CB J11-3
LWR HIGH LIMIT
1015
1016
LOWER
REF 5019142
1051
41.52Ω/wrap
1007
TO CB RY2-2
TO CB RY1-2
1013
2007
SMOKER OPTION
REF SMK OPTION 5019135
SMK ELEMENT
2008
1012
TO CB RY1-1
603
TO CB J9-9
602
TO CB J9-10
GRND TERMINAL
401
L1 L2 N GND
TB1 L1
TB1 L2
TB1N
TB3 / L1
TB4 N
REF 5019138
ALTO-SHAAM
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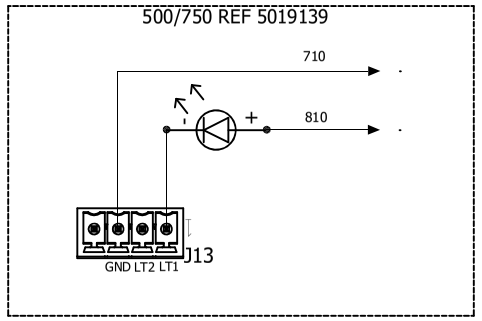

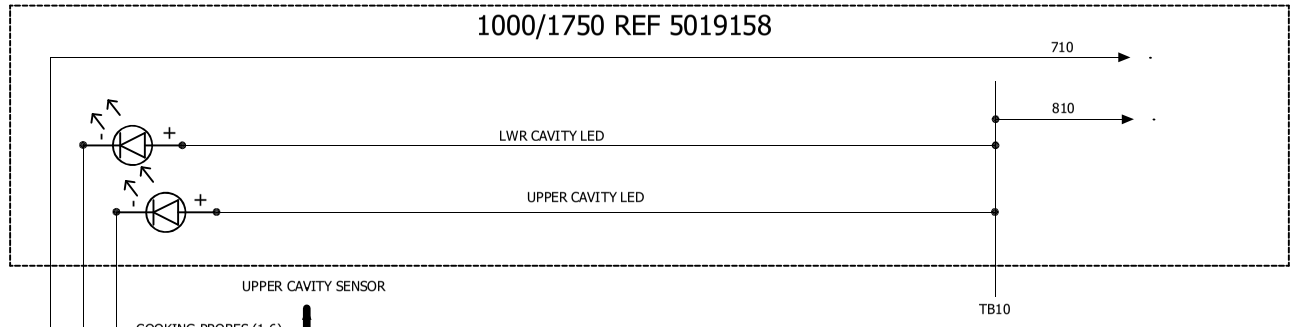

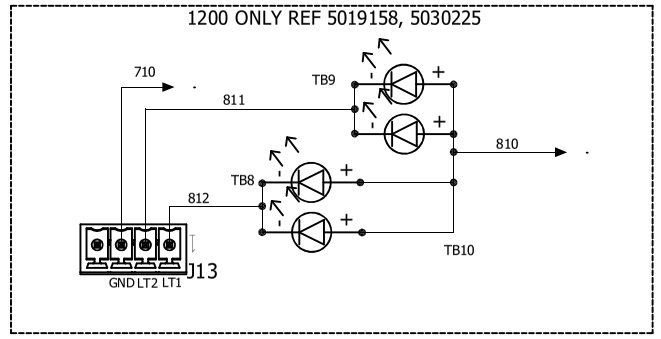

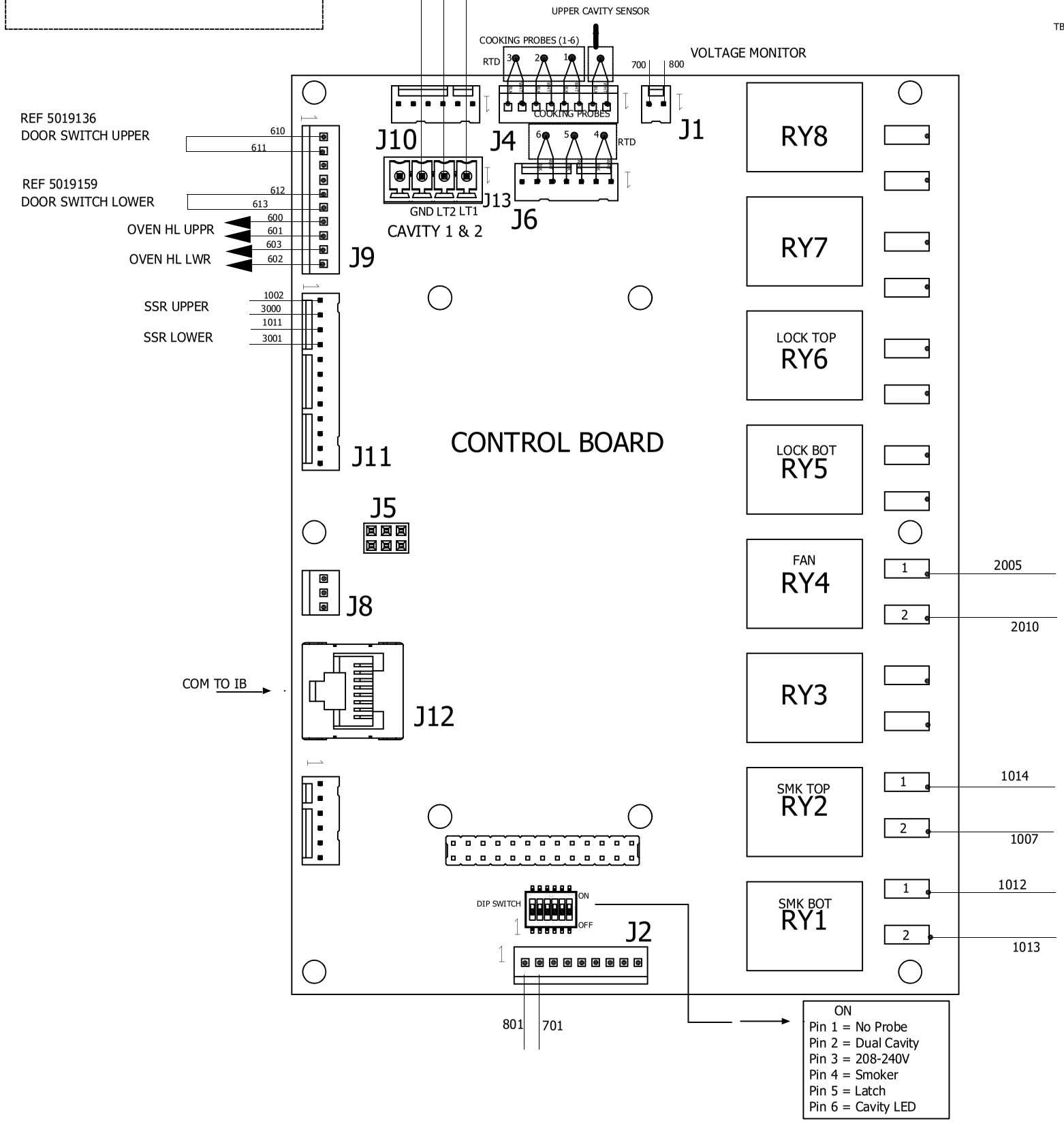

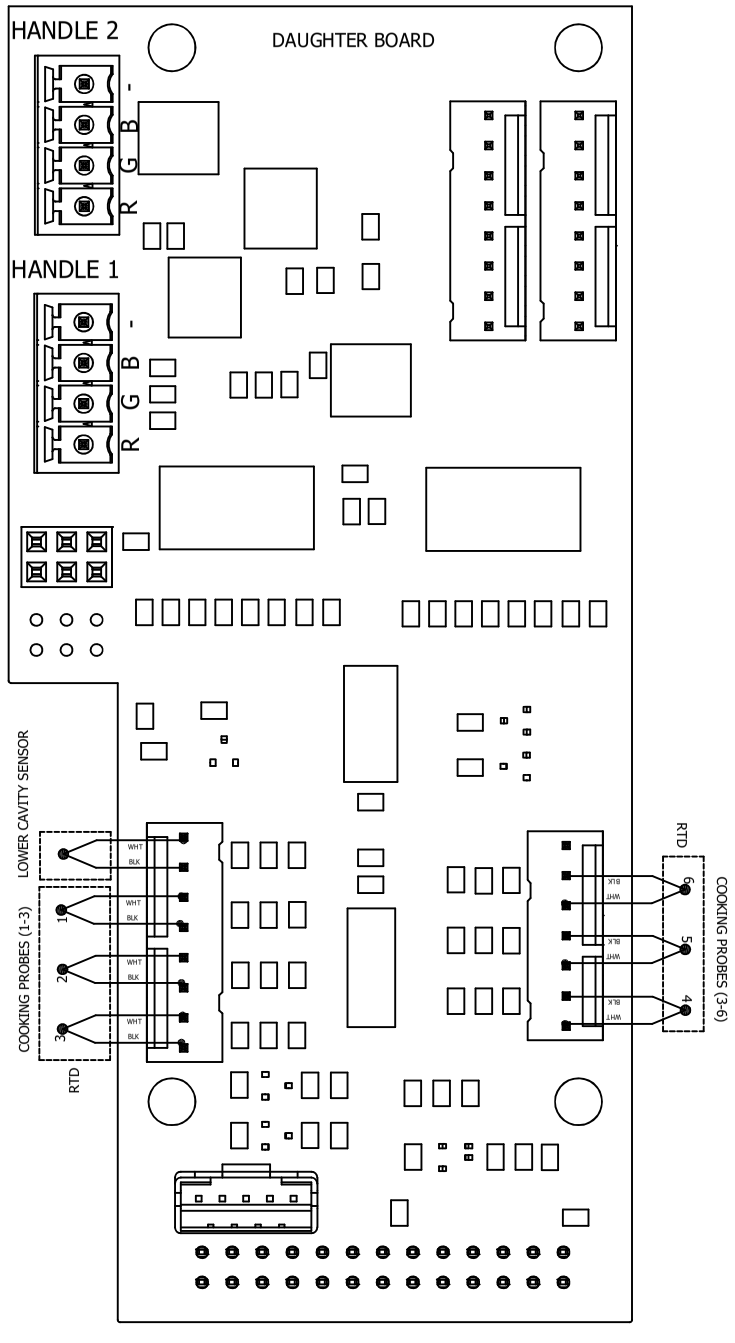

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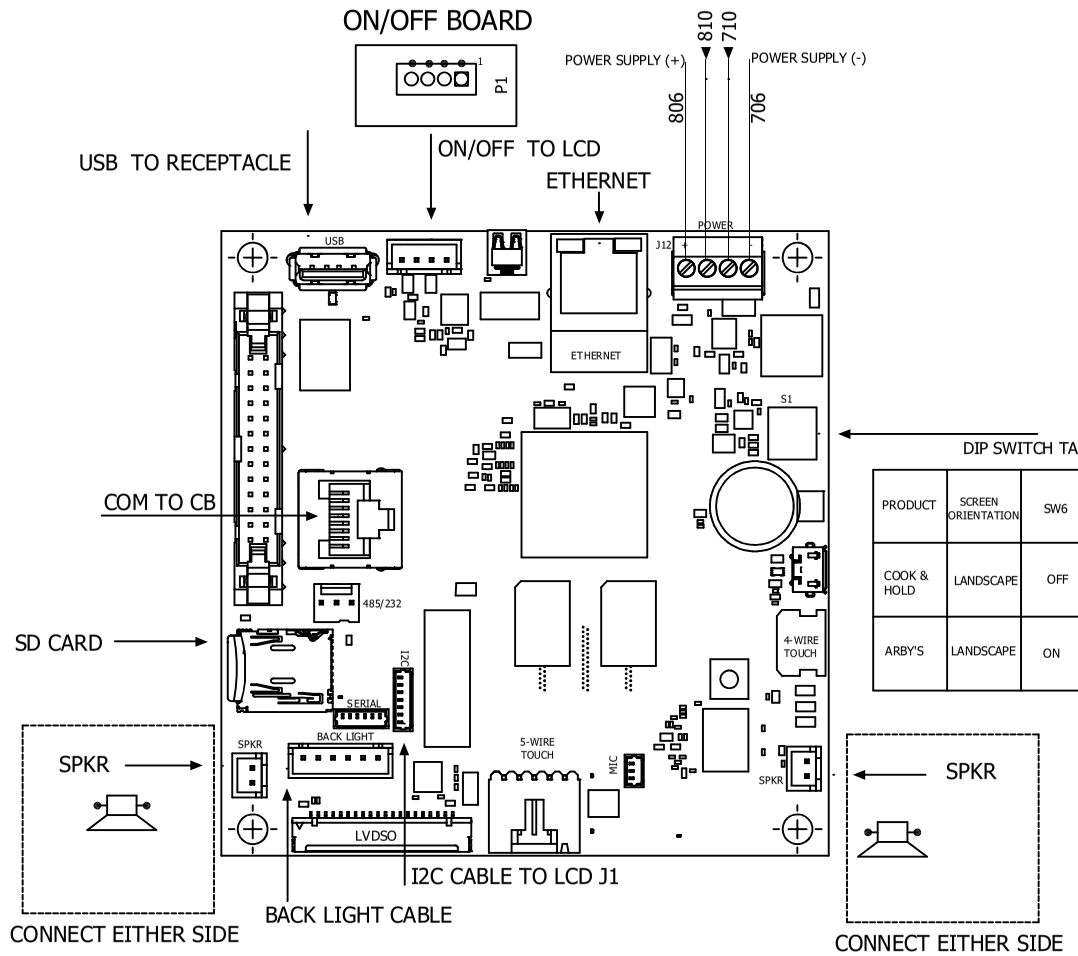
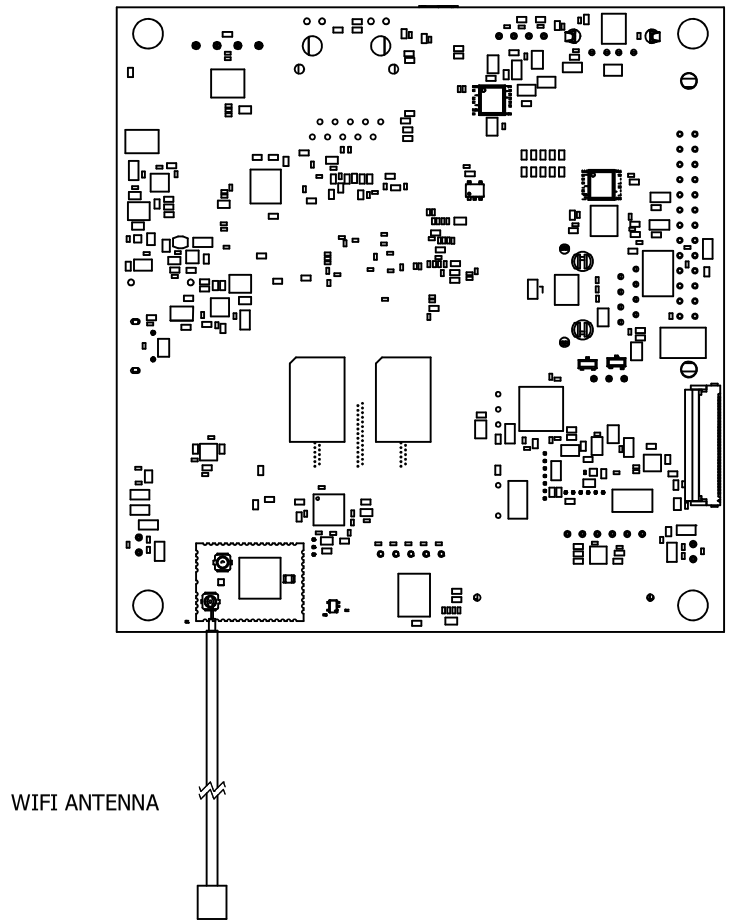
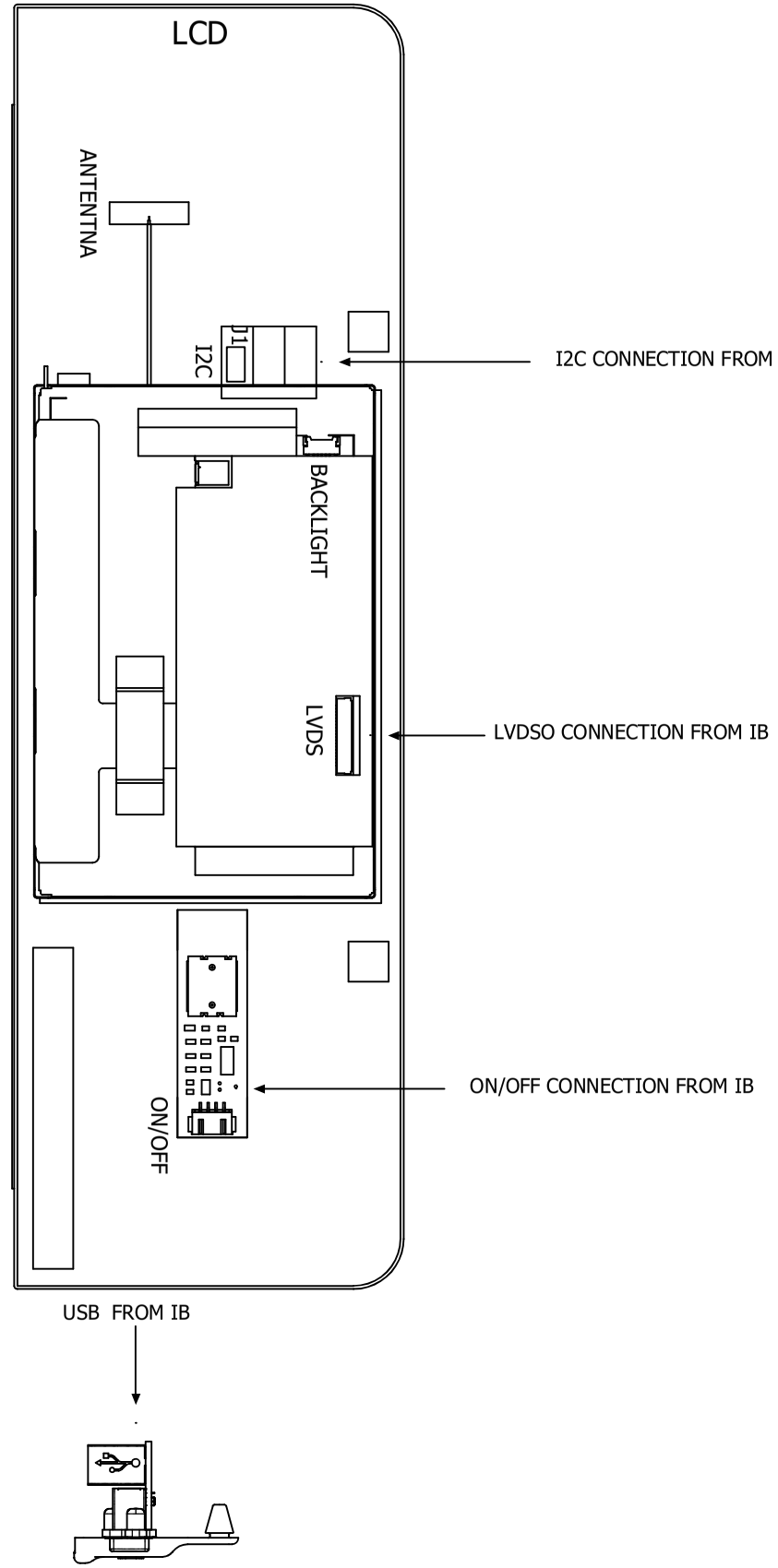


DIP SWITCH TABLE

PRODUCT	SCREEN ORIENTATION	SW6	SW5	SW4	SW3	SW2	SW1
COOK & HOLD	LANDSCAPE	OFF	OFF	ON	OFF	OFF	OFF
ARBY'S	LANDSCAPE	ON	OFF	ON	OFF	ON	OFF





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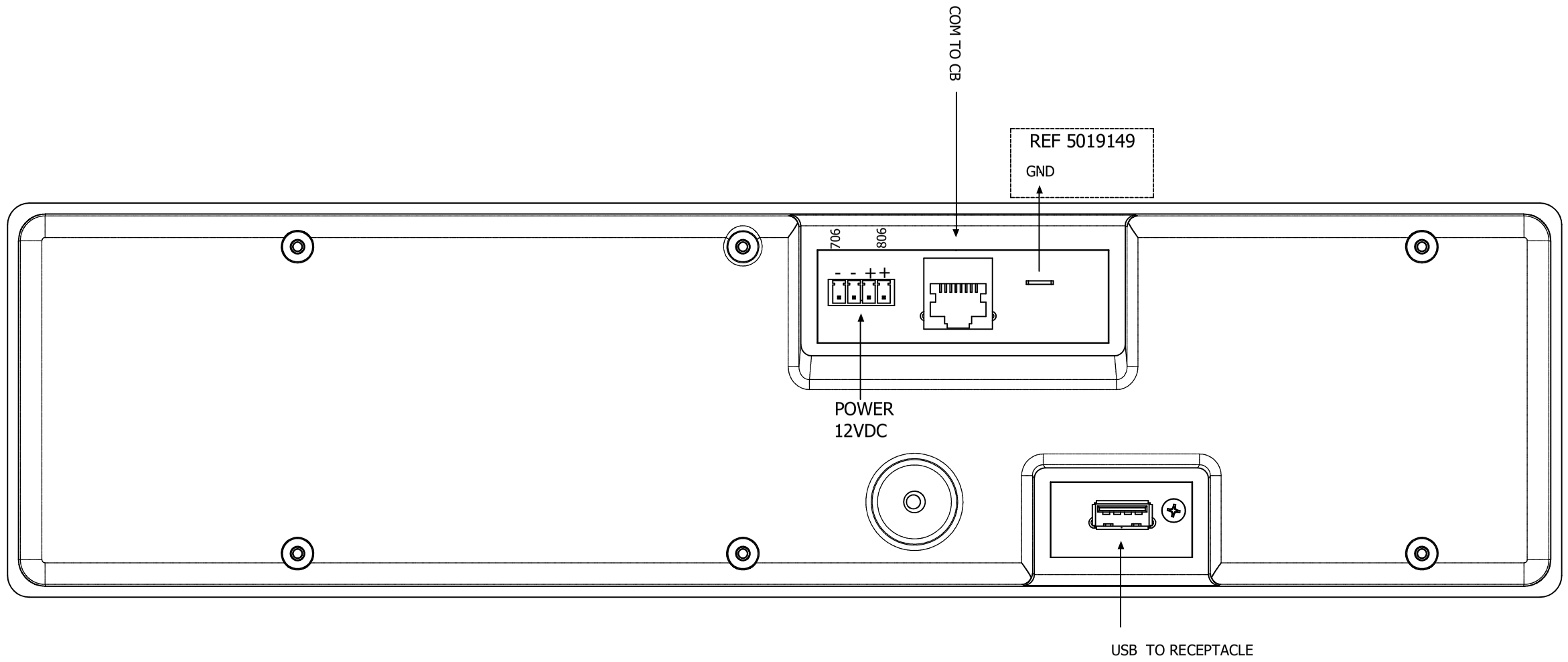

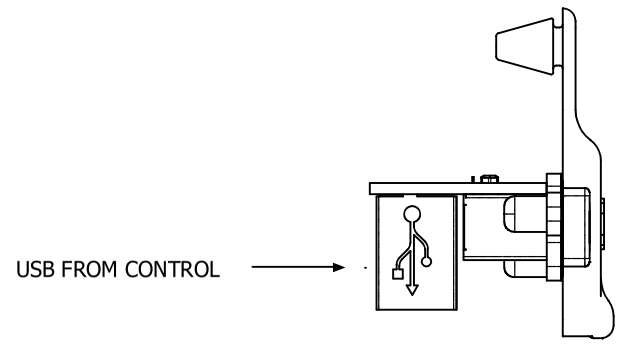

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REVISION 8

SCHEME 11/11

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