



Cook & Hold Oven

Simple Control

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



MN-46713-EN

REV.03
4/22

EN

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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.

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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.

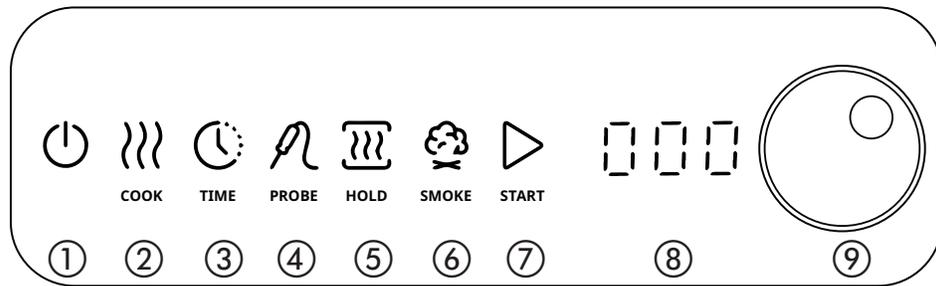
A tether is not supplied by nor available from the manufacturer.

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

Control Identification



TH-TS-008705

Item	Description	Function
1	Power icon	Touch to turn on or turn off the oven.
2	Cook icon	Touch to set cook temperature.
3	Time icon	Touch to cook by time.
4	Probe icon	Touch to cook by probe.
5	Hold icon	Touch to set hold temperature.
6	Smoke icon (Ovens with smoker option only)	Touch to set smoke time.
7	Start icon	Touch to start cook, hold, or smoke function. Touch and hold to stop the current oven function.
8	LCD Display	Displays time, temperature, settings, and error codes.
9	Knob	Used to set or confirm time, temperature, or change settings. Press and hold to access the Settings menu.

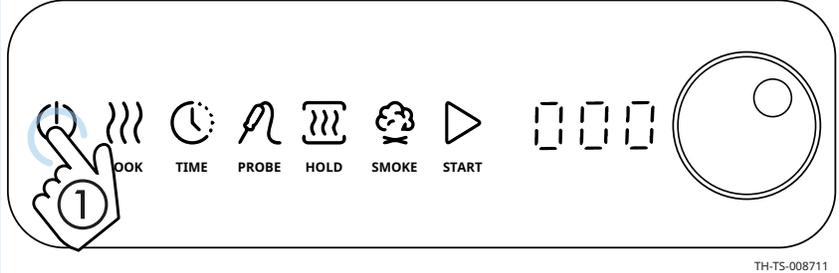
How to Turn On and Turn Off the Oven

Before you begin

The oven must be connected to electric power.

Turning the oven on or off

To turn on and off the oven, do the following.

Step	Action
1.	<p>Touch the power icon ① to turn on the oven.</p>  <p>TH-TS-008711</p>
2.	<p>Touch and hold the power icon ① for at least 5 seconds to turn off the oven.</p>

Result

The oven is turned on or off.

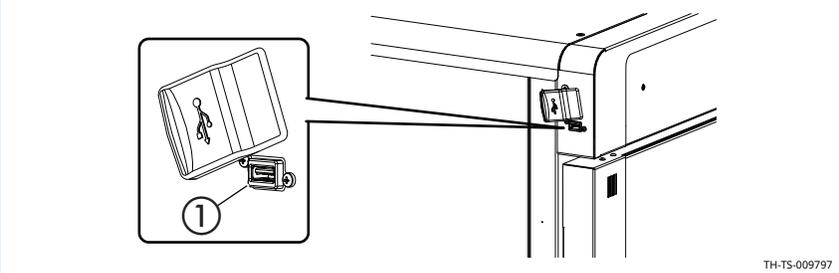
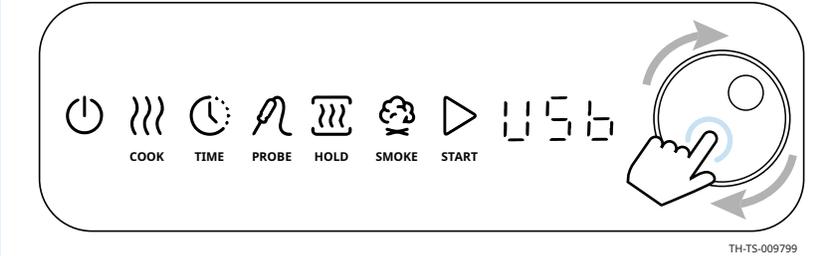
How to Update Software with a USB Drive

Before you begin

- You will need a USB drive loaded with the software update.
- Make sure the oven is on, but is not in cooking or holding mode.
- Record the versions of the software loaded to the oven. See topic *How to View the Software Versions*.

Procedure

To update the software, do the following.

Step	Action
1.	<p>Plug the USB drive into the port ①.</p>  <p style="text-align: right;"><small>TH-TS-009797</small></p>
2.	<p>Press and hold the knob to access the settings menu.</p>  <p style="text-align: right;"><small>TH-TS-008727</small></p>
3.	<p>Turn the knob until the control displays USB.</p> <p>Press the knob to access the USB menu.</p>  <p style="text-align: right;"><small>TH-TS-009799</small></p>

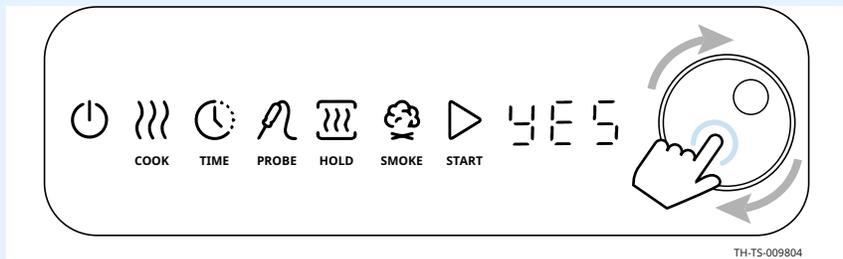
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4. **Turn** the knob until the control displays “Prog”.
- Press** the knob to select “Prog”.



5. **Turn** the knob to “yes”.
- Press** the knob to select “yes” and begin the update.

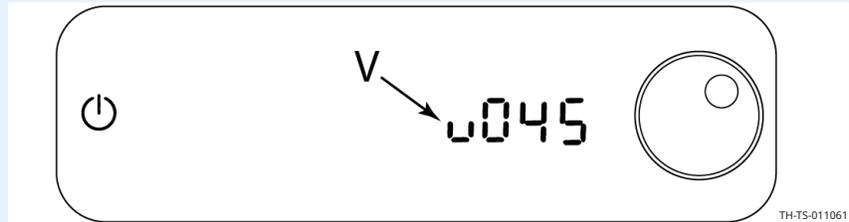


The START icon will display. The light around the knob will flash. The display will go blank for several seconds. The interface board (IB) software version displays. The control board (CB) software version displays. Record this number.

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6. The interface board (IB) software version displays.



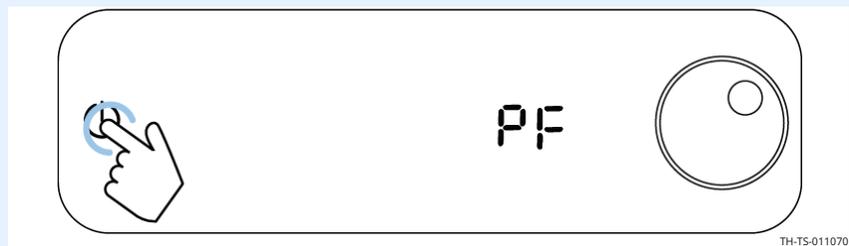
The control board (CB) software version displays. The numbers to the left of the colon ":" display in HEX format. Record this number.

NOTE: A CB version of 1.11 would be represented as 1:11, while a version of 111.11 would be represented as 6F:11. The numbers to the right of the colon ":" are not in HEX format.



7. Power failure (PF) displays.

Touch the power icon to clear the power failure (PF).



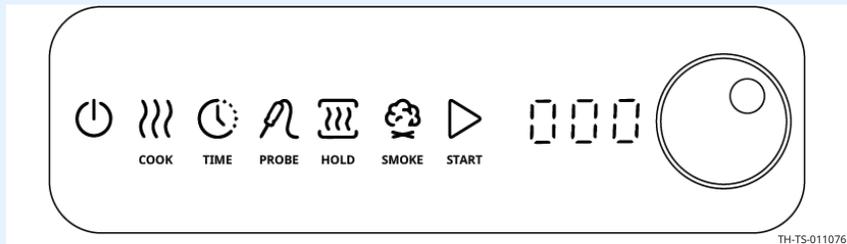
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8. The display will go blank. **Touch** the power icon.



The display will power up and the icons display.



9. **Remove** the USB drive.

Result

The software has been updated.

As an alternative to using the “Prog” function, software can also be updated by doing the following:

- Turn off the breaker on the back, or unplug the oven.
- Plug the USB drive into the port on the side of the oven.
- Turn on the breaker on the back, or plug the oven back in.

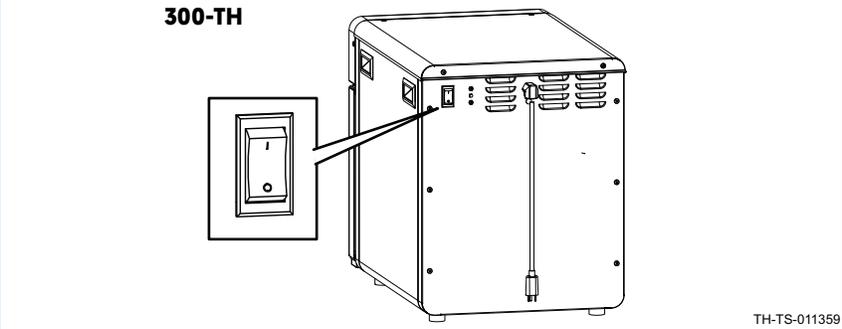
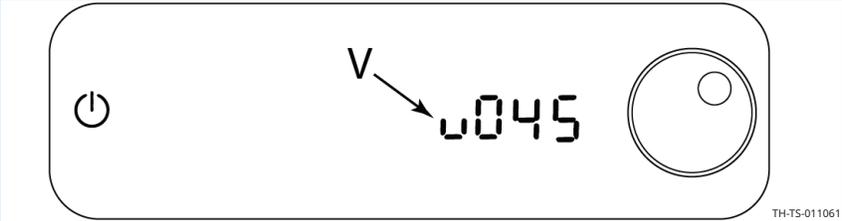
The software will update automatically.

Do not remove the USB drive until the update is complete.

How to View the Software Versions

Procedure

To view the software versions, do the following.

Step	Action
1.	<p>Remove and reapply electrical power from the oven.</p> <p>NOTE: For TH-300 ovens, the power switch can be used.</p>  <p style="text-align: right;">TH-TS-011359</p>
2.	<p>The interface board (IB) software version displays. Record this number.</p>  <p style="text-align: right;">TH-TS-011061</p> <p>The control board (CB) software version displays. The numbers to the left of the colon ":" display in HEX format. Record this number.</p> <p>NOTE: A CB version of 1.11 would be represented as 1:11, while a version of 111.11 would be represented as 6F:11. The numbers to the right of the colon ":" are not in HEX format.</p>  <p style="text-align: right;">TH-TS-011064</p>

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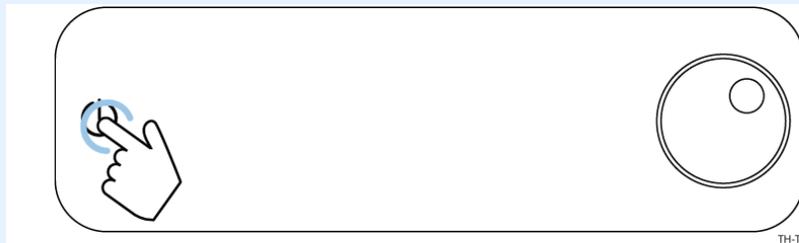
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3. Power failure (PF) displays.

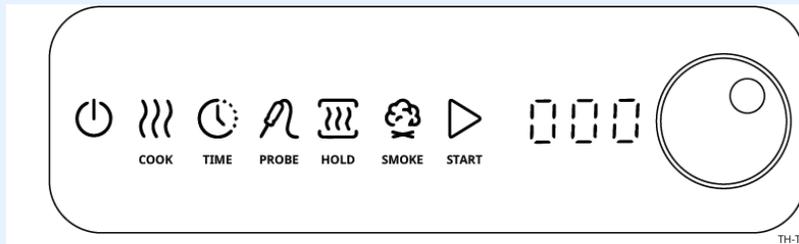
Touch the power icon to clear the power failure (PF).



4. The display will go blank. **Touch** the power icon.



The display will power up and the icons display.



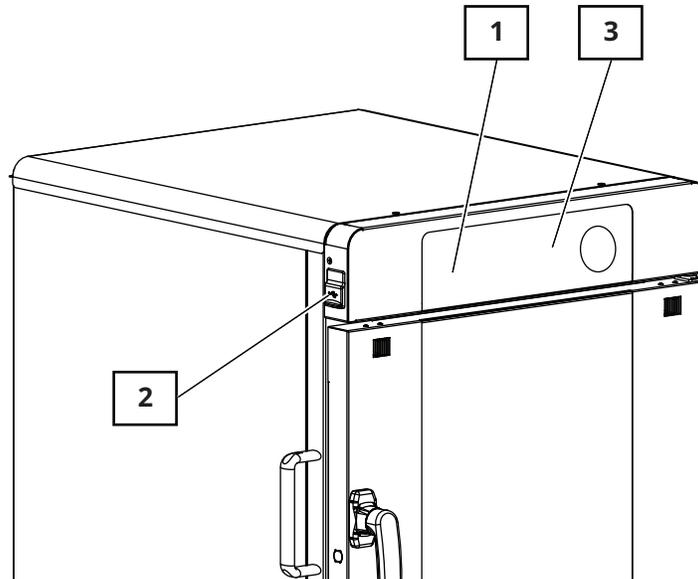
Result

The software versions have now been viewed.

Component Identification



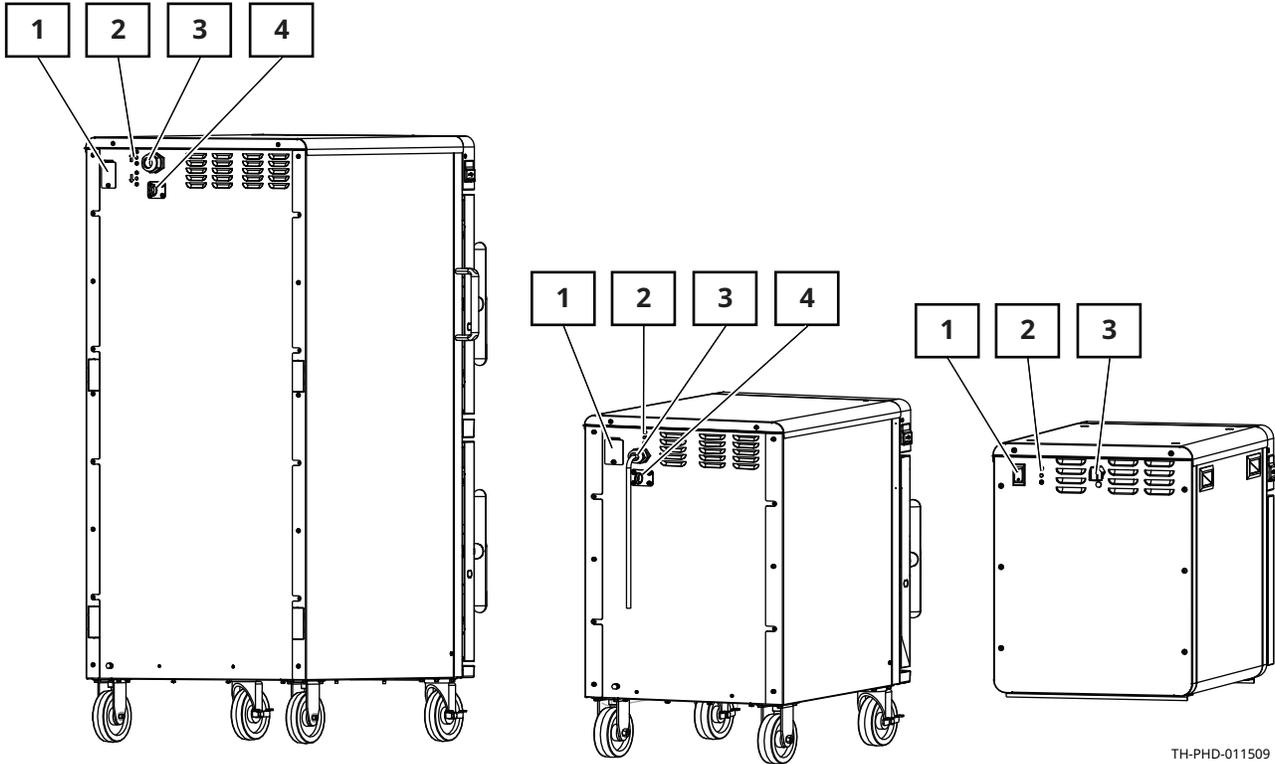
Front Panel Identification



TH-PHD-011659

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

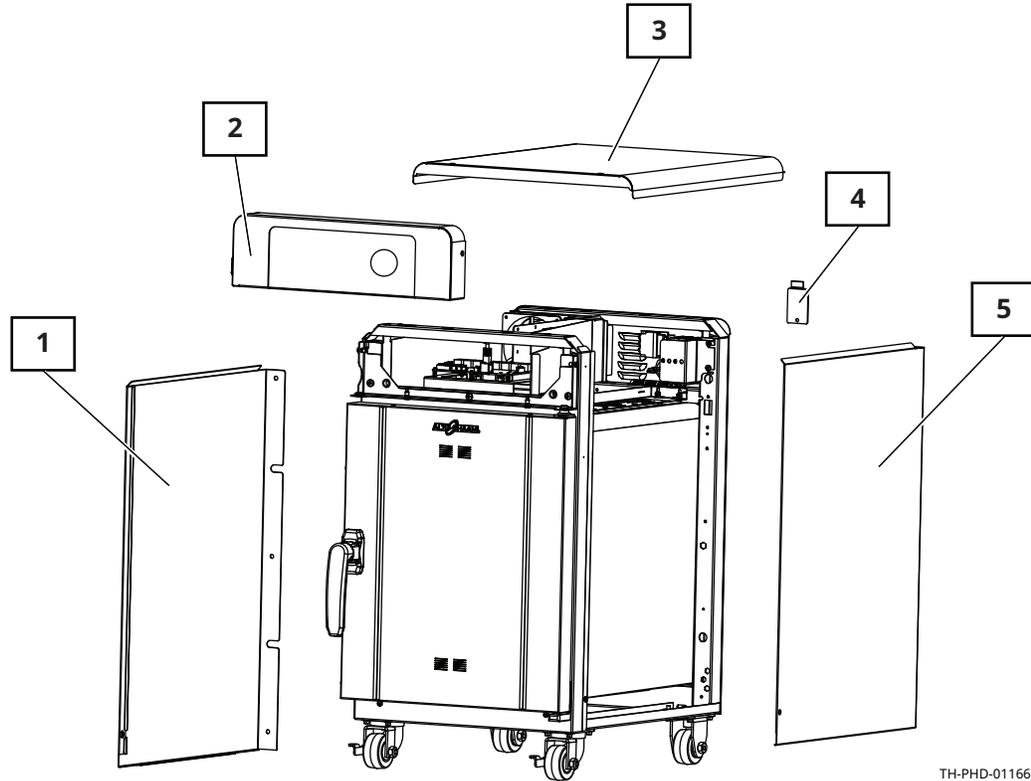
Back Panel Identification



TH-PHD-011509

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

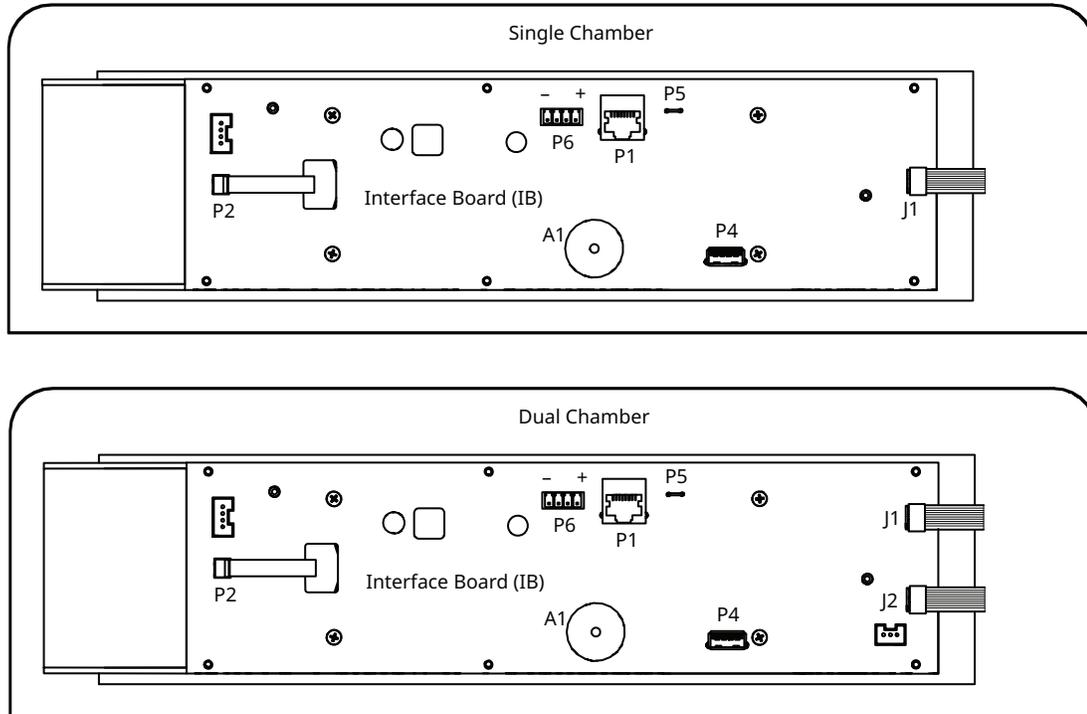
Component Access Panels Identification



TH-PHD-011662

Ref.	Description	Provides access to
1	Left side panel	Heating element terminal block
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	—

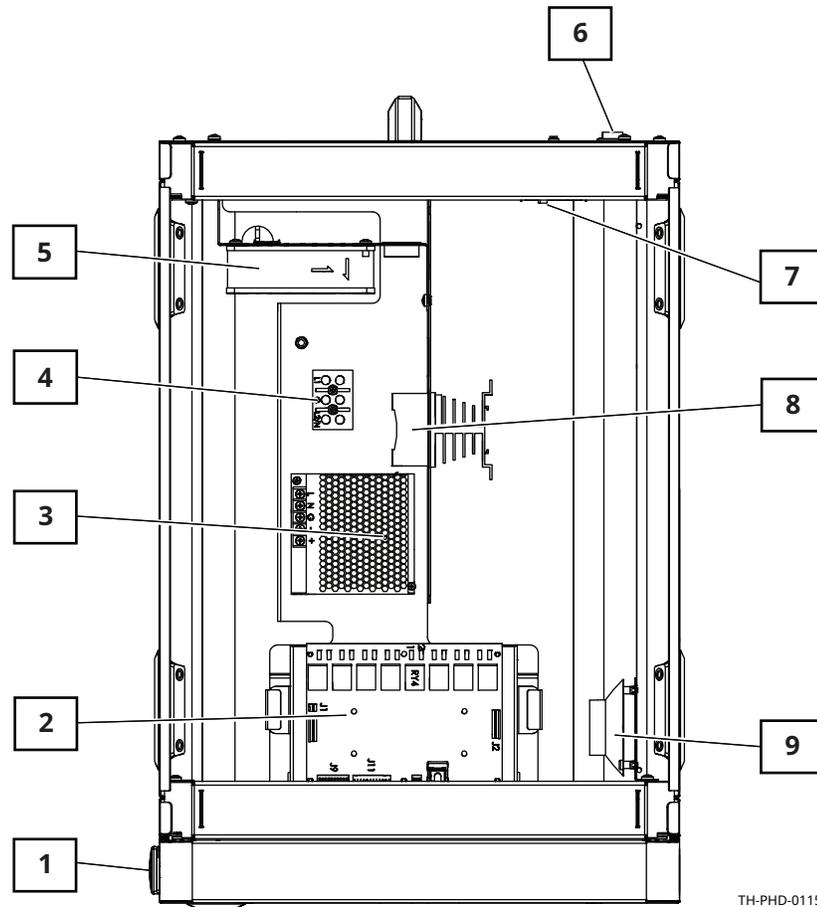
Control Panel



TH-PHD-011665

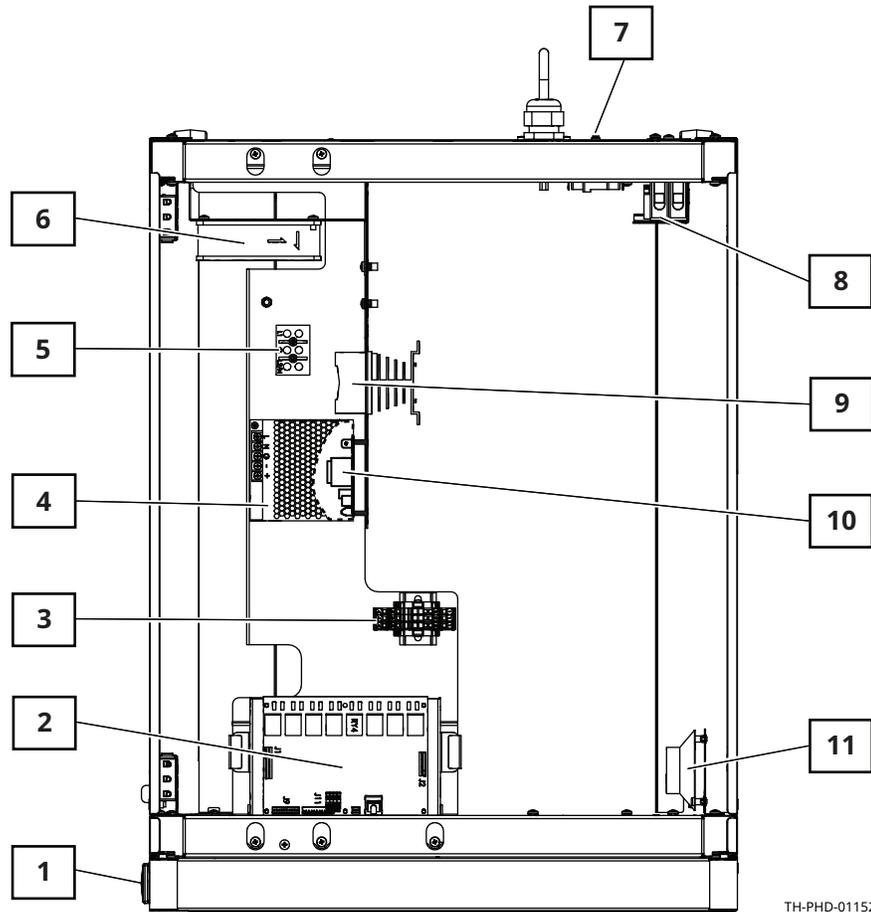
Ref.	Description
A1	Alarm - buzzer
J1	Touch sensor - top oven
J2	Touch sensor - bottom oven
P1	RJ485 Modbus
P2	Encoder (dial)
P4	USB
P5	Chassis ground
P6	12VDC

300-TH—Electrical Component Identification



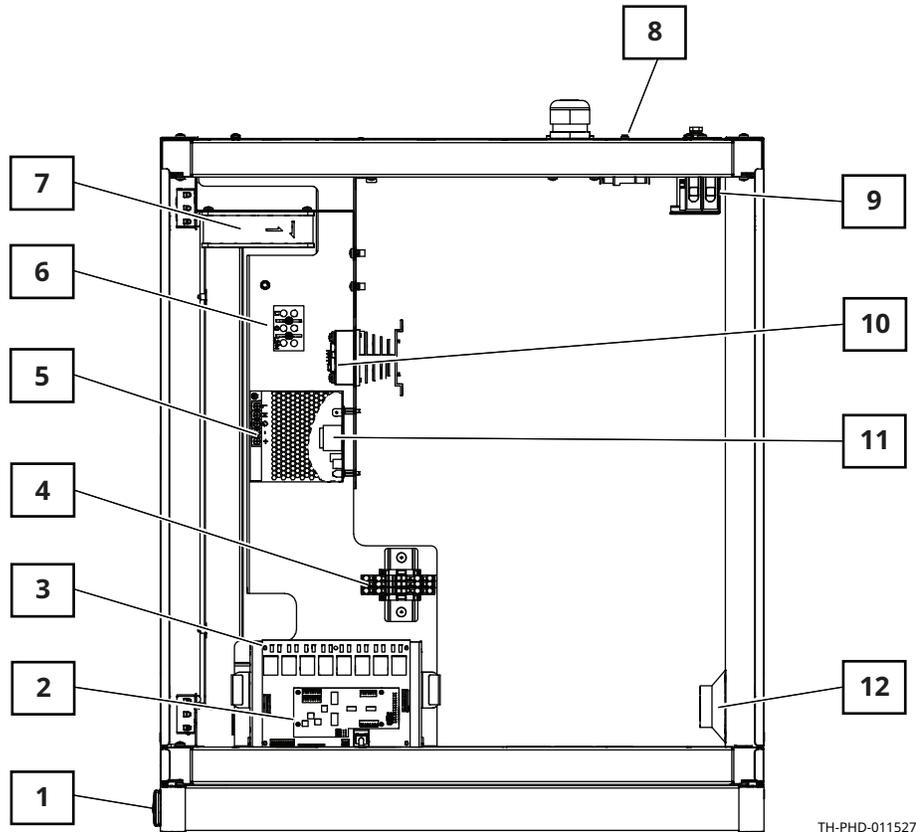
Ref.	Description	Ref.	Description
1	USB port	6	ON/OFF switch
2	Control board	7	High limit switch
3	12VDC power supply	8	Solid State Relay (SSR)
4	Terminal blocks (L1, GND, L2/N)	9	Speaker
5	Cooling fan	—	—

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



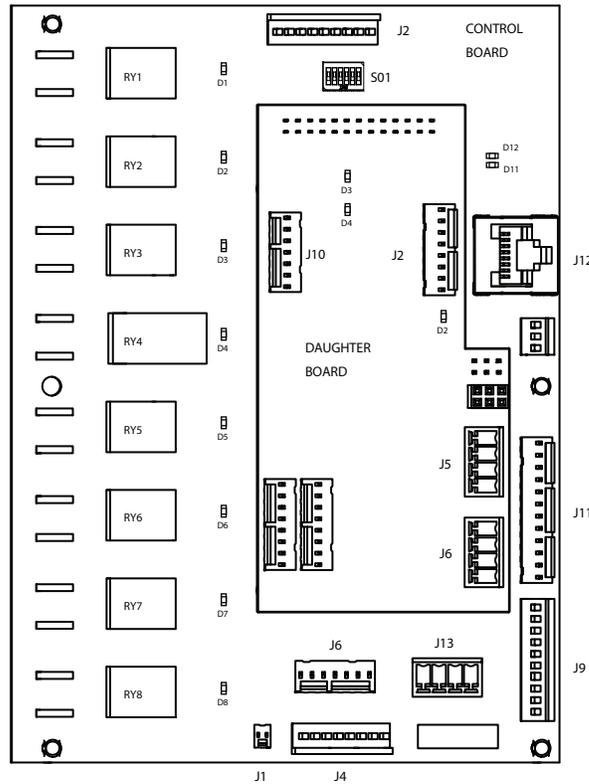
Ref.	Description	Ref.	Description
1	USB port	7	High limit switch
2	Control board	8	Circuit breakers
3	Terminal blocks	9	Solid State Relay (SSR)
4	12VDC power supply	10	Voltage monitor
5	Terminal blocks (L1, GND, L2/N)	11	Speaker
6	Cooling fan	—	—

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

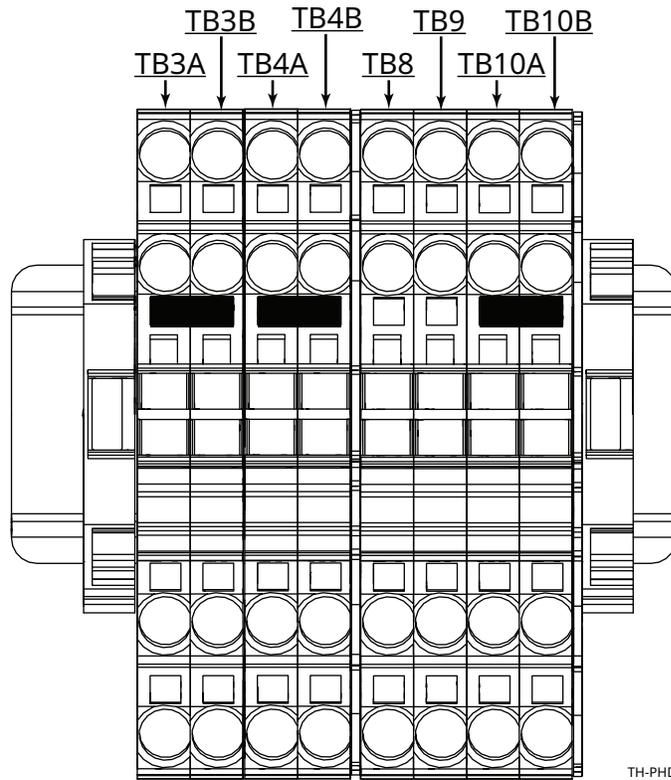
Control Board (CB) and Daughter Board (DB)



TH-PHD-011530

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

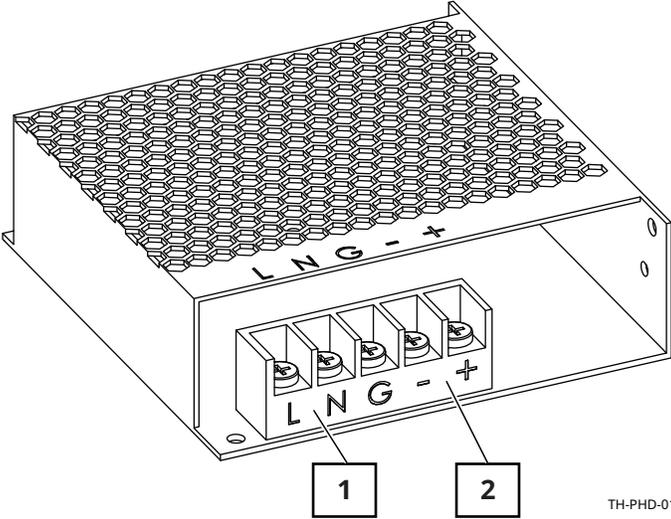


TH-PHD-011533

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

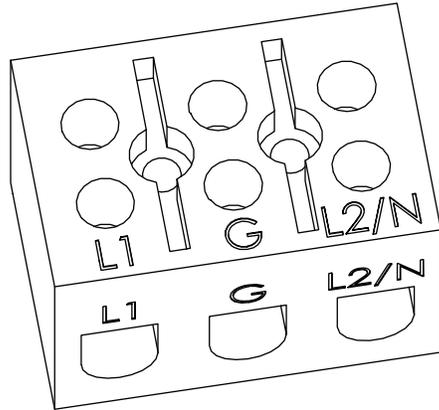
Supplies DC voltage to the control board and the ON/OFF switch.



TH-PHD-011536

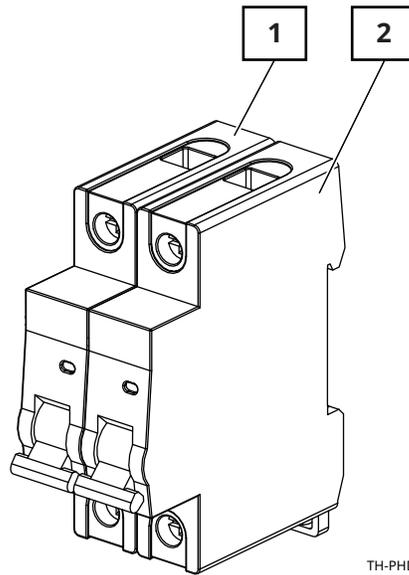
Ref.	Description
1	120-240VAC terminals
2	12VDC terminals

Terminal Blocks (L1, GND, L2/N)



TH-PHD-011539

Circuit Breakers



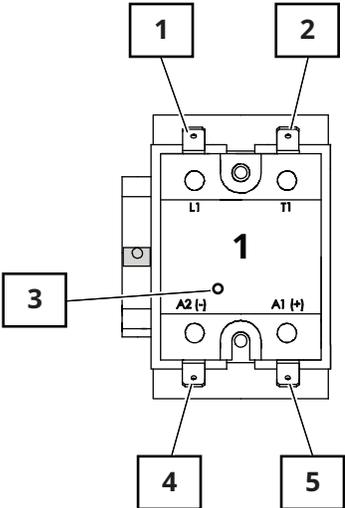
TH-PHD-011542

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

Solid State Relay (SSR)

Single cavity

Heater element control.



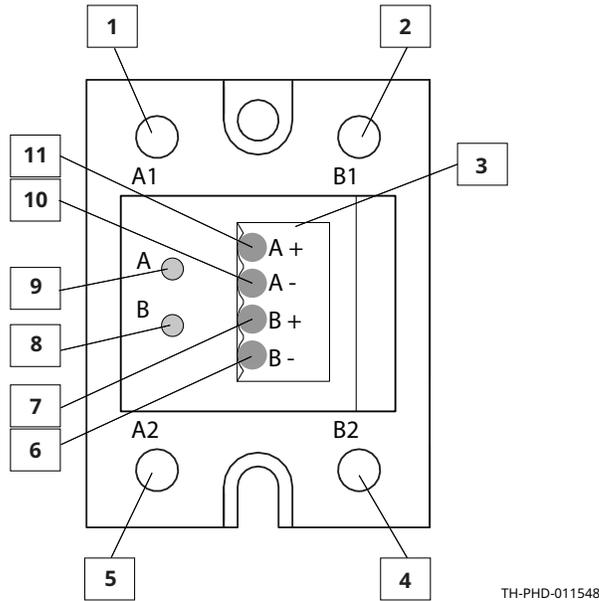
TH-PHD-011545

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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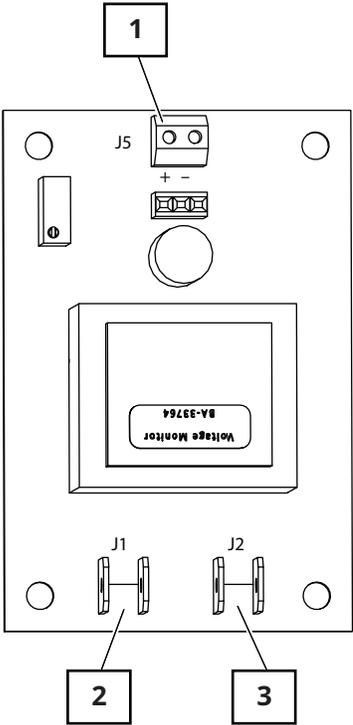
Dual cavity



TH-PHD-011548

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

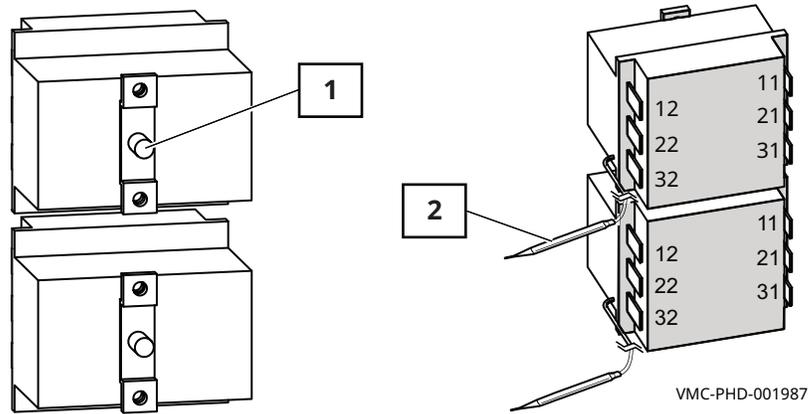
Input	DC Range
200-209	4.58-5.00
210-219	4.17-4.53
220-229	3.82-4.13
230-239	3.51-3.78
240-249	3.22-3.48
250+	3.20

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

High Limit Switches

Resettable

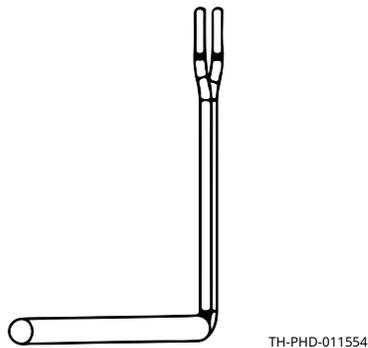
Contacts open at 300°F (149°C)



Ref.	Description
1	Reset button
2	Temperature bulb

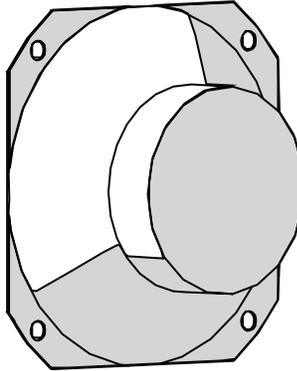
Chamber Air Temperature Probe

100 Ohm at 0°C



Speaker

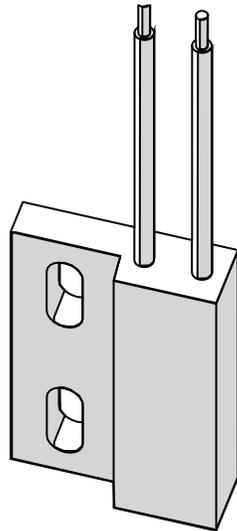
8 Ohms



VMC-PHD-001995

Door Switch

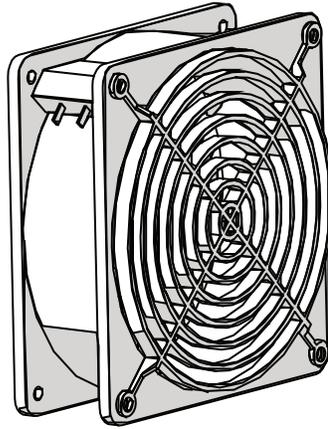
- **Door closed** 0 Ohms; 0 VDC across terminals 1 and 2 (top oven) or 5 and 6 (bottom oven) of connector J9 on the control board.
- **Door open** Infinite Ohms; 8 VDC across terminals 1 and 2 (top oven) or 5 and 6 (bottom oven) of connector J9 on the control board.



VMC-PHD-001999

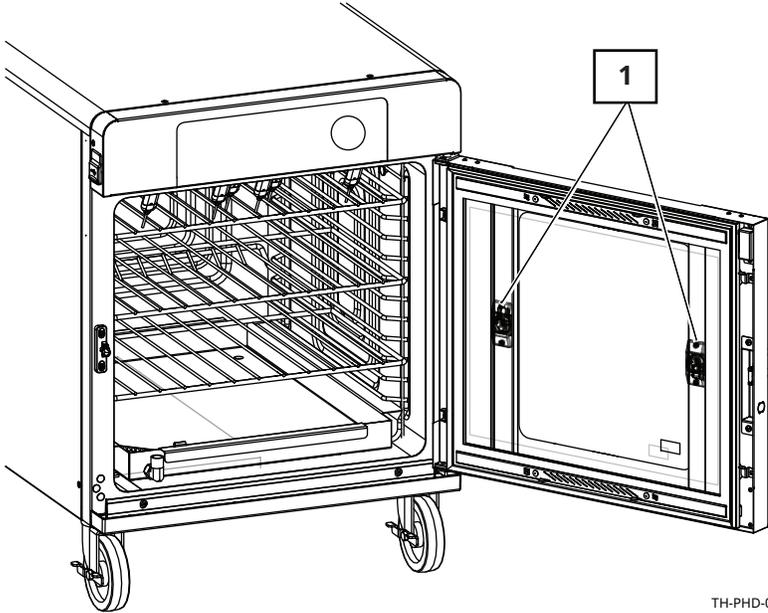
Fan

- Impedance protected
 - 240 Volt
 - 581 Ohm
-



VMC-PHD-002011

Internal Components Identification



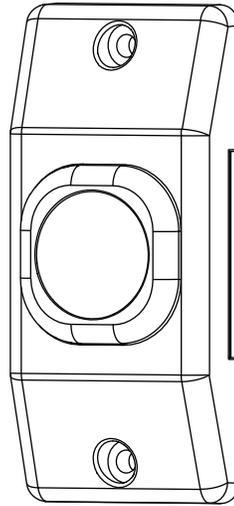
TH-PHD-011668

Ref.	Description
1	Cavity lights

Internal Components

Cavity Light

12 VDC



VMC-PHD-007587

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.

Continued on next page

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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.

Continued on next page

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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.
<div style="border: 1px solid blue; padding: 5px; margin: 5px 0;"> <p>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.</p> </div>	
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

Code	Description	Cause	Remedy
ProG	Programmer error	Fatal error	Call Alto-Shaam technical support.
P111	Probe 1 open circuit, upper compartment	Open circuit detected on sensor wires.	1. Sensor connection 2. Sensor 3. Control Board
P110	Probe 1 short circuit, upper compartment	Short circuit detected on sensor wires.	1. Sensor connection 2. Sensor 3. Control Board
P711	Probe 1 open circuit, lower compartment	Open circuit detected on sensor wires	1. Sensor connection 2. Sensor 3. Control Board
P710	Probe 1 short circuit, lower compartment	Short circuit detected on sensor wires	1. Sensor connection 2. Sensor 3. Control Board
E-10	Cavity probe shorted	Short circuit detected on sensor wires. Halts any active program.	1. Sensor connection 2. Sensor 3. Control Board
E-11	Cavity probe open	Open circuit detected on sensor wires. Halts any active program.	1. Sensor connection 2. Sensor 3. Control Board
E-31	Unit over temperature	Cavity sensor over temperature too long. Halts active program if temperature exceeds 375°F / 190°C.	1. Cooling fan not operating 2. Installation clearance requirements not met
E-30	Unit under temperature	Cavity sensor under temperature too long.	Troubleshoot heating elements
E-79	Over-voltage	Supply voltage incorrect	Correct the supply voltage
E-78	Under-voltage	Supply voltage incorrect	Correct the supply voltage
E-109	High limit	Cavity high limit open. Stops any active program.	Any oven experiencing this error should be investigated by an authorized Alto-Shaam service provider.
E-b0	PCB shorted	PCB board temperature sensor is short-circuited.	Board failure
E-b1	PCB open	PCB board temperature sensor is open-circuit.	Board failure
E-b2	PCB over temperature	PCB board temperature sensor over 70° C.	1. Cooling Fan not operating 2. Installation clearance requirements not met
E-bC	Bootloader EEPROM RAM reset	Bootloader chip error	Requires power cycle to reset

TROUBLESHOOTING

EFA n	Check fans	Insufficient internal cooling airflow.	<ol style="list-style-type: none"> 1. Cooling fan filters dirty 2. Cooling fans not operating 3. Installation clearance requirements not met
UE01	USB error (USB not present)	USB not present	Insert USB, USB cable faulty
UE02	No such file on USB	Missing file on USB	Load the correct file onto the USB
U-05	HACCP date/time not set, no communication with RTC chip	Cable not connected or damaged	<ol style="list-style-type: none"> 1. Set the date and time 2. Check and reset or replace cable
U-06	No communication with the HACCP module	Cable not connected or damaged	<ol style="list-style-type: none"> 1. Check and reset or replace cable 2. Replace HACCP board
U-07	No communication with flash chip on HACCP module	Cable not connected or damaged	<ol style="list-style-type: none"> 1. Check and reset or replace cable 2. Replace HACCP board

What to do if a Power Interruption Occurs

Background

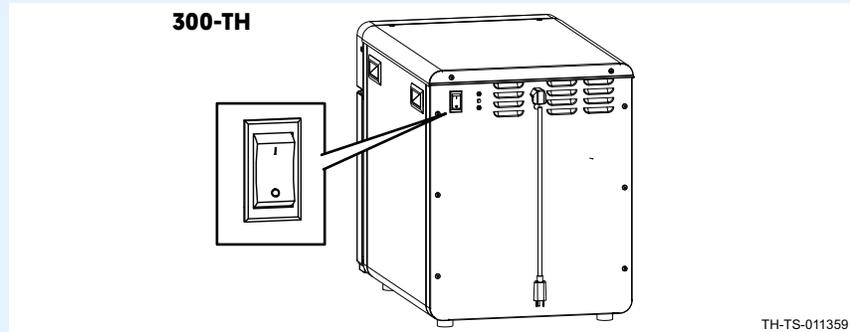
You may need to reset the oven if a power interruption occurs.

Procedure

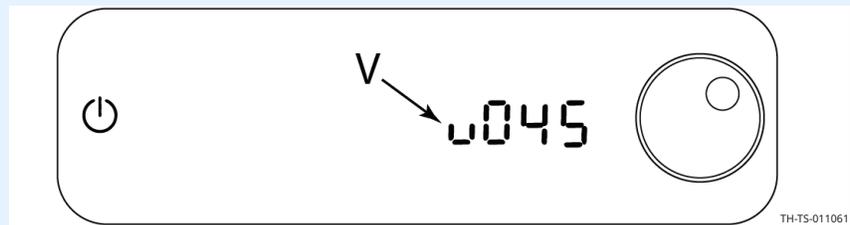
To continue operation of the oven, do the following.

Step	Action
------	--------

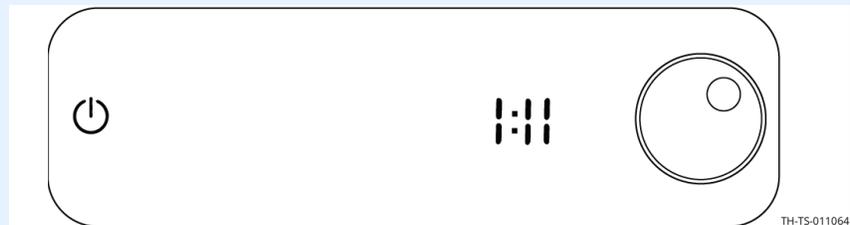
1. For TH-300 ovens, set the power switch to the ON position.



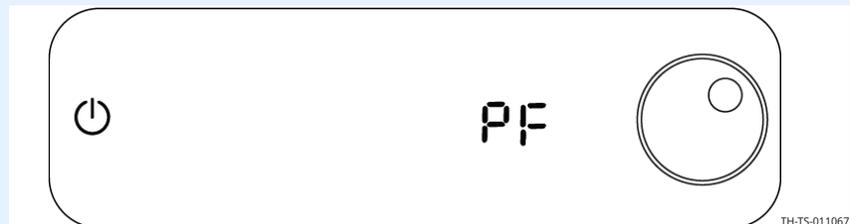
The interface board (IB) software version displays.



The control board (CB) software version displays.



Power failure (PF) displays.

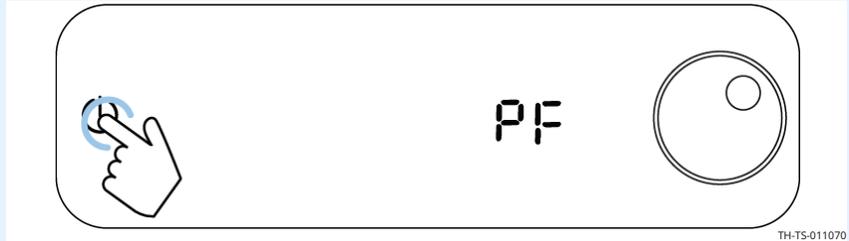


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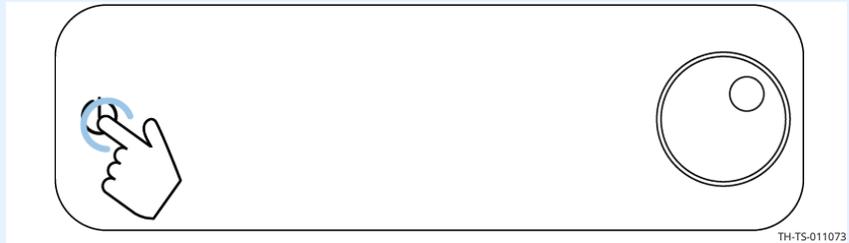
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2. **Touch** the power icon to clear the power failure (PF).

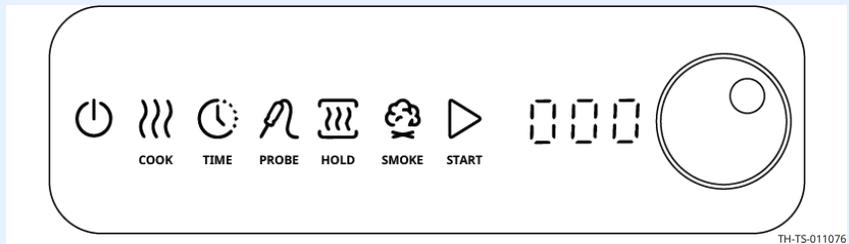
NOTE: For ovens equipped with a HACCP module, the control will display "PF", then the duration of the power failure.



The display will go blank. **Touch** the power icon.



The display will power up and the icons display.



Result

Resume operation of the oven.

How to Change the Language Strip

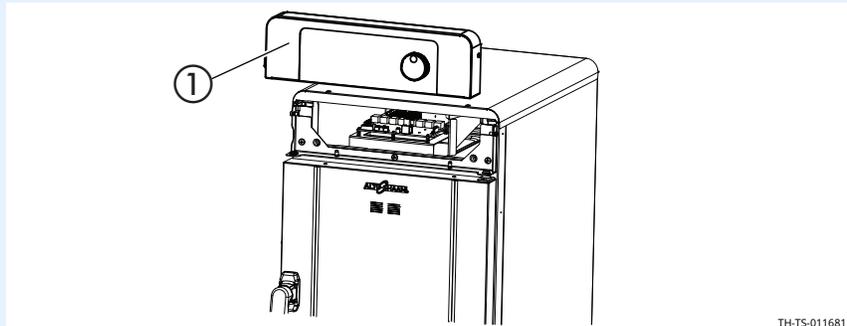
Before you begin

- The oven must be disconnected from electrical power.
- Make sure you have hand tools.

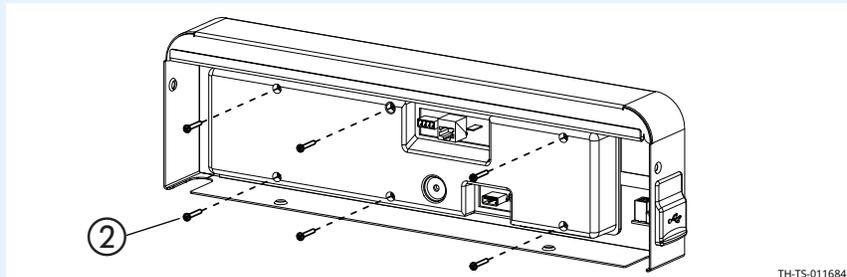
Procedure

To change the language strip, do the following.

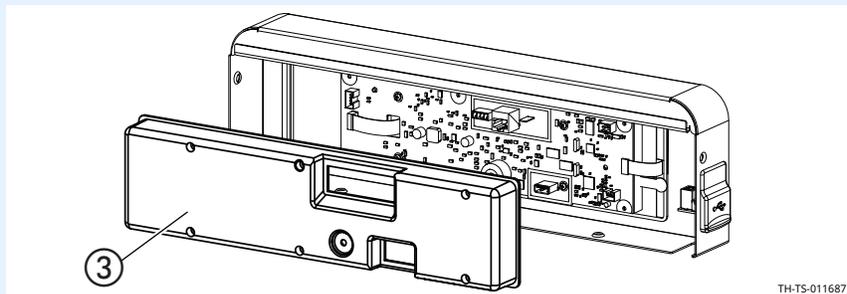
Step	Action
1.	Remove the control panel ① from the oven.
2.	Remove the screws ② from the interface board (IB) cover.
3.	Remove the interface board cover ③.



TH-TS-011681



TH-TS-011684



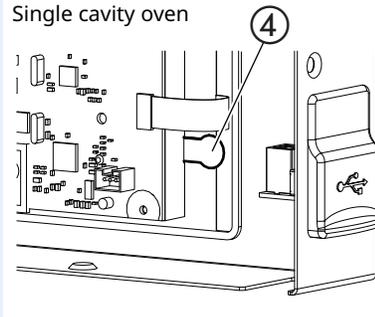
TH-TS-011687

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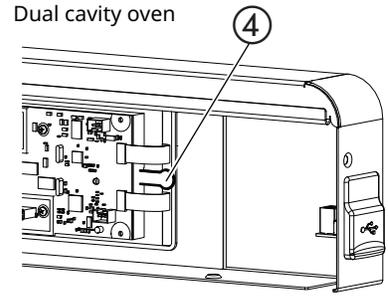
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4. **Locate** the language strip ④.

Single cavity oven

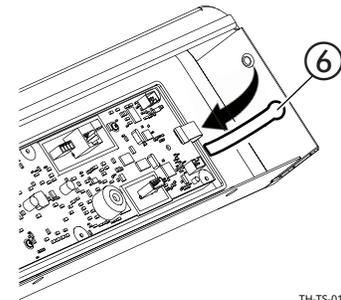
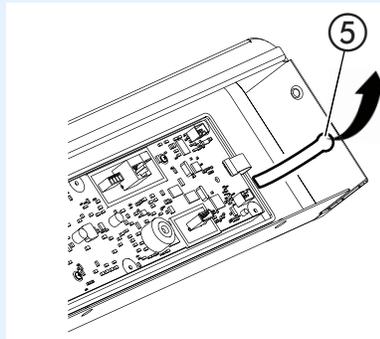


Dual cavity oven



TH-TS-011695

5. **Remove** the language strip ⑤ from the control panel.
Install the new language strip ⑥ into the control panel.



TH-TS-011698

6. **Re-install** the interface board cover and screws.
7. **Re-install** the control panel.
8. **Re-connect** the oven to electrical power.

Result

The language strip has now been changed.

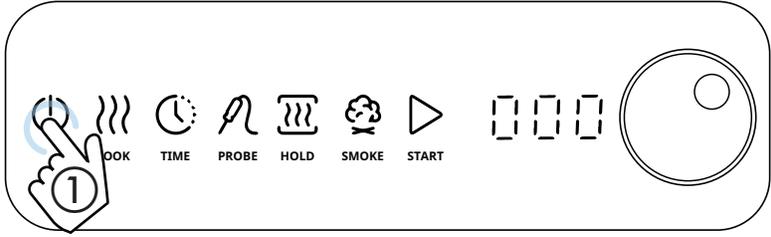
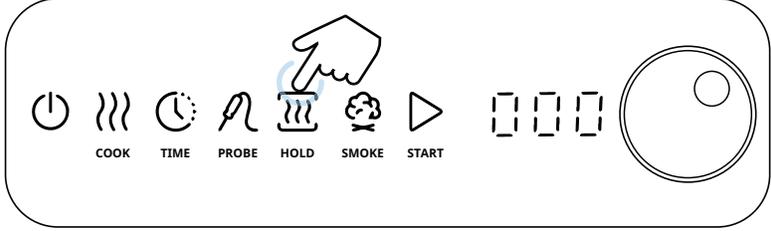
How to Calibrate the Cavity Thermocouple

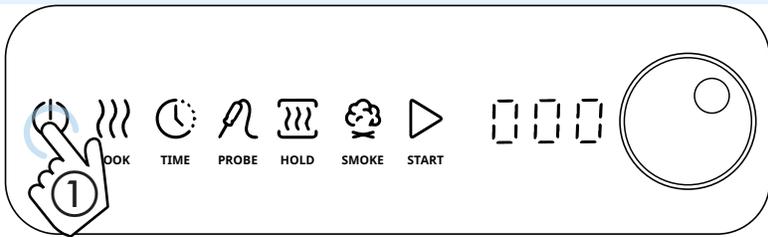
Before you begin

- The oven must be connected to electrical power.
- Make sure the oven heating is in the OFF state.
- Make sure you have a meter with thermocouple attachment.
- The oven thermocouple needs to be calibrated in the "HOLD" mode and the "COOK" mode.
- To view the cavity temperature in hold mode, touch and hold the "HOLD" icon for 3 seconds. To view the cavity temperature in cook mode touch the cook icon, the "HOLD" icon will illuminate. Touch and hold the "HOLD" icon for 3 seconds.

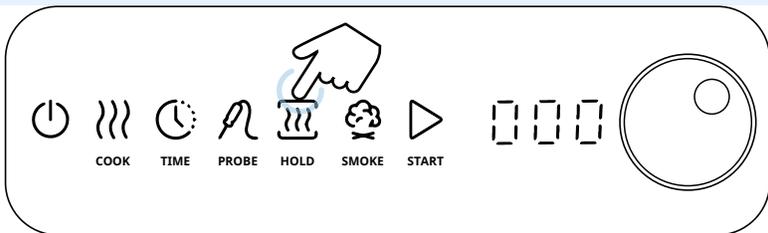
Procedure

To calibrate the cavity thermocouple, do the following.

Step	Action
1.	Insert the meter's thermocouple into the oven cavity.
2.	Touch the power icon ① to turn on the oven.
<p>NOTE: If electrical power was removed from the oven and then restored, the software versions may be displayed followed by "PF". Touch the power icon twice.</p> 	
3.	Touch the "HOLD" icon.
	



TH-TS-008711



TH-TS-008724

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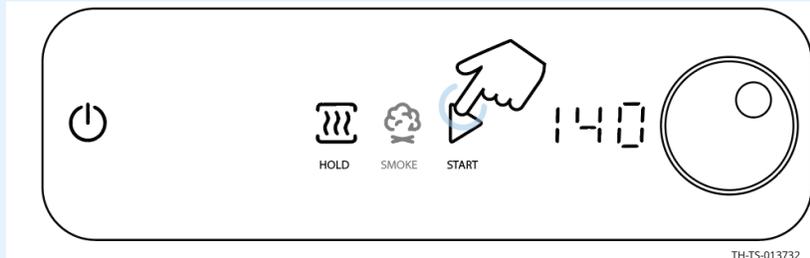
4. **Adjust** the knob to 140°F (60°C), then press the knob.



TH-TS-013729

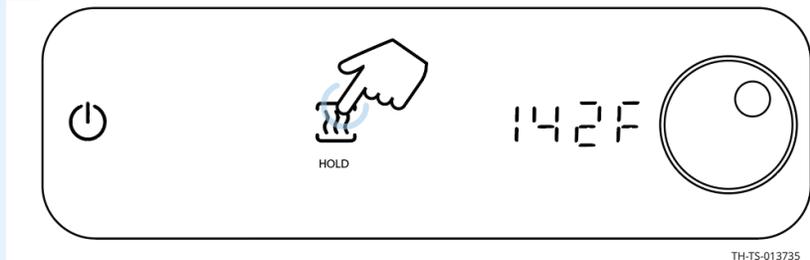
5. **Touch** the “START” icon. Wait for the oven and meter temperatures to stabilize. This takes approximately 1 hour. The set temperature and the elapsed time will alternately display.

NOTE: The degree symbol indicates a call for heat.



TH-TS-013732

6. **Touch** and hold the “HOLD” icon for 3 seconds, the cavity temperature will display.

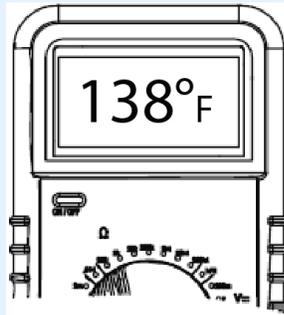


TH-TS-013735

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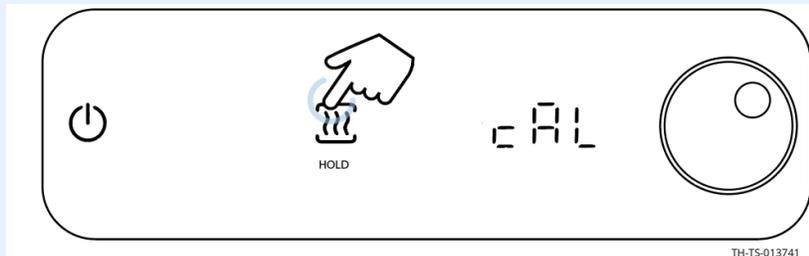
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7. **Read** the cavity temperature displayed on the meter.



TH-TS-013738

8. **Touch** and hold the “HOLD” icon for 10 seconds until cAL displays.

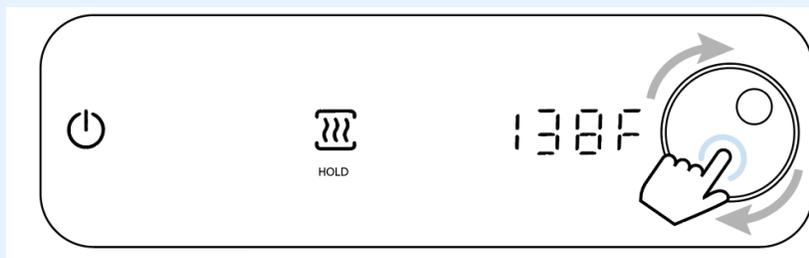


TH-TS-013741

9. **Adjust** the cAL temperature displayed to the temperature displayed on the meter, then press the knob. If you do not press the knob, the offset will not save.



NOTE: Turn the knob slowly.



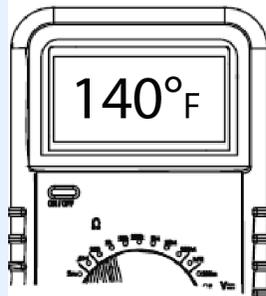
TH-TS-013744

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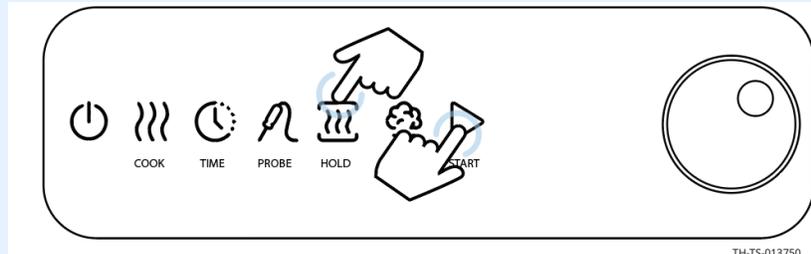
10. **Monitor** the cavity temperature (step 6) and meter temperature. If required, make small adjustments to the cAL number (step 8).

NOTE: The meter and the oven may react at different rates to temperature changes.



TH-TS-013747

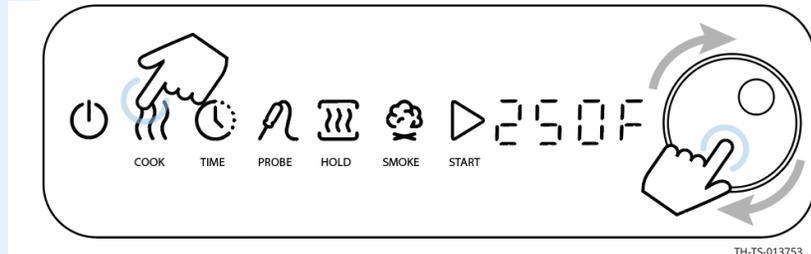
11. **Touch** the “HOLD” icon, all icons will illuminate.
Touch and hold the “START” icon to stop the current recipe.



TH-TS-013750

Cook mode calibration

12. **Touch** the “COOK icon, adjust the dial to 250°F (121°C) and press the knob.

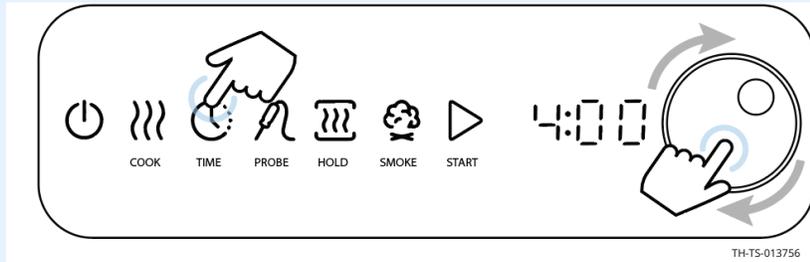


TH-TS-013753

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13. **Touch** the “TIME” icon, adjust the dial to 4 hours, then press the knob.

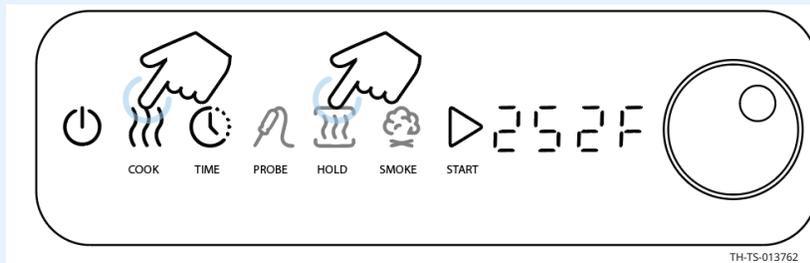


14. **Touch** the “START” icon. Wait for the oven and meter temperatures to stabilize. This is approximately 2 hours. The set temperature and the cook time will alternately display.

NOTE: The degree symbol indicates a call for heat.



15. **Touch** the “COOK” icon, all icons will illuminate. Touch and hold the “HOLD” icon for 3 seconds, the cavity temperature will display.



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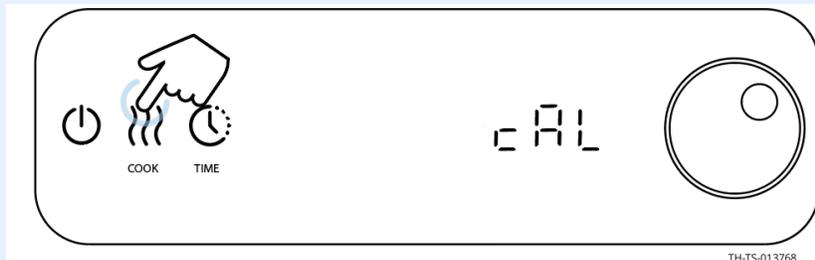
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16. **Read** the cavity temperature displayed on the meter.



TH-TS-013765

17. **Touch** and hold the “COOK” icon for 10 seconds until cAL is displayed.

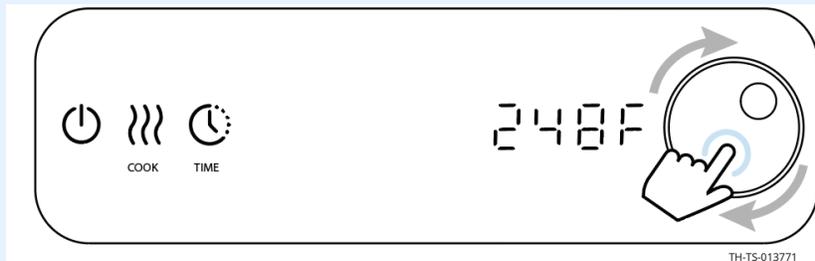


TH-TS-013768

18. **Adjust** the cAL temperature displayed to the temperature displayed on the meter, then press the knob. If you do not press the knob, the offset will not save.



NOTE: Turn the knob slowly.



TH-TS-013771

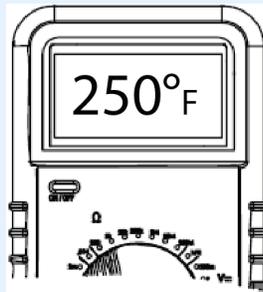
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19. **Monitor** the cavity temperature (step 16) and meter temperature. If required, make small adjustments to the cAL number (step 18).

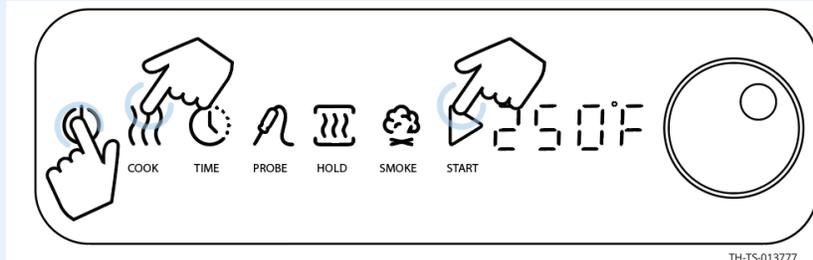


NOTE: The meter and the oven may react at different rates to temperature changes.



TH-TS-013774

20. **Touch** the “COOK” icon, all icons will illuminate.
Touch and hold the “START” icon to stop the current recipe.
Touch the “POWER” icon to turn the oven off.

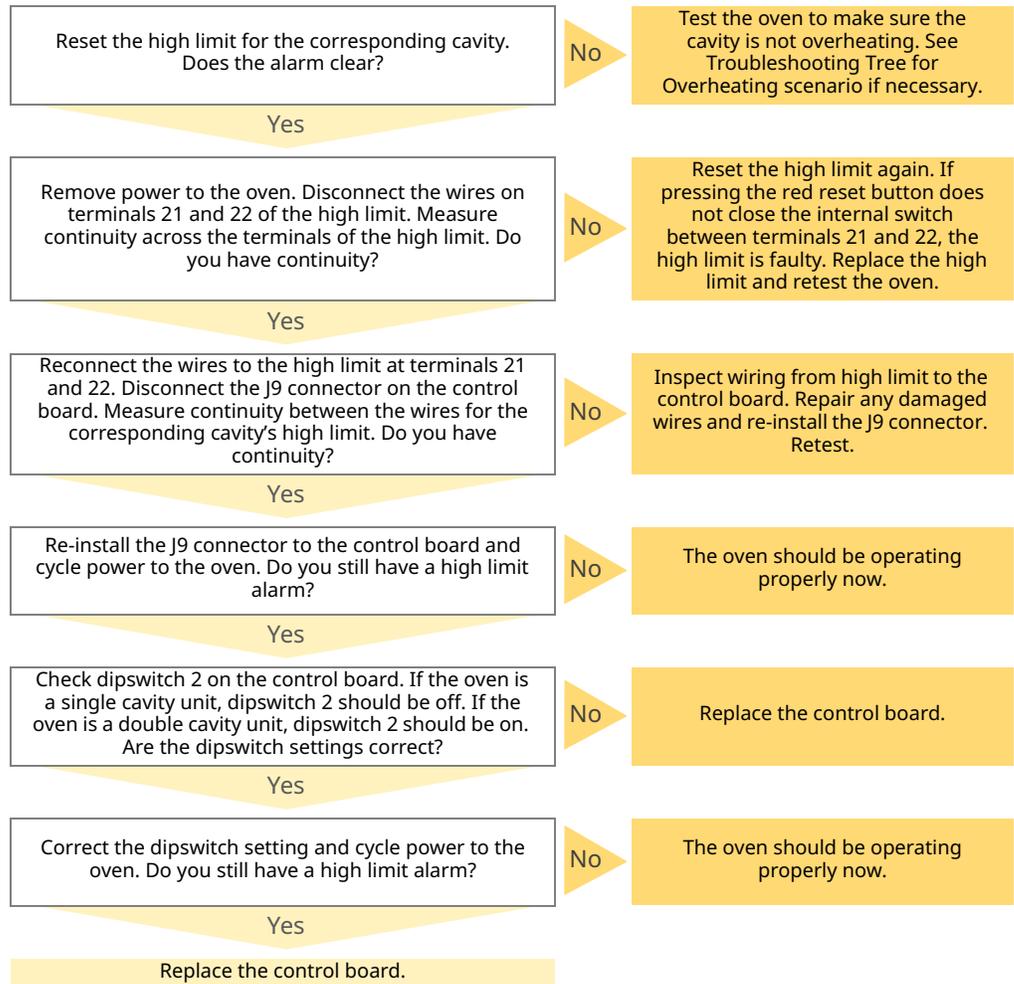


TH-TS-013777

Result

The cavity thermocouple has now been calibrated.

High Limit Alarm



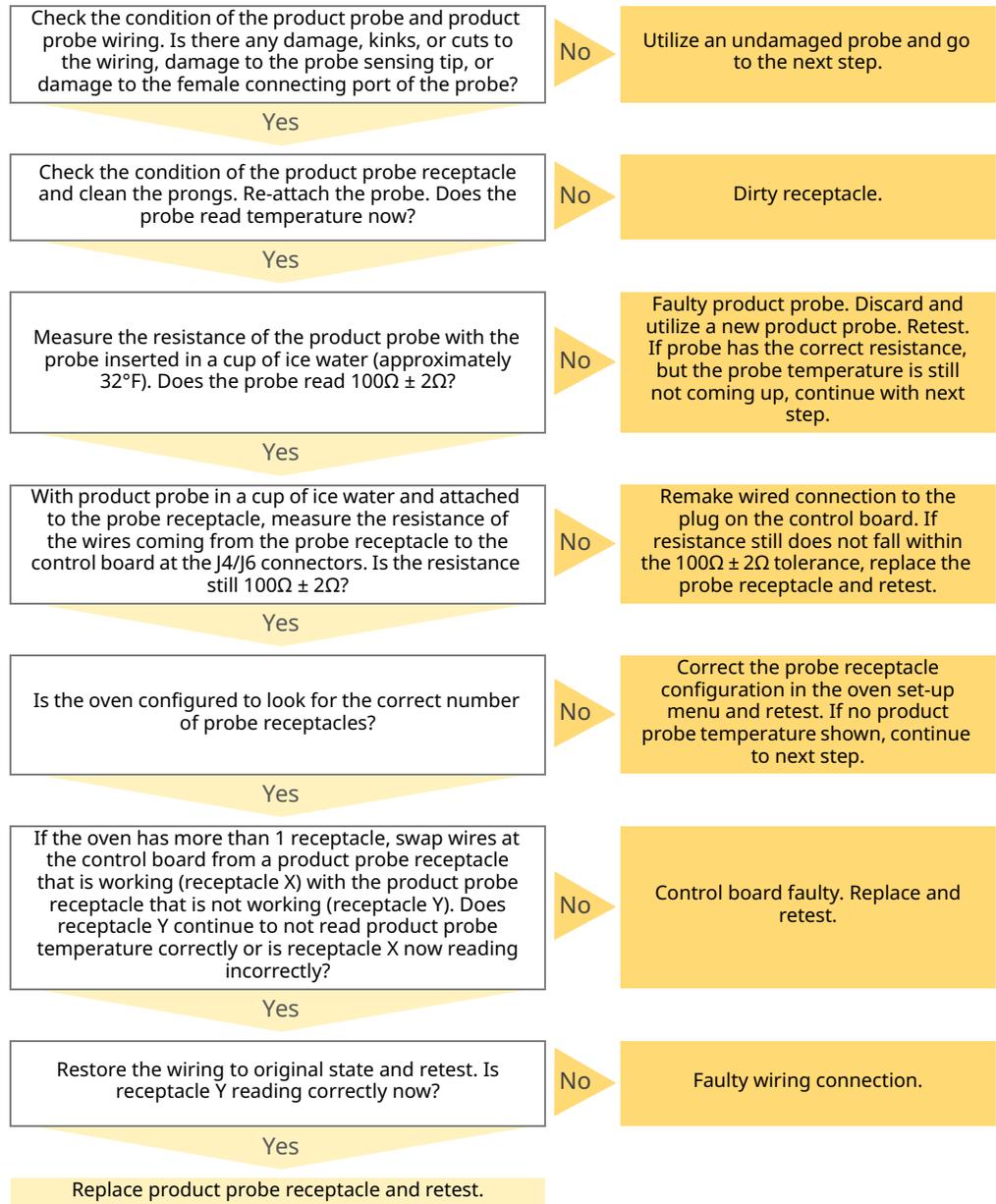
The Oven does not Heat



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



The Product Probe does not Work

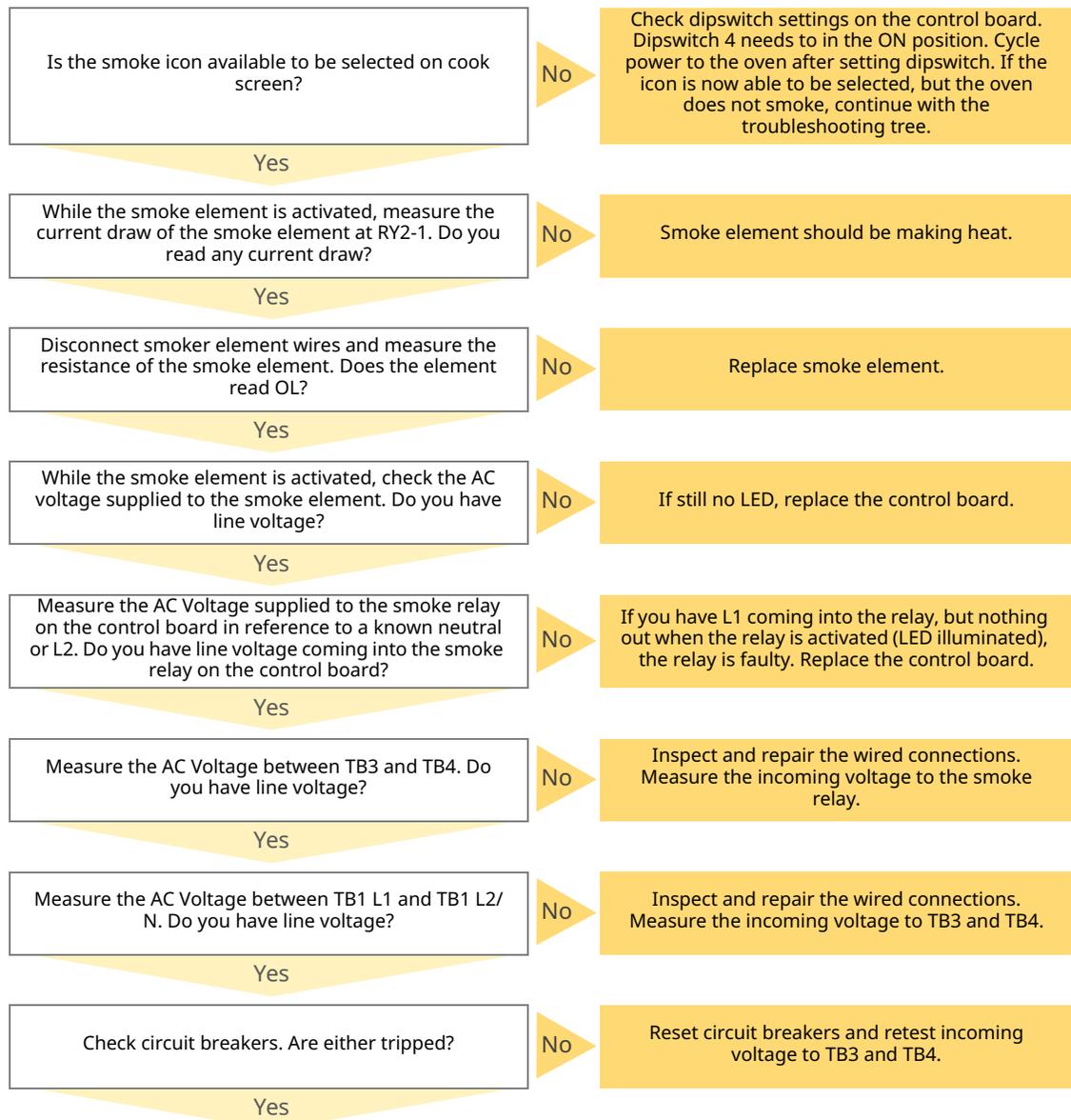


The Smoke Function does not Operate

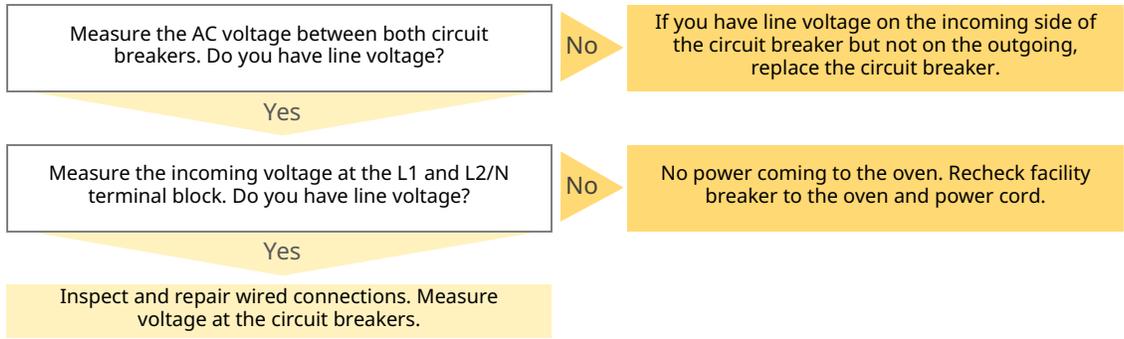


WARNING: Electric shock and arc flash hazard.
Use caution when measuring line voltage.
Wear Personal Protective Equipment (PPE).

Before beginning, ensure DIP switch position 4 on the control board is in the ON position. Ensure jumper wires 610 / 611 and wires 612 / 613 are installed in connector J9 on the control board.



TROUBLESHOOTING



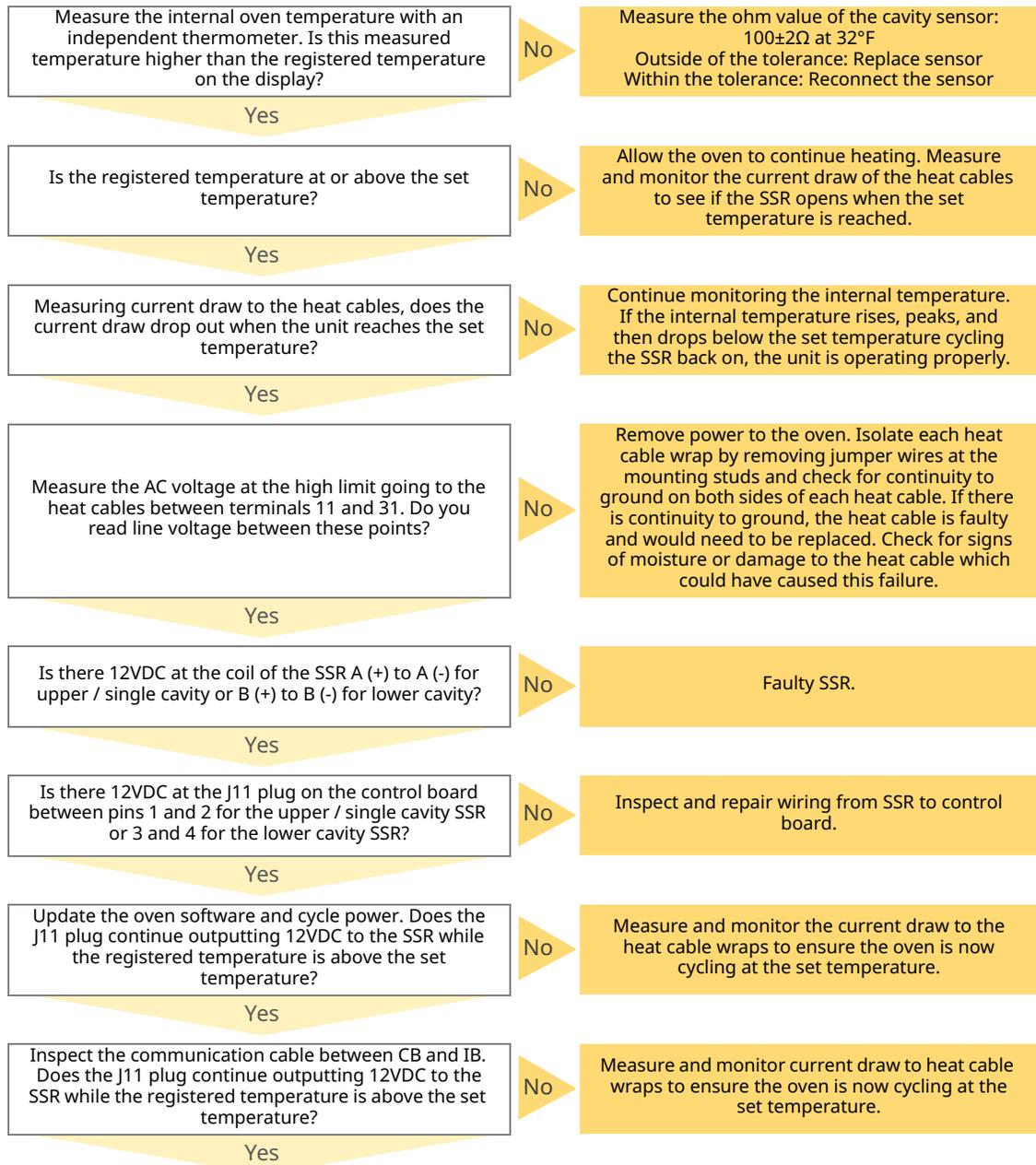
The Oven Overheats



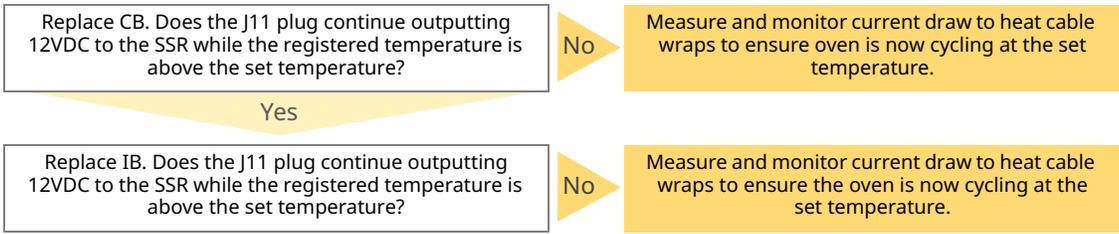
WARNING: Electric shock and arc flash hazard.

Use caution when measuring line voltage.

Wear Personal Protective Equipment (PPE).



TROUBLESHOOTING



77667

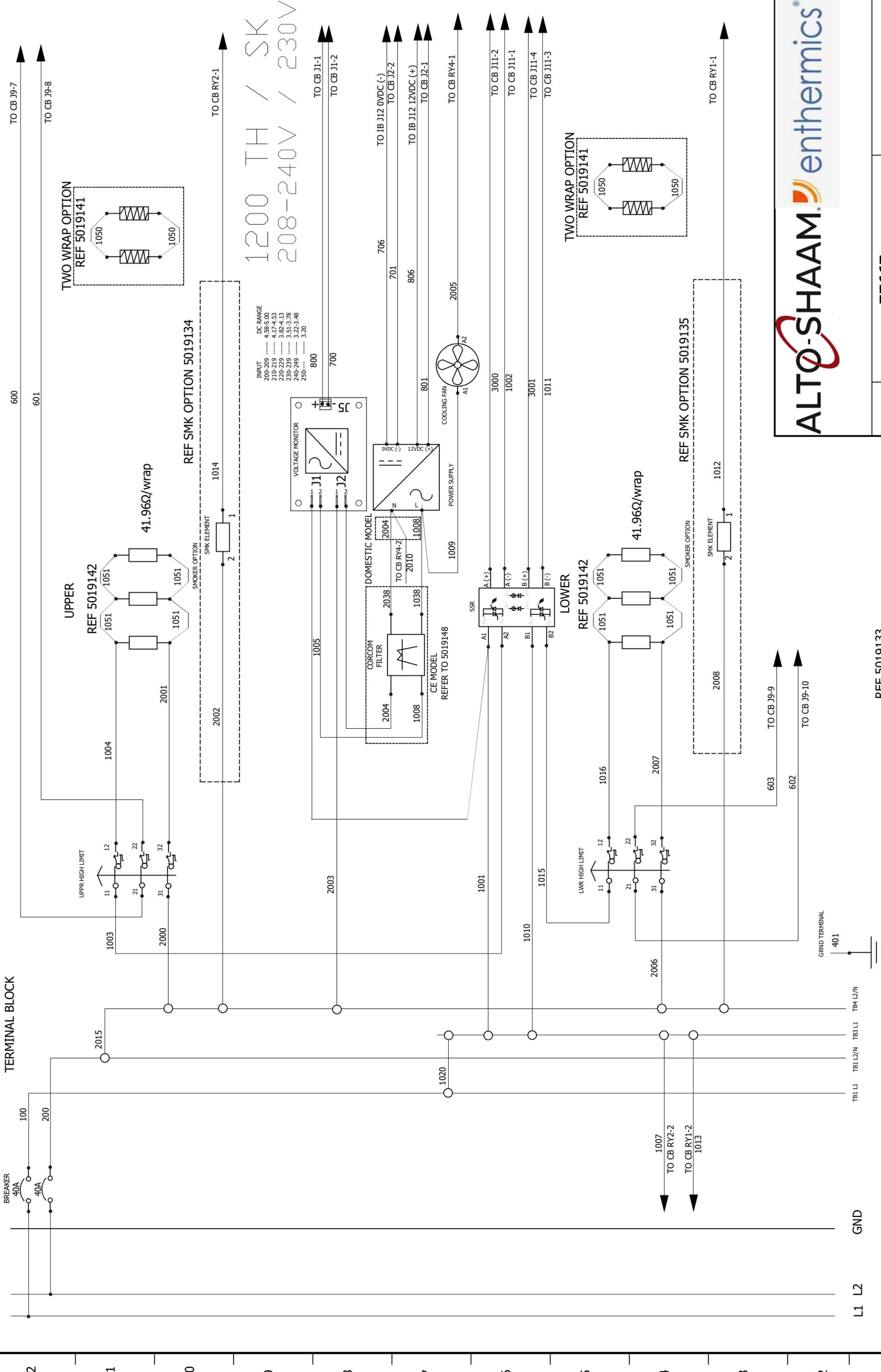
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300 TH	PG 02
500 TH	PG 03
750 TH	PG 04
1000 TH	PG 05
1200 TH	PG 06
1750 TH	PG 07
1750/1200 TH 380V	PG 08
CONTROL CB	PG 09
DELUXE CONTROL	PG 10
SIMPLE CONTROL	PG 11

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,
REV.	DATE	NAME	ECO	CHANGES
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		ALL COOK & HOLD		8
				PAGE
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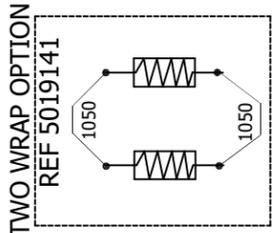


TERMINAL BLOCK



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



REF SMK OPTION 5019135

L1 L2

GND

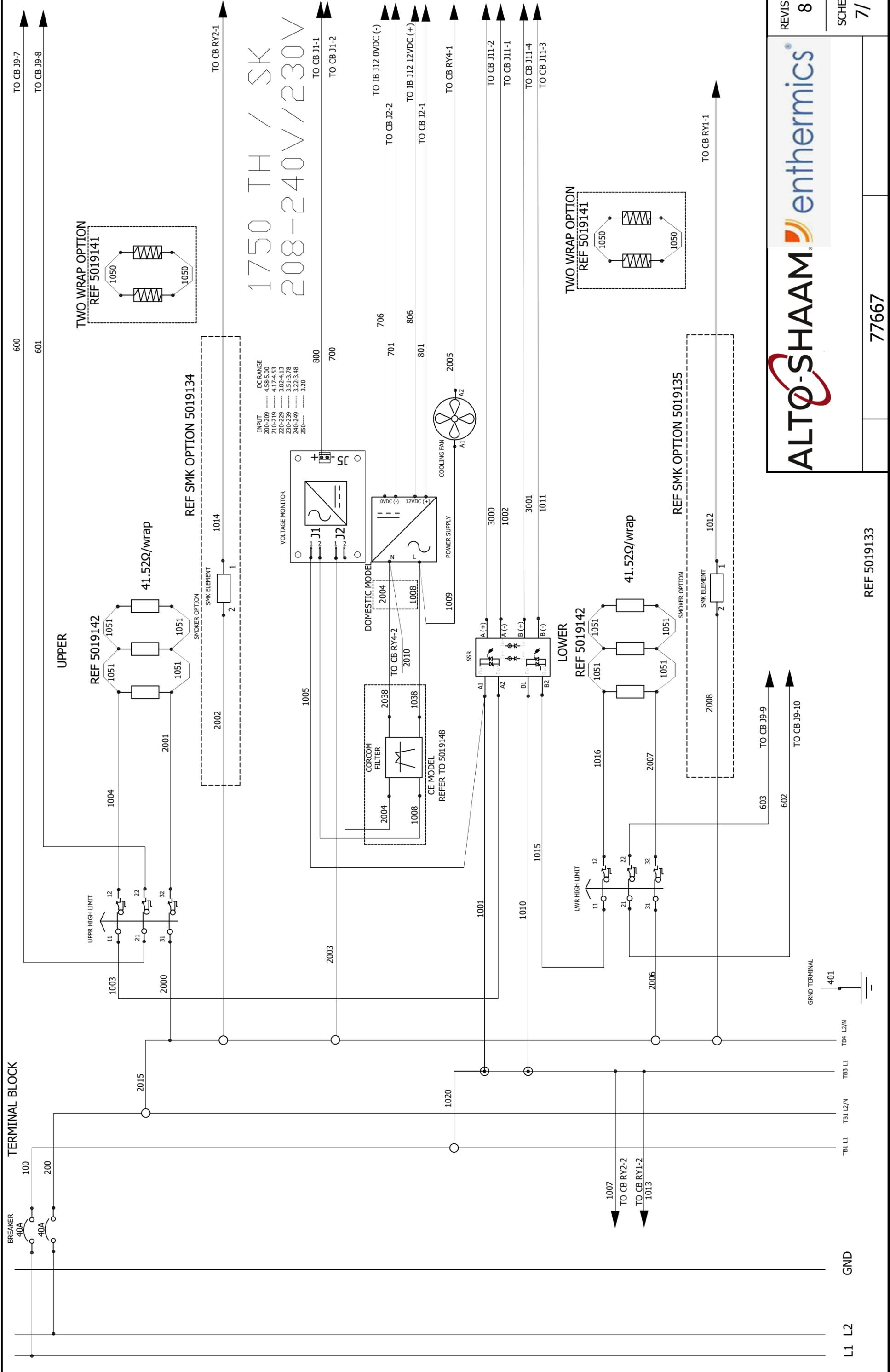
TB1 L1 TB1 L2/N TB3 L1 TB4 L2/N

GRND TERMINAL 401

REF 5019133

77667





TERMINAL BLOCK

BREAKER 40A

GND

L1 L2

TB1 L1

TB1 L2/N

TB3 L1

TB4 L2/N

401

GRND TERMINAL

602

603

TO CB J9-9

TO CB J9-10

1012

SMK ELEMENT

REF SMK OPTION 5019135

TO CB RY1-1

1011

3001

1002

3000

1009

POWER SUPPLY

COOLING FAN

A1 A2

2005

801

806

TO IB J12 12VDC (+)

TO IB J12 0VDC (-)

701

706

TO CB J2-2

TO CB J2-1

800

TO CB J1-1

TO CB J1-2

2015

2000

1003

UPPR HIGH LIMIT

11 12

21 22

31 32

1004

2001

1051

41.52Ω/wrap

REF 5019142

UPPER

1014

SMK ELEMENT

REF SMK OPTION 5019134

TO CB RY2-1

1050

1050

TWO WRAP OPTION

REF 5019141

1016

1010

1001

SSR

A1 A2

B1 B2

1015

1010

1001

DOMESTIC MODEL

2004

1008

CE MODEL

REFER TO 5019148

2038

1038

CORCOM FILTER

TO CB RY4-2

2010

1009

POWER SUPPLY

9VDC (-)

12VDC (+)

J1

J2

VOLTAGE MONITOR

1005

1016

2007

1051

41.52Ω/wrap

REF 5019142

LOWER

1012

SMK ELEMENT

REF SMK OPTION 5019135

TO CB RY1-1

1011

3001

1002

3000

1009

POWER SUPPLY

COOLING FAN

A1 A2

2005

801

806

TO IB J12 12VDC (+)

TO IB J12 0VDC (-)

701

706

TO CB J2-2

TO CB J2-1

800

TO CB J1-1

TO CB J1-2

2015

2000

1003

UPPR HIGH LIMIT

11 12

21 22

31 32

1004

2001

1051

41.52Ω/wrap

REF 5019142

UPPER

1014

SMK ELEMENT

REF SMK OPTION 5019134

TO CB RY2-1

1050

1050

TWO WRAP OPTION

REF 5019141

1016

1010

1001

SSR

A1 A2

B1 B2

1015

1010

1001

DOMESTIC MODEL

2004

1008

CE MODEL

REFER TO 5019148

2038

1038

CORCOM FILTER

TO CB RY4-2

2010

1009

POWER SUPPLY

9VDC (-)

12VDC (+)

J1

J2

VOLTAGE MONITOR

1005

1016

2007

1051

41.52Ω/wrap

REF 5019142

LOWER

1012

SMK ELEMENT

REF SMK OPTION 5019135

TO CB RY1-1

1011

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3000

1009

POWER SUPPLY

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TO IB J12 12VDC (+)

TO IB J12 0VDC (-)

701

706

TO CB J2-2

TO CB J2-1

800

TO CB J1-1

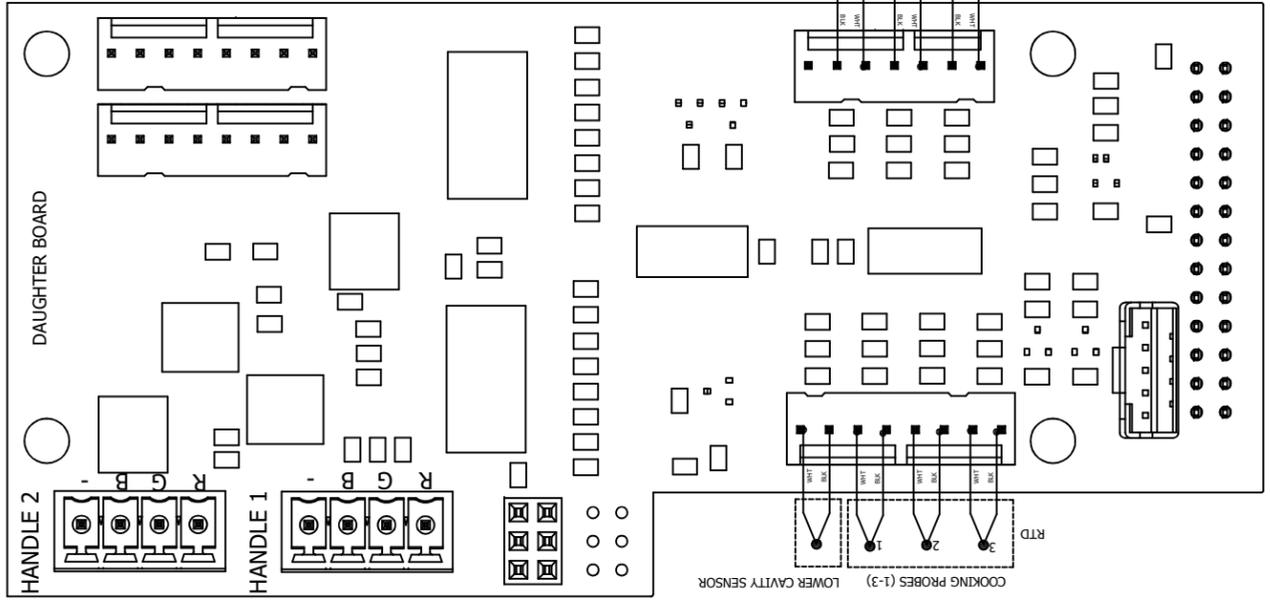
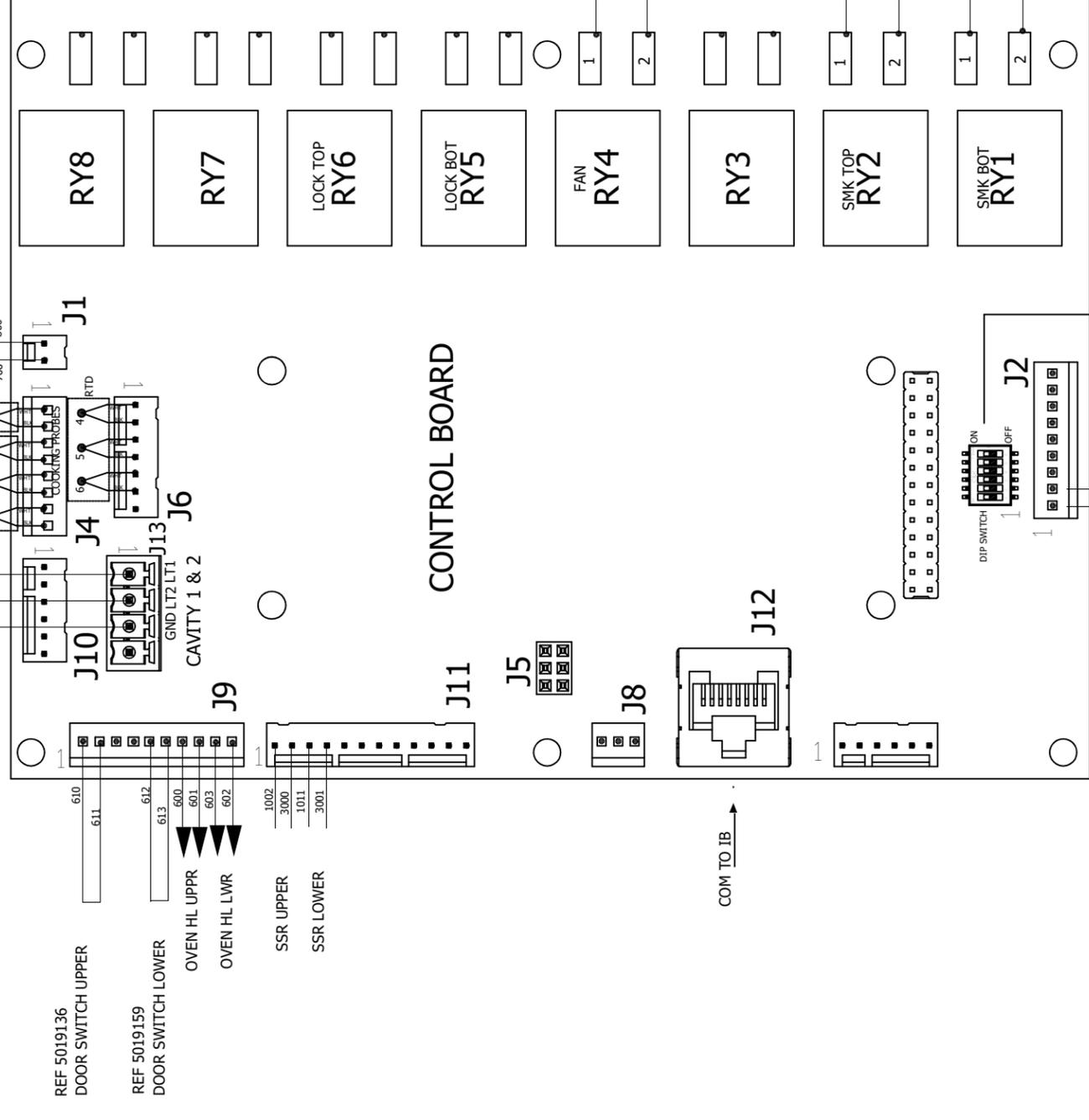
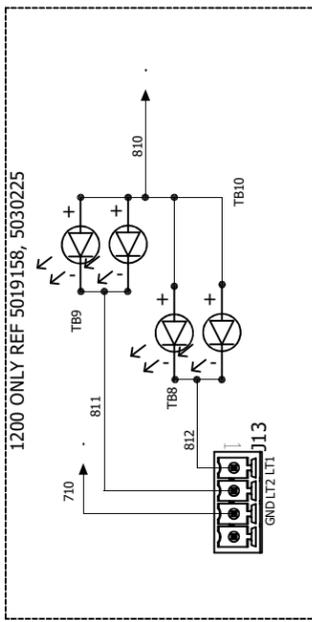
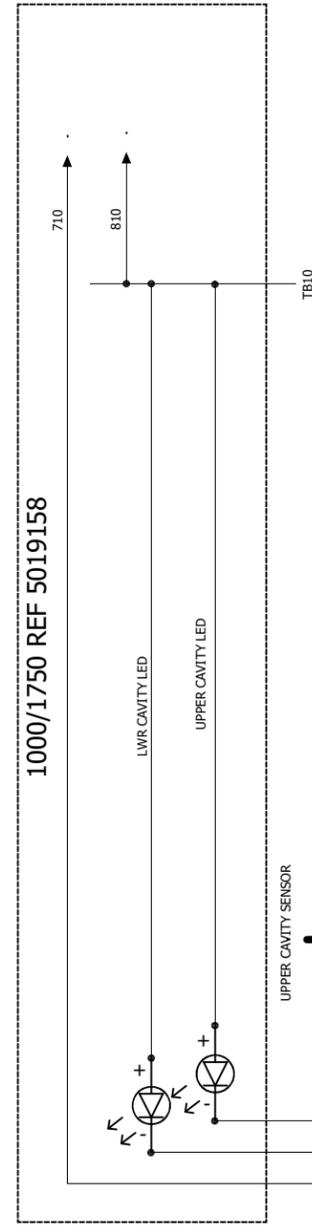
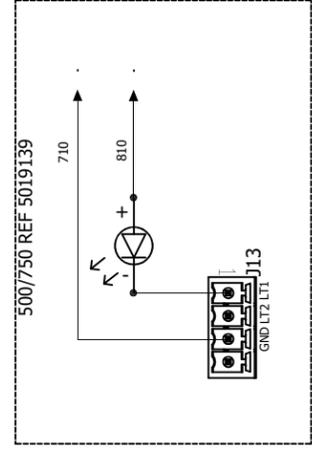
TO CB J1-2

2015

2000

1003

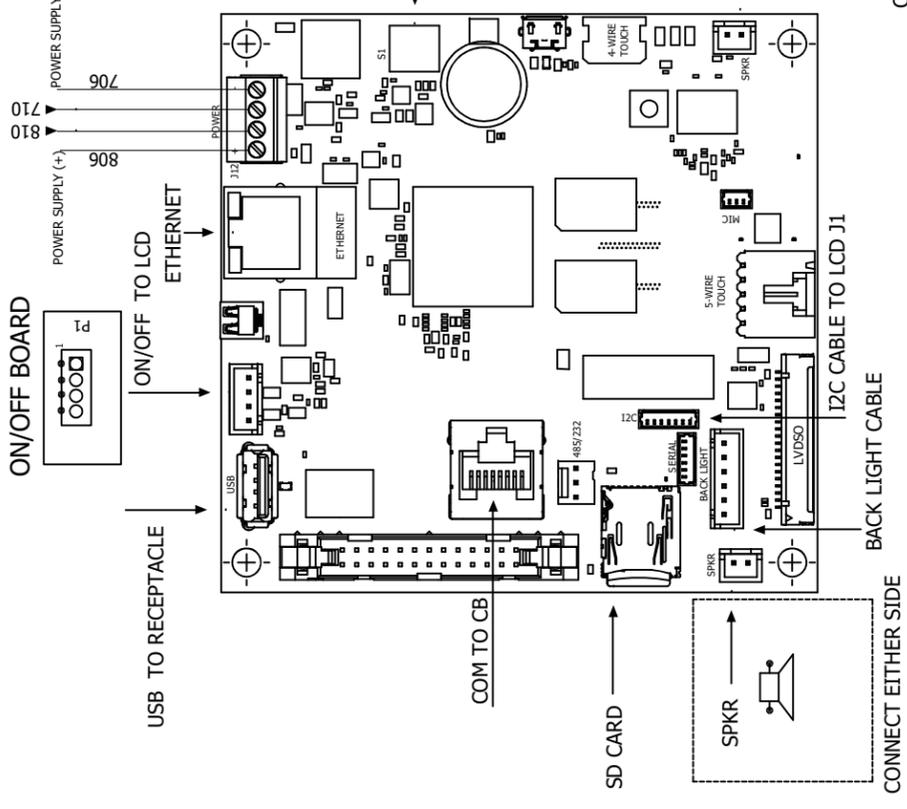
UPPR HIGH LIMIT



ON

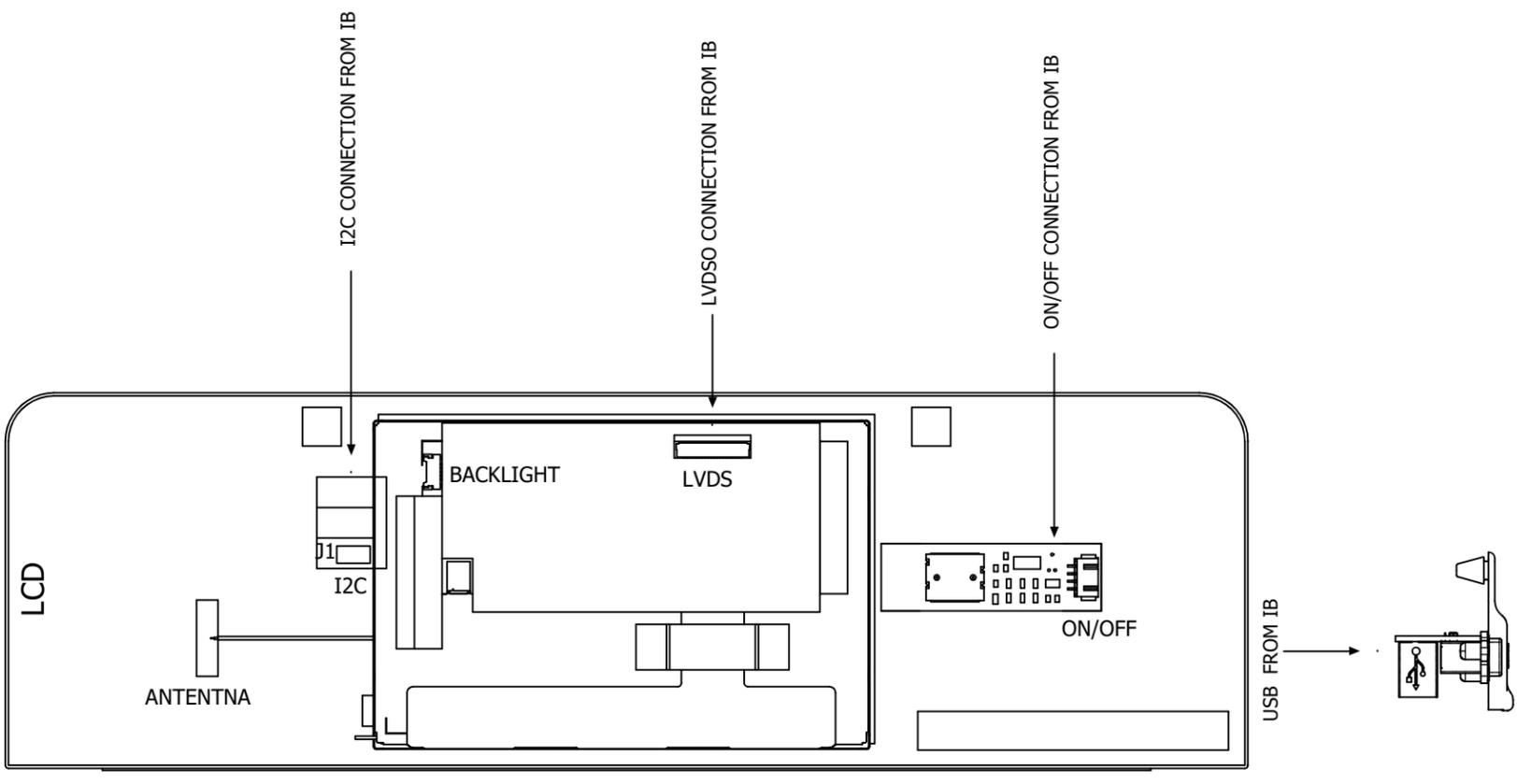
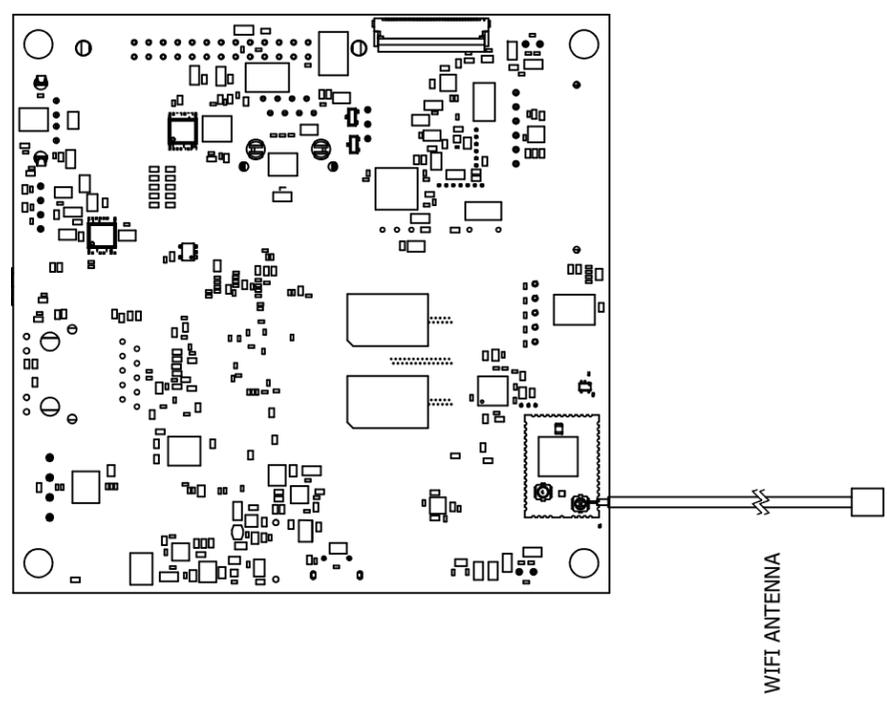
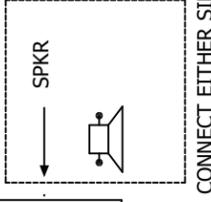
- Pin 1 = No Probe
- Pin 2 = Dual Cavity
- Pin 3 = 208-240V
- Pin 4 = Smoker
- Pin 5 = Latch
- Pin 6 = Cavity LED

12
11
10
9
8
7
6
5
4
3
2
1



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



12

11

10

9

8

7

6

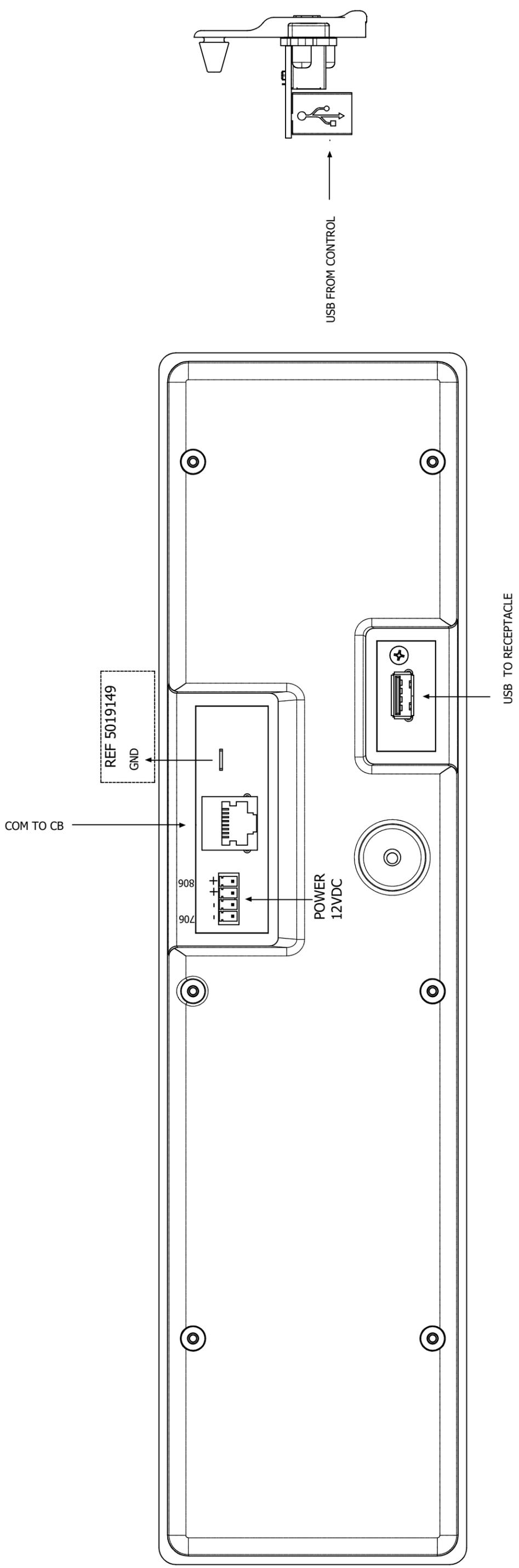
5

4

3

2

1





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