



# 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

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# **Manufacturer's Information**

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	This manual or any portion thereof may not be reproduced or used in any manner whatsoever without the express written permission of Alto-Shaam, Inc.	
Trademarks	All trademarks referenced in this documentation are the property of their respective owners.	
Manufacturer	Alto-Shaam, Inc.	
	P.O. Box 450	
	W164 N9221 Water Street	
	Menomonee Falls, WI 53052	
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.

FOREWORD



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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 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.		
<b>Electrical precautions</b>	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.		
	<ul> <li>Always keep liquids, or foods that can become liquid when heated, level and at or below eye level where they can be seen.</li> </ul>		
	<ul> <li>Always open the appliance door very slowly. Escaping hot vapors or steam can cause serious injury.</li> </ul>		
	Use utensils and protective clothing such as dry oven mitts when loading and unloading the appliance.		
	<ul> <li>Use caution when using the appliance. Floors adjacent to the appliance may become slippery.</li> </ul>		
	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	Obey these maintenance precautions when maintaining the appliance:		
precautions	<ul> <li>Obey precautions in the manual, on tags, and on labels attached to or shipped with the appliance.</li> </ul>		
	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.
	<ul> <li>Have demonstrated their ability with commercial kitchens and commercial appliances.</li> </ul>
	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	Only use the appliance when:
appliance	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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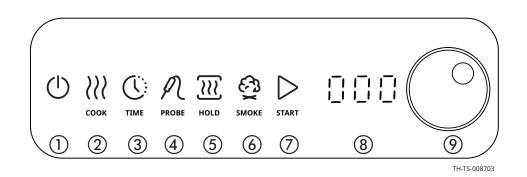


#### SAFETY

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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.	
	<ul> <li>Limit the movement of the appliance so that no stress is transmitted to the electrical conduit.</li> </ul>	
	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	

The Service Technician's employer

# **Control Identification**



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. <b>Touch</b> the power icon ① to turn on the oven.		
		TH-TS-00871	
2. <b>Touch</b> and hold the power icon (1) for at least 5 seconds t		<b>Touch</b> and hold the power icon (1) for at least 5 seconds to turn off the oven.	

Result

The oven is turned on or off.



## How to Update Software with a USB Drive

#### Before you begin

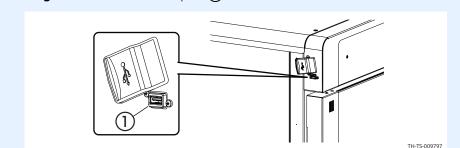
- You will need a USB drive loaded with the software update.
- Make sure the oven is on, but is not in cooking or holding mode.
- Record the versions of the software loaded to the oven. See topic *How to View the Software Versions*.

#### Procedure

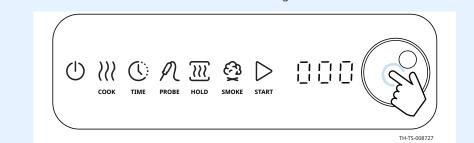
#### To update the software, do the following.

#### Step Action

1. **Plug** the USB drive into the port (1).

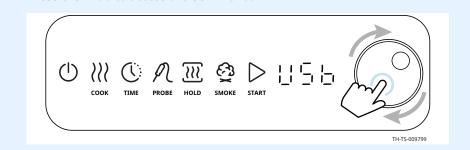


2. **Press** and hold the knob to access the settings menu.



3. **Turn** the knob until the control displays USB.

**Press** the knob to access the USB menu.



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



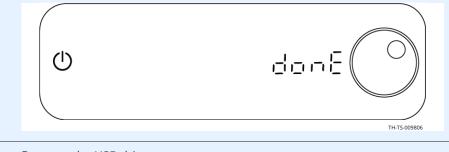
5. **Turn** the knob to "yes".

**Press** the knob to select "yes" and begin the update.



The control will count up to 99, flash the software version, then count up to 99 again.

The control will display "done" when the software has been updated. Touch the power icon to resume operation.



6. **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.

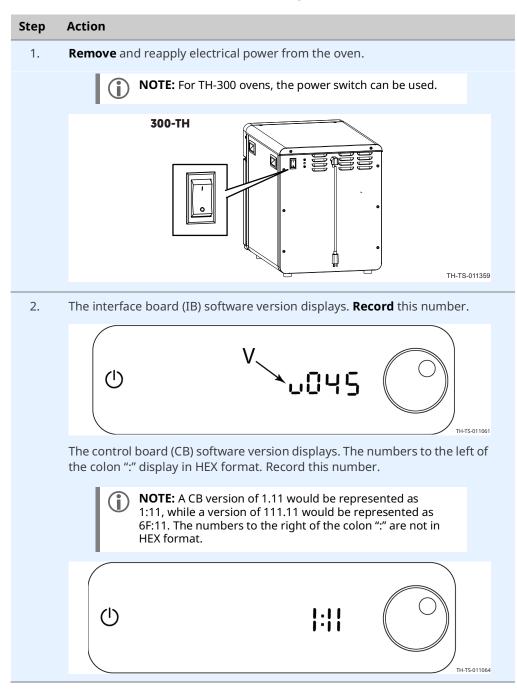
Do not remove the USB drive until the update is complete.



### How to View the Software Versions

#### Procedure

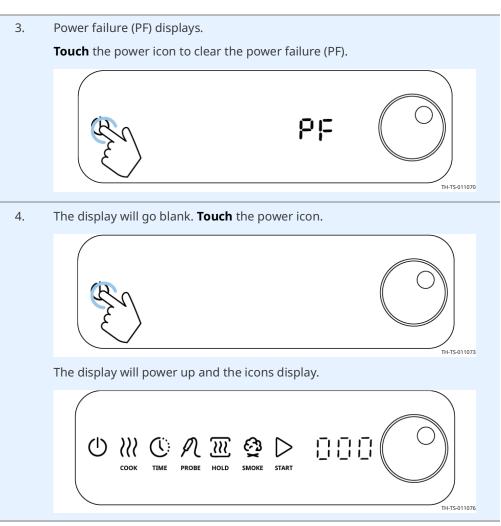
To view the software versions, do the following.



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Result

The software versions have now been viewed.

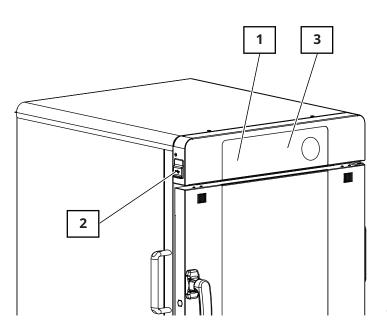


# **Component Identification**





# **Front Panel Identification**

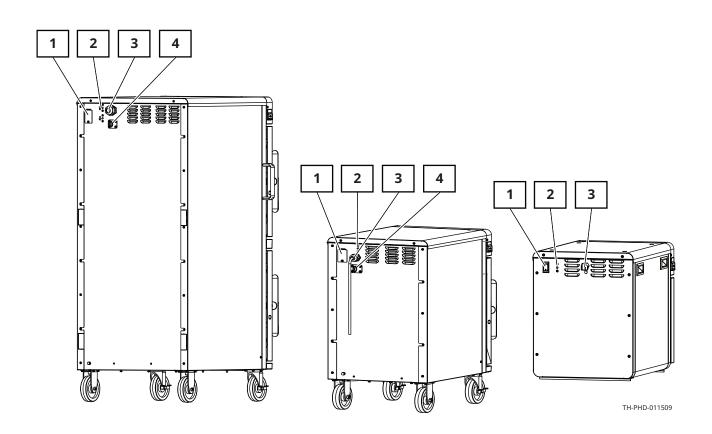


TH-PHD-011659

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



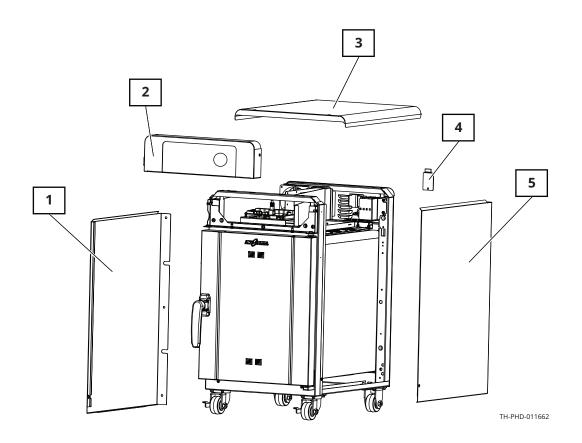
# **Back Panel Identification**



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



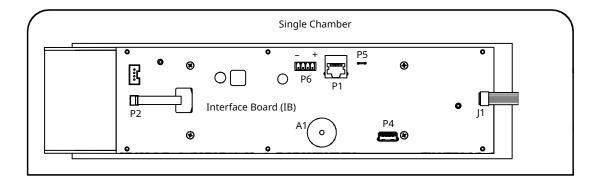
# **Component Access Panels Identification**

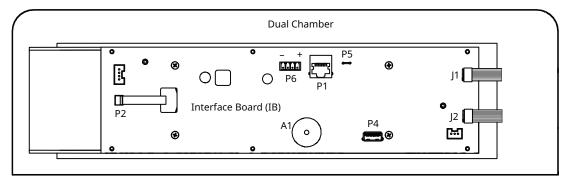


Ref.	Description	Provides access to
1	Left side panel	Heating element terminal block
2	Control panel	Interface board
3	Top service panel	Electrical components
4	Circuit breaker access panel	Circuit breakers (500-TH and larger)
5	Right side panel	-



### **Control Panel**



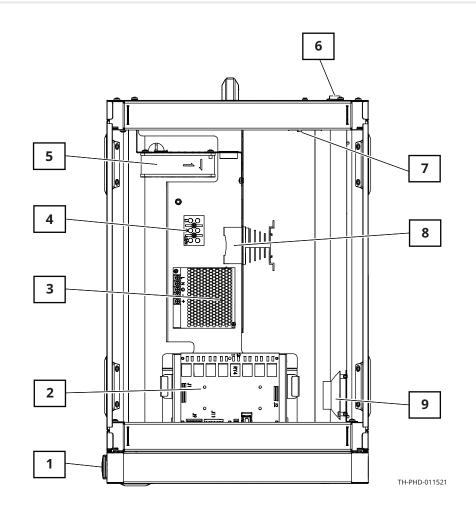


TH-PHD-011665

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	



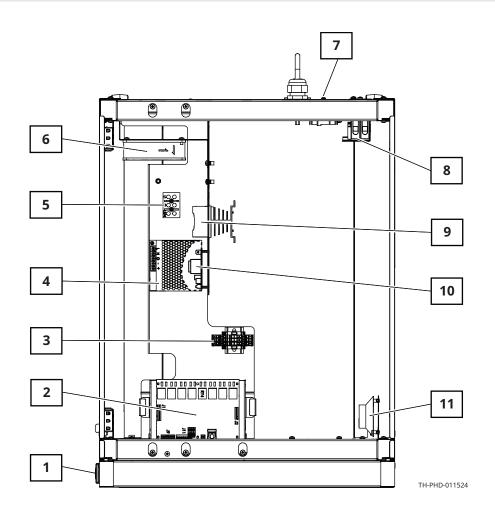
# **300-TH—Electrical Component Identification**



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	—	-



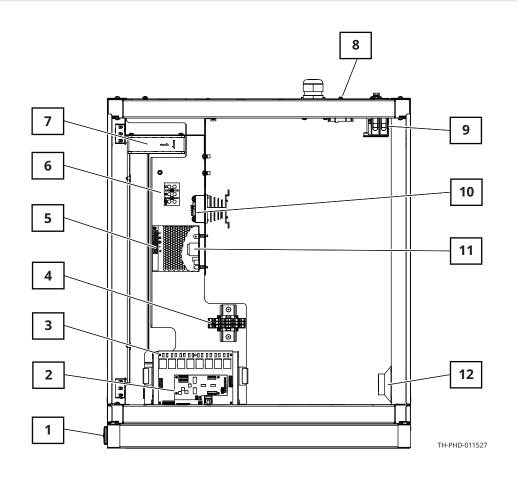
# 500-TH, 750-TH/SK, 1000-TH/SK—Electrical Component Identification



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	_	-



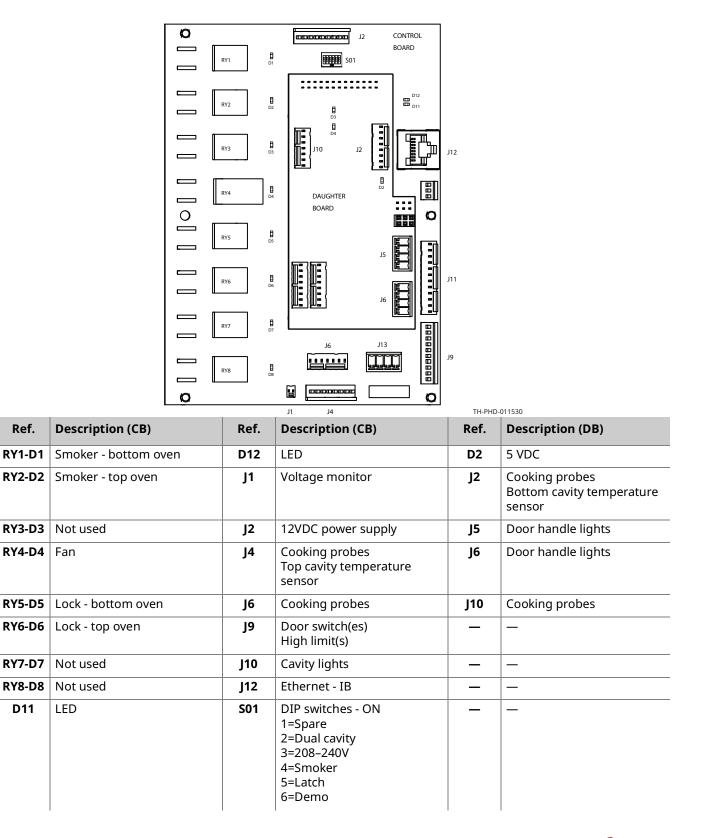
# 1250-TH/SK, 1750-TH/SK—Electrical Component Identification



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

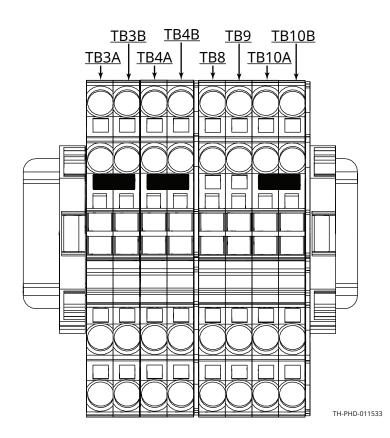


### Control Board (CB) and Daughter Board (DB)





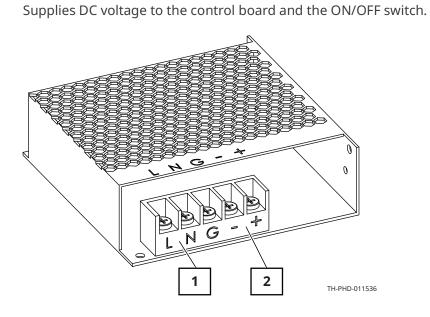
### **Terminal Blocks**



TB3A         L1         750-TH, 1000-TH, 1200-TH, 1750-T           TB3B         Smoker option         1200-TH, 1750-TH           TB4A         L2/N         750-TH, 1000-TH, 1200-TH, 1750-TH           TB4B         Smoker option         1200-TH, 1750-TH	Н
TB4A         L2/N         750-TH, 1000-TH, 1200-TH, 1750-TH           TB4B         Smoker option         1200-TH, 1750-TH	
TB4B         Smoker option         1200-TH, 1750-TH	
	Ή
TB8DC - Lights, top cavity1200-TH	
TB9DC - Lights, bottom cavity1200-TH	
TB10A         DC + Lights         1000-TH, 1200-TH, 1750-TH	
TB10B         DC + Lights         1200-TH	

ALTO-SHAAM.

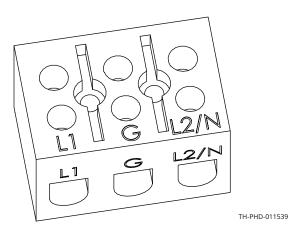
### **12VDC Power Supply**



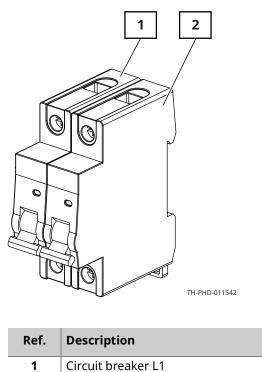
Ref.Description1120-240VAC terminals212VDC terminals

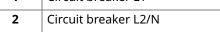


### **Terminal Blocks (L1, GND, L2/N)**



#### **Circuit Breakers**



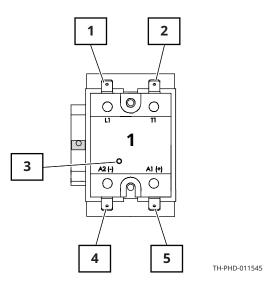




### Solid State Relay (SSR)

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

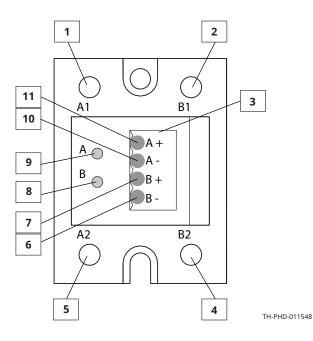
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#### COMPONENTS

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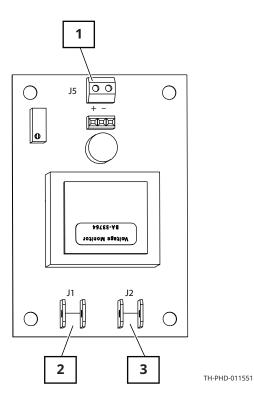
#### **Dual cavity**



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)



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

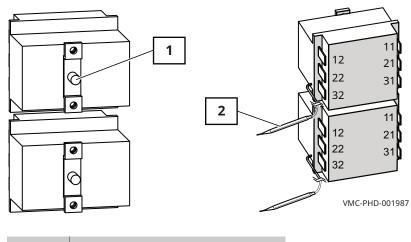
Ref.	Description
1	J5 DC output
2	J1 AC input
3	J2 AC input



### **High Limit Switches**

#### Resettable

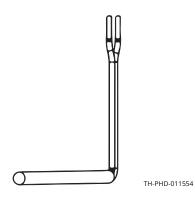
Contacts open at 300°F (149°C)



Ref.	Description
1	Reset button
2	Temperature bulb

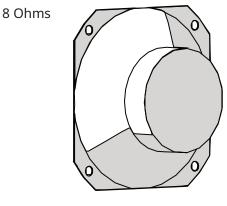
### **Chamber Air Temperature Probe**

100 Ohm at 0°C





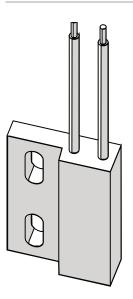
#### Speaker



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

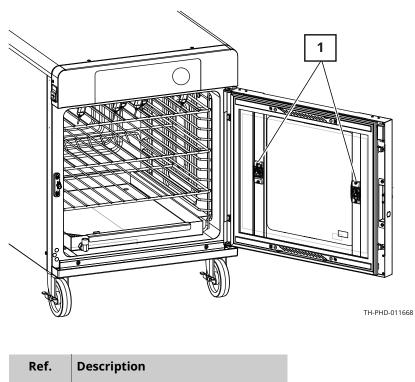
- Impedance protected
- 240 Volt
- 581 Ohm



VMC-PHD-002011



# **Internal Components Identification**



Cavity lights

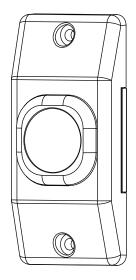
1



# **Internal Components**

### **Cavity Light**

12 VDC



VMC-PHD-007587



# **Maintenance Schedule**

Requirements	<ul> <li>See topic <i>How to Clean the Oven</i>.</li> <li>Make sure the oven is cooled down and off—inside of chamber 140°F (60°C) or less.</li> </ul>
Daily	<ul> <li>For daily maintenance, do the following.</li> <li>See topic <i>How to Clean the Oven</i>, and follow the Daily Cleaning procedure.</li> <li>Check the screen for cracking or peeling. Contact Technical Service if needed.</li> </ul>
Weekly	<ul> <li>For weekly maintenance, do the following.</li> <li>See topic <i>How to Clean the Oven</i>, and follow the Weekly Cleaning procedure.</li> <li>Check the oven for any damage or loose parts.</li> </ul>
Monthly	<ul> <li>For monthly maintenance, do the following.</li> <li>Inspect door gasket.</li> <li>Inspect door window gasket for proper seal.</li> <li>Inspect cavity door vent slides for proper operation.</li> <li>Inspect side racks, shelves, and shelf supports for damage.</li> <li>Calibrate the removable product probe (if applicable)</li> <li>Clean the cooling fan intake area and exhaust vents.</li> <li>Inspect door handle screws and tighten if necessary.</li> <li>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.</li> </ul>
Yearly	<ul> <li>For yearly maintenance, do the following.</li> <li>NOTE: Must be performed by a qualified professional.</li> <li>Check and tighten all wire connections.</li> <li>Inspect the smoke element and smoke element wiring.</li> <li>Measure the current draw of each cavity. Operate with smoker on if applicable.</li> <li>Test the heating elements for electrical short to ground.</li> <li>Inspect the condition of the cord and plug.</li> </ul>



### MAINTENANCE

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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.	<b>Remove</b> any all detachable items such as wire shelves, side racks, drip pan, and drip tray and clean these items separately.
3.	<b>Remove</b> 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.	<b>Wipe</b> 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, <b>clean</b> each side of the window pane with an all-purpose glass cleaner.
7.	<b>Wipe</b> 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.	<b>Set</b> 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.	<b>Spray</b> the exterior areas of the oven with stainless steel polish.								
	NOTICEUse 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.	<b>Spray</b> the interior areas of the oven with oven cleaner. Let the cleaner work for 3–5 minutes.								
5.	<b>Wipe</b> the interior of the oven with a non-abrasive nylon scrub pad.								
6.	<b>Clean</b> the door gasket with a warm water and detergent solution.								
7.	If oven has an optional glass door, <b>clean</b> each side of the window pane with an all-purpose glass cleaner.								
8.	<b>Plug</b> 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.	<ol> <li>Sensor connection</li> <li>Sensor</li> <li>Control Board</li> </ol>
P110	Probe 1 short circuit, upper compartment	Short circuit detected on sensor wires.	<ol> <li>Sensor connection</li> <li>Sensor</li> <li>Control Board</li> </ol>
P711	Probe 1 open circuit, lower compartment	Open circuit detected on sensor wires	<ol> <li>Sensor connection</li> <li>Sensor</li> <li>Control Board</li> </ol>
P710	Probe 1 short circuit, lower compartment	Short circuit detected on sensor wires	<ol> <li>Sensor connection</li> <li>Sensor</li> <li>Control Board</li> </ol>
E-10	Cavity probe shorted	Short circuit detected on sensor wires. Halts any active program.	<ol> <li>Sensor connection</li> <li>Sensor</li> <li>Control Board</li> </ol>
E-11	Cavity probe open	Open circuit detected on sensor wires. Halts any active program.	<ol> <li>Sensor connection</li> <li>Sensor</li> <li>Control Board</li> </ol>
E-31	Unit over temperature	Cavity sensor over temperature too long. Halts active program if temperature exceeds 375°F / 190°C.	<ol> <li>Cooling fan not operating</li> <li>Installation clearance requirements not met</li> </ol>
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.	<ol> <li>Cooling Fan not operating</li> <li>Installation clearance requirements not met</li> </ol>
E-bC	Bootloader EEPROM RAM reset	Bootloader chip error	Requires power cycle to reset



# TROUBLESHOOTING

EFAn	Check fans	Insufficient internal cooling airflow.	<ol> <li>Cooling fan filters dirty</li> <li>Cooling fans not operating</li> <li>Installation clearance requirements not met</li> </ol>
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	1. Set the date and time 2. Check and reset or replace cable
U-06	No communication withe HACCP module	Cable not connected or damaged	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	1. Check and reset or replace cable 2. Replace HACCP board



# What to do if a Power Interruption Occurs

### Background

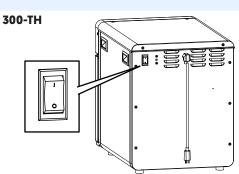
You may need to reset the oven if a power interruption occurs.

Procedure

To continue operation of the oven, do the following.

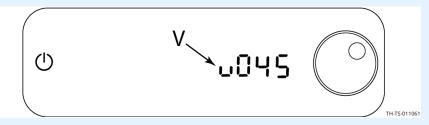
### Step Action

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



TH-TS-011359

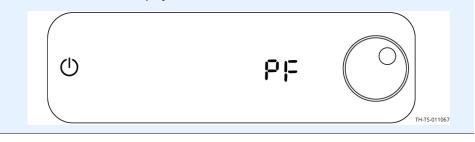
The interface board (IB) software version displays.



The control board (CB) software version displays.



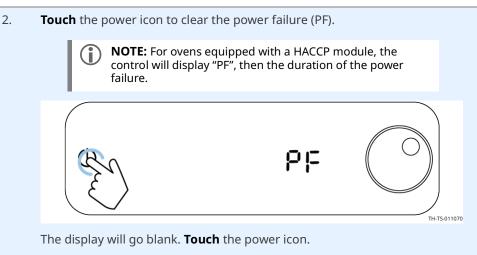
Power failure (PF) displays.

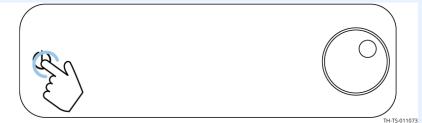


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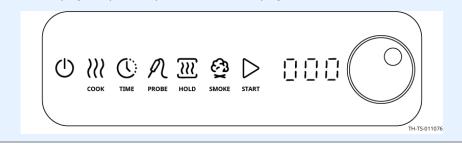


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The display will power up and the icons display.



Result

Resume operation of the oven.



# How to Change the Language Strip

### Before you begin

The oven must be disconnected from electrical power.

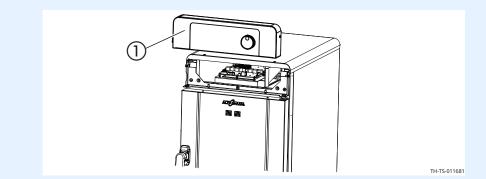
Make sure you have hand tools.

Procedure

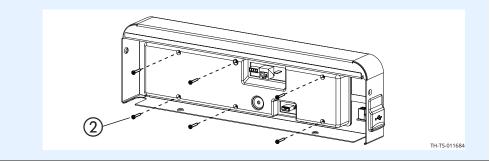
To change the language strip, do the following.

### Step Action

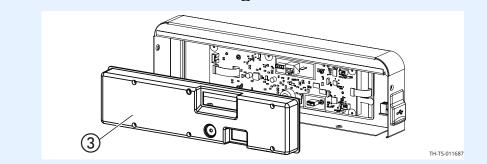
1. **Remove** the control panel ① from the oven.



2. **Remove** the screws (2) from the interface board (IB) cover.



3. **Remove** the interface board cover (3).

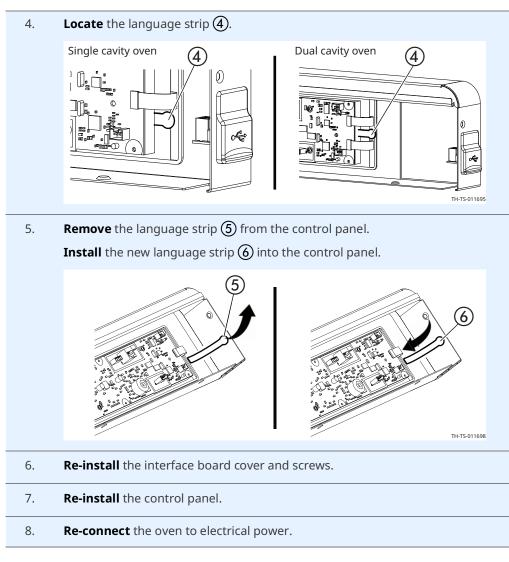


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### TROUBLESHOOTING

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Result

The language strip has now been changed.

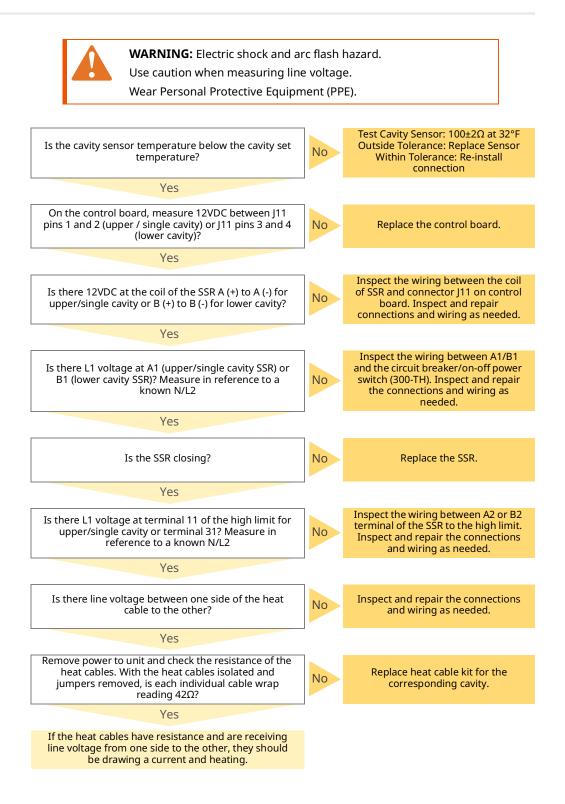


# **High Limit Alarm**



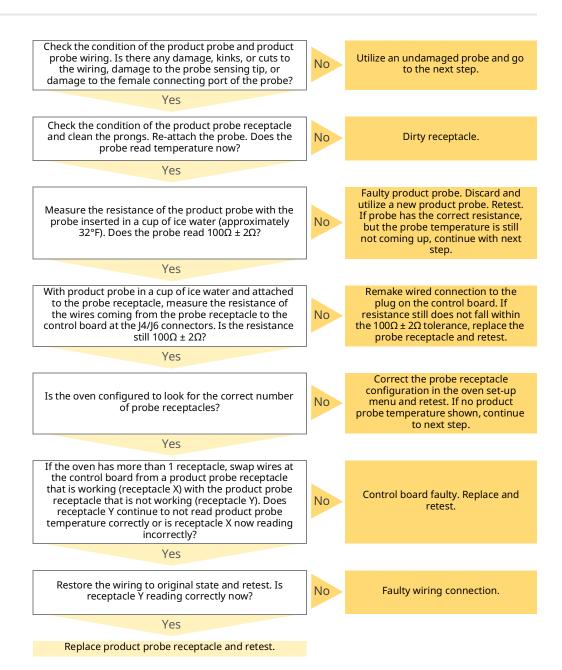


# The Oven does not Heat





## **The Product Probe does not Work**



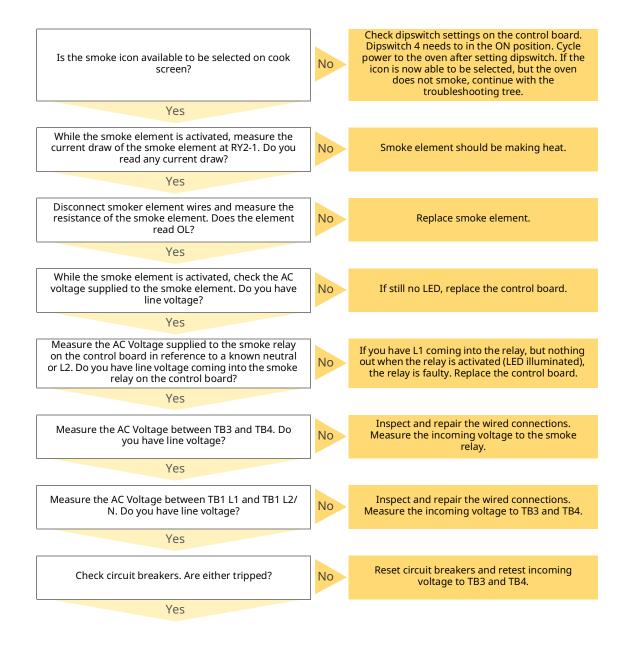


# The Smoke Function does not Operate



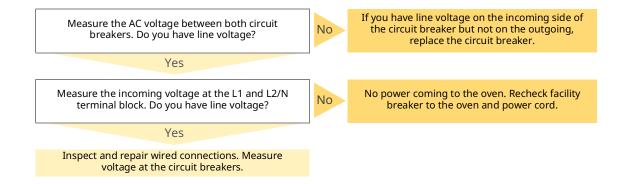
**WARNING:** Electric shock and arc flash hazard. Use caution when measuring line voltage. Wear Personal Protective Equipment (PPE).

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** 



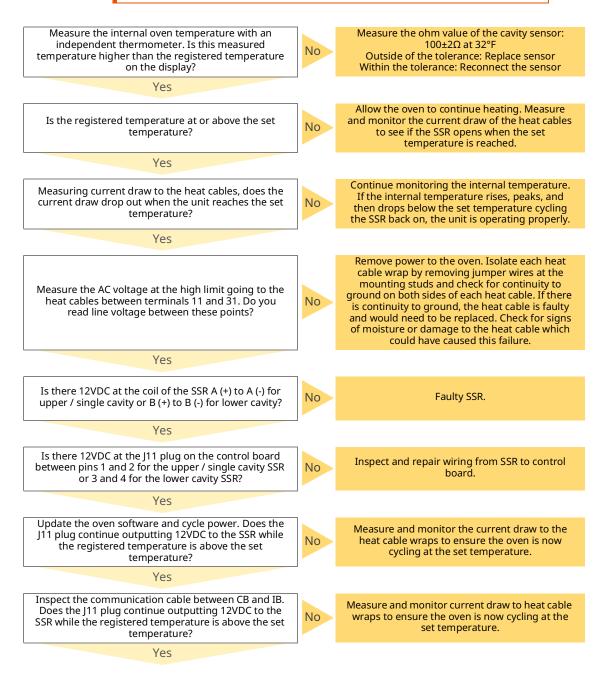


# **The Oven Overheats**

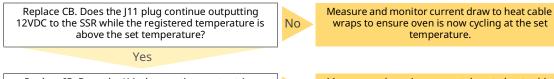


**WARNING:** Electric shock and arc flash hazard. Use caution when measuring line voltage.

Wear Personal Protective Equipment (PPE).



TROUBLESHOOTING



Replace IB. Does the J11 plug continue outputting 12VDC to the SSR while the registered temperature is above the set temperature?

No Meas

Measure and monitor current draw to heat cable wraps to ensure the oven is now cycling at the set temperature.



# TROUBLESHOOTING

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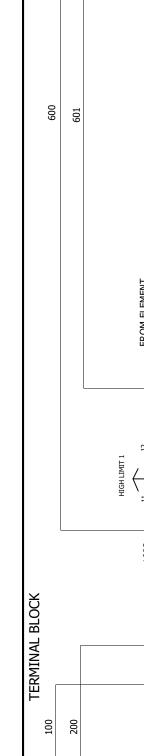
02	03	04	05	90	07	08	60	10	11
БЧ	БЧ	Б	Бq	БЧ	Бq	БЧ	БЧ	БЧ	Бq

LTQ-SHAAM Schahermics

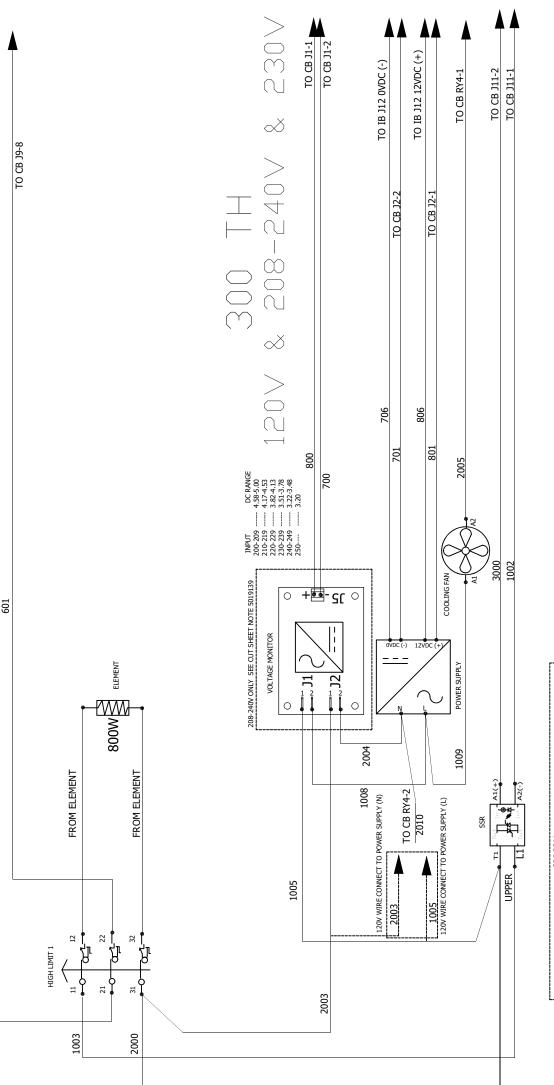
	8	1/20/2021	montev	182095	1/20/2021 montev 182095 Switch 2006 and 2007 location on high limit	ation on high limit	
	~	11/11/2020	montev 182040	182040	Adding two wrap 750 & 1000 SK	200 SK	
	9	6 10/3/2020	montev 181497	181497	Ethernet option		
	5	3/16/2020	montev	181489	Remove page 2 and 8 ad	montev 181489 Remove page 2 and 8 adding EMI filter for CE units, add gnd simple control	e control
	4	1/10/2020	montev		Change Dip Switch 6 to LED,	ED,	
	REV.	DATE	NAME	ECO	C	CHANGES	
				1		ASi	REVISION
-			100/1	<b>\</b>			¢
		ALL	ALL COOK & HOLD	U IOH V			)
							PAGE
							1/11

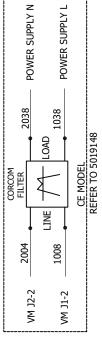


300 TH 500 TH 750 TH 1000 TH 1200 TH 1750 TH 1750/1200 TH 380V CONTROL CB DELUXE CONTROL SIMPLE CONTROL



TO CB J9-7



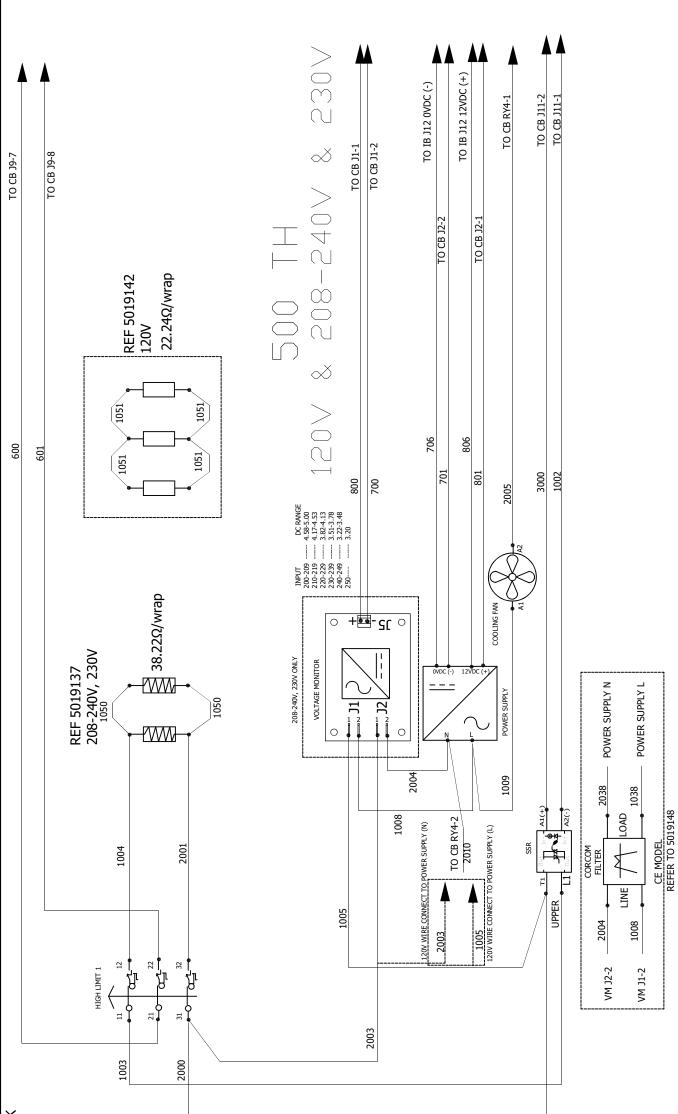


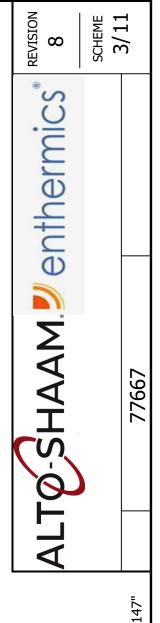


REF 120V "5019156" REF 208-240V, 230V "5019157"

GRND TERMINAL 401 -||·

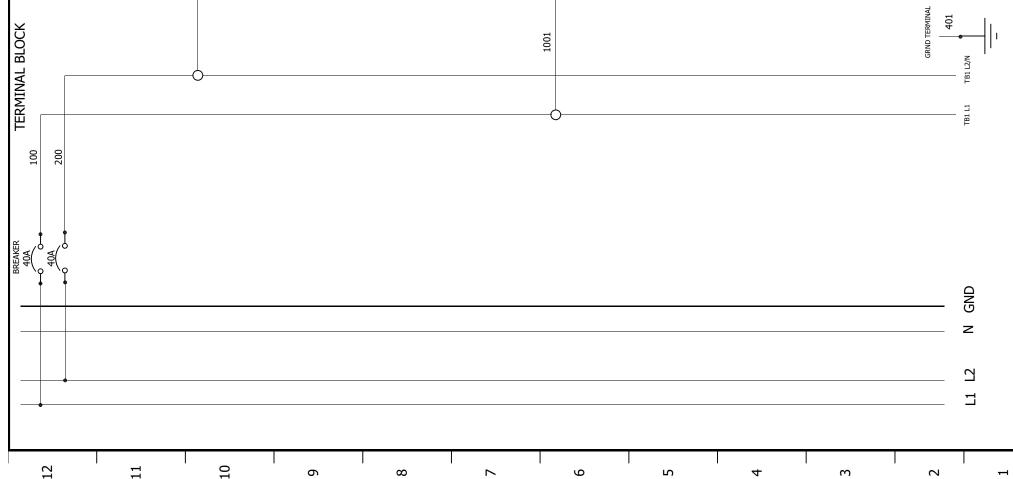
TERMINAL BLOCK				1001				GRND TE	
0N/OFF_SWITCH	-								
									L1 L2 N GND
12		 ი	ω	9	<u>م</u> ا	4	 	5	

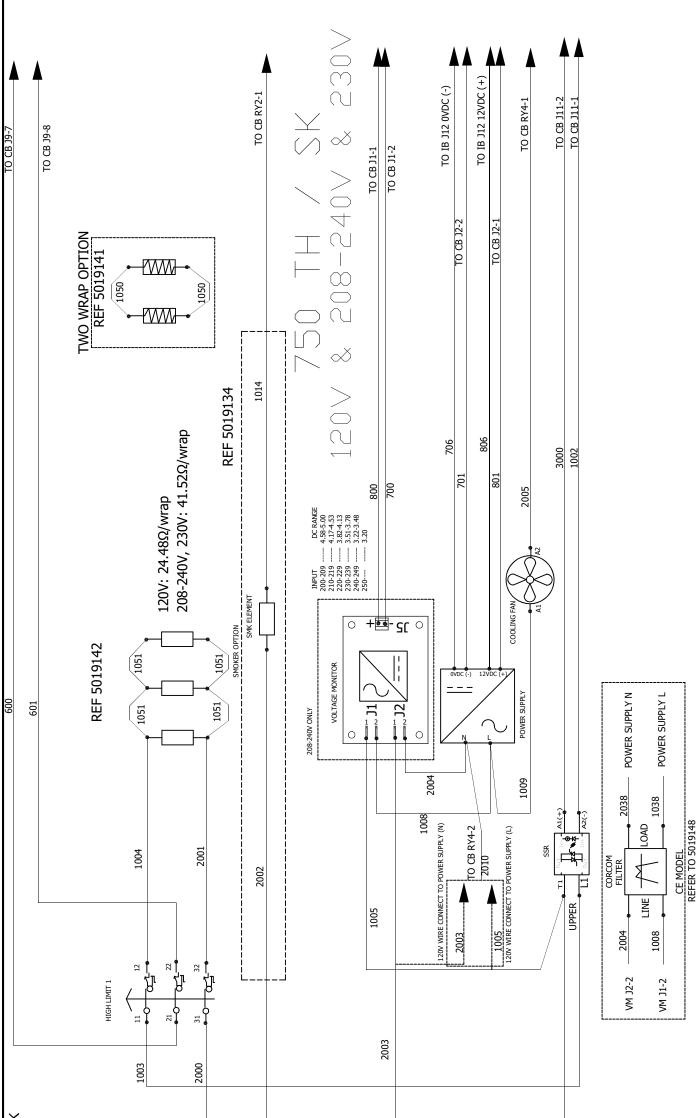




REF 120V "5019131" REF 208-240V, 230V "5019147"

001

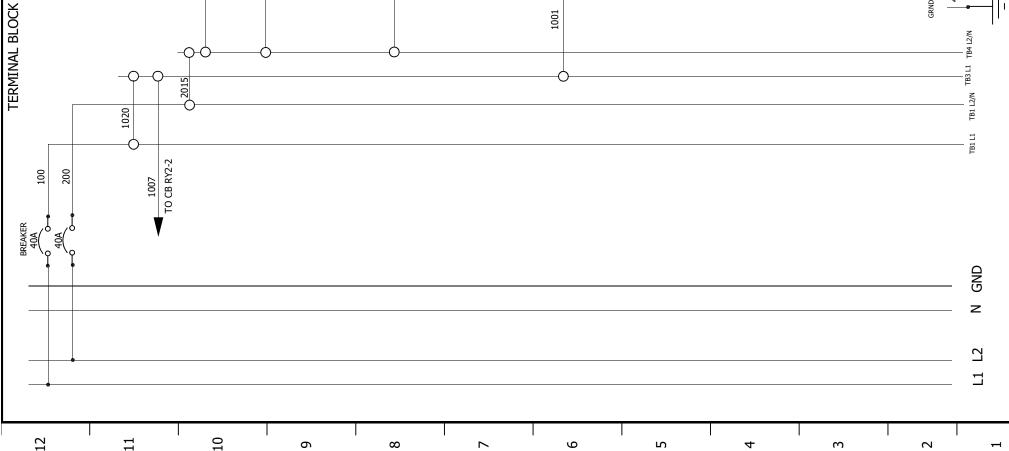


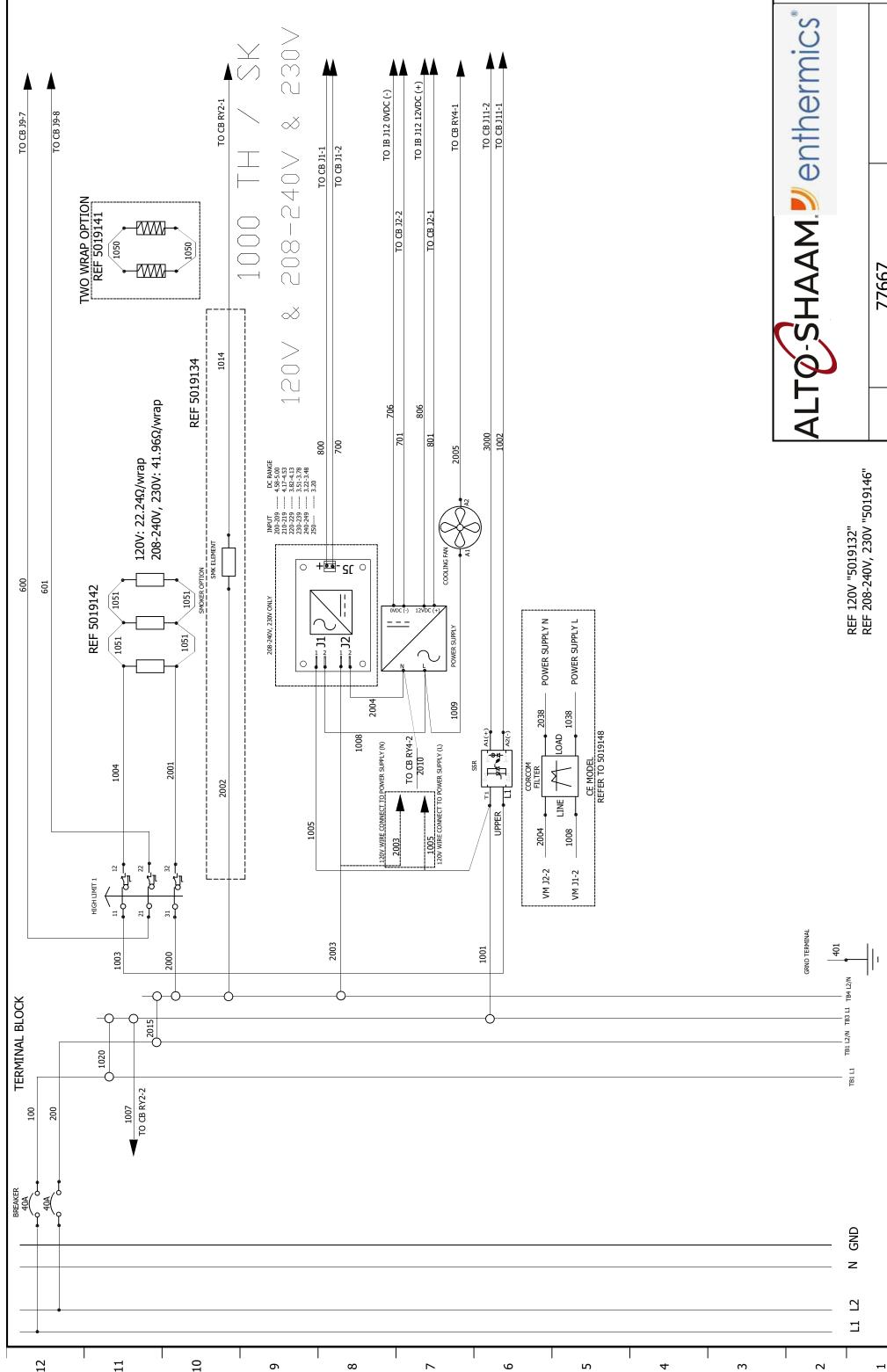




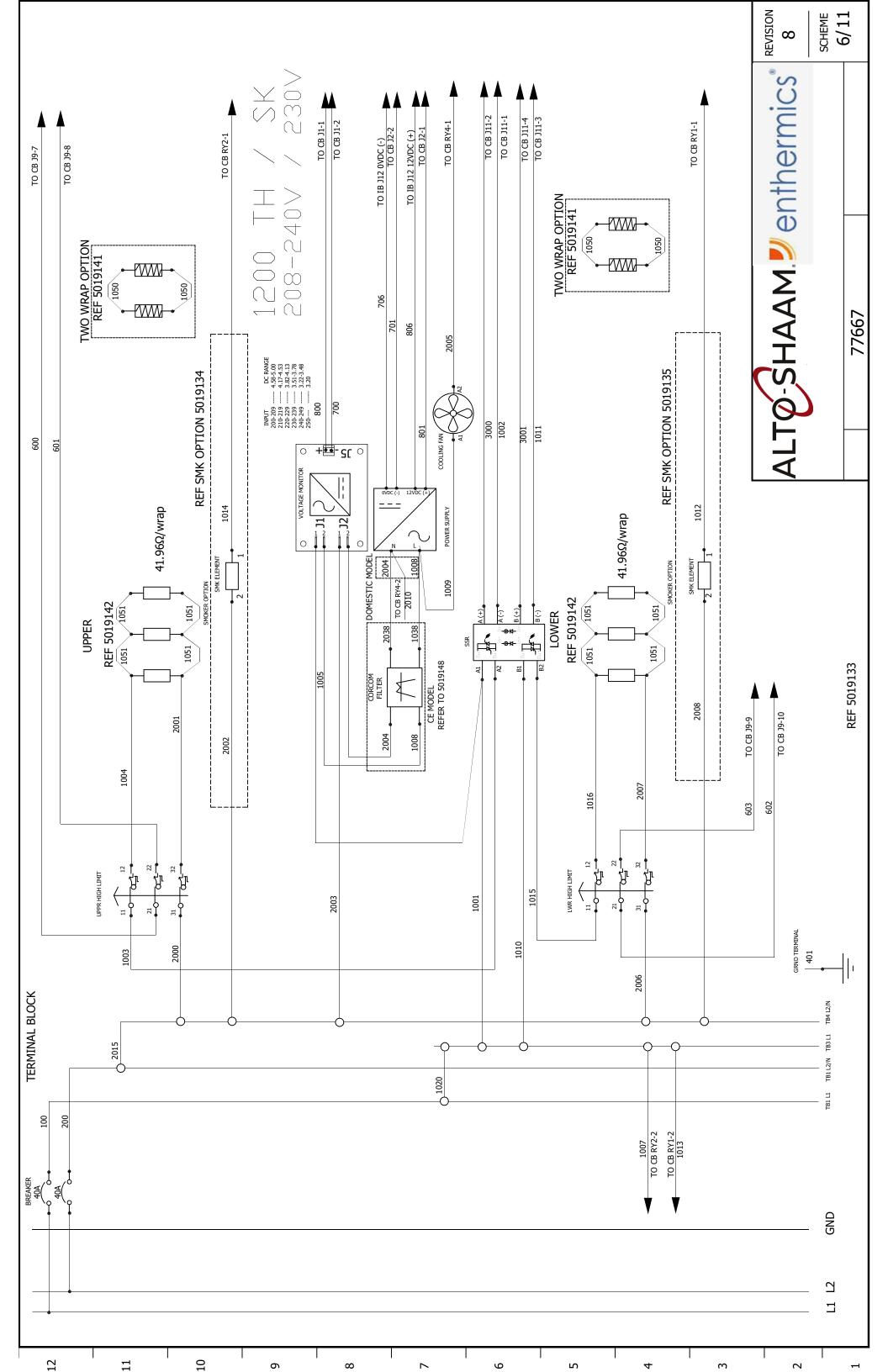
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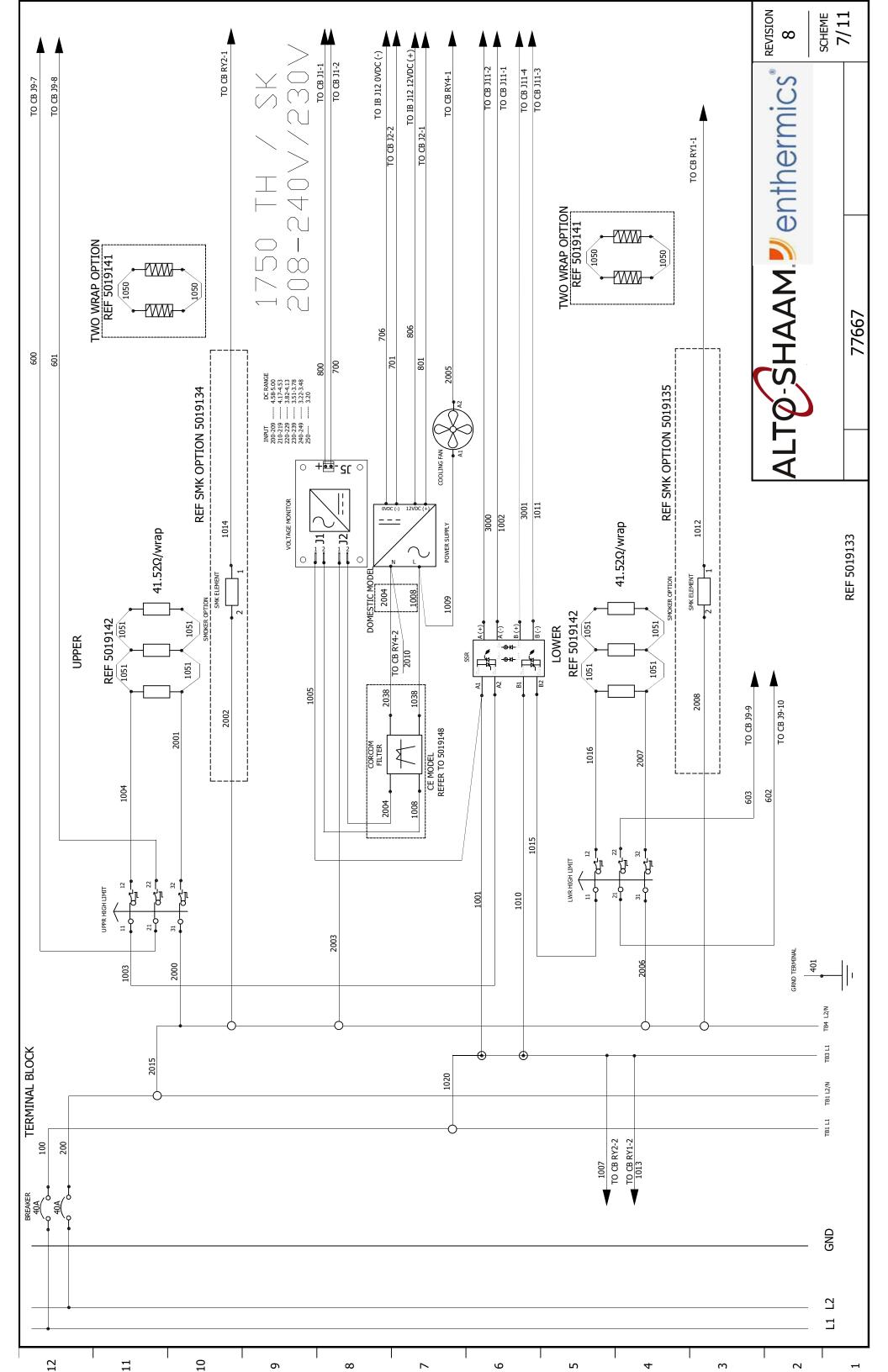
**GRND TERMINAL** 401

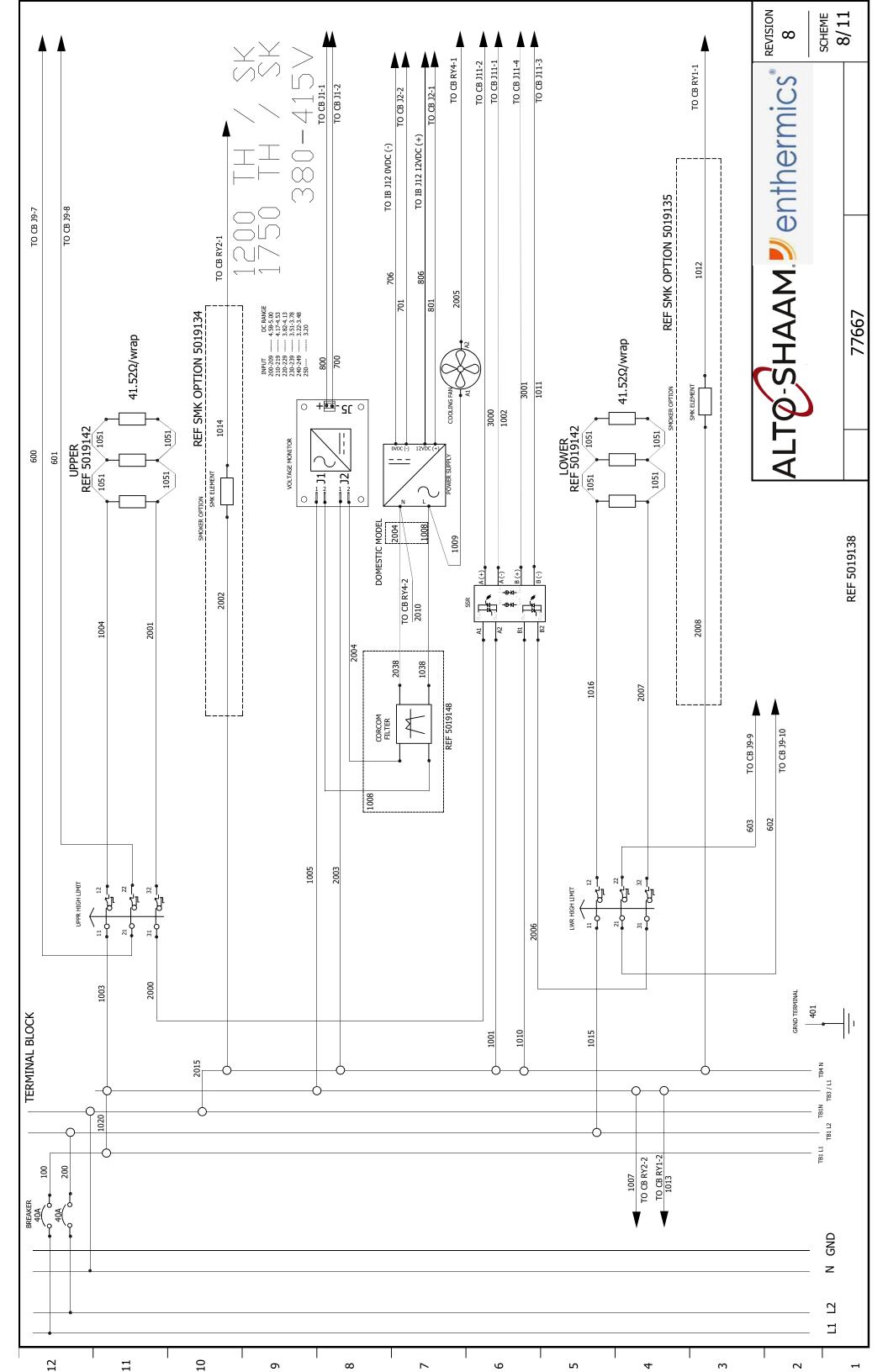


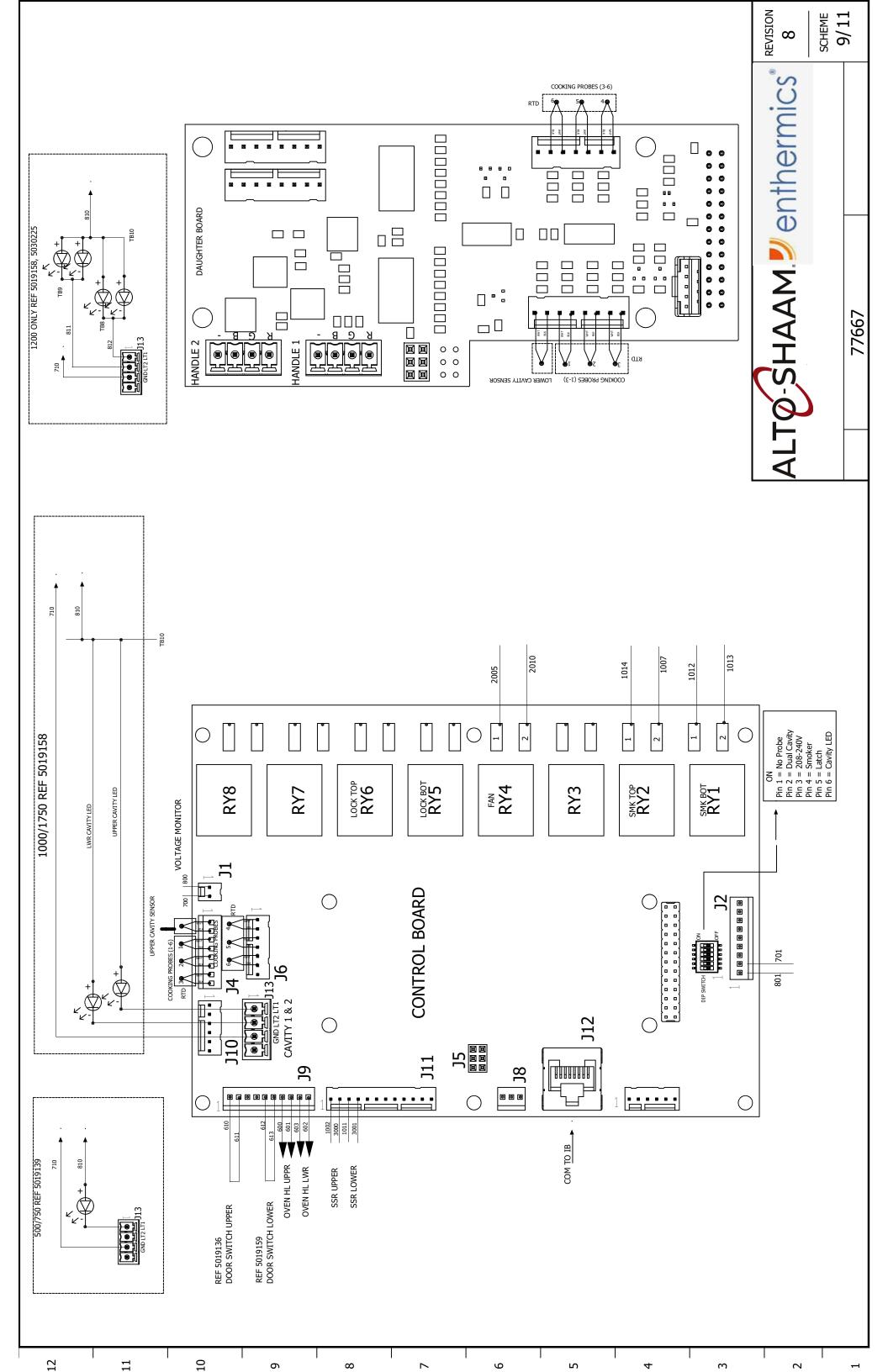


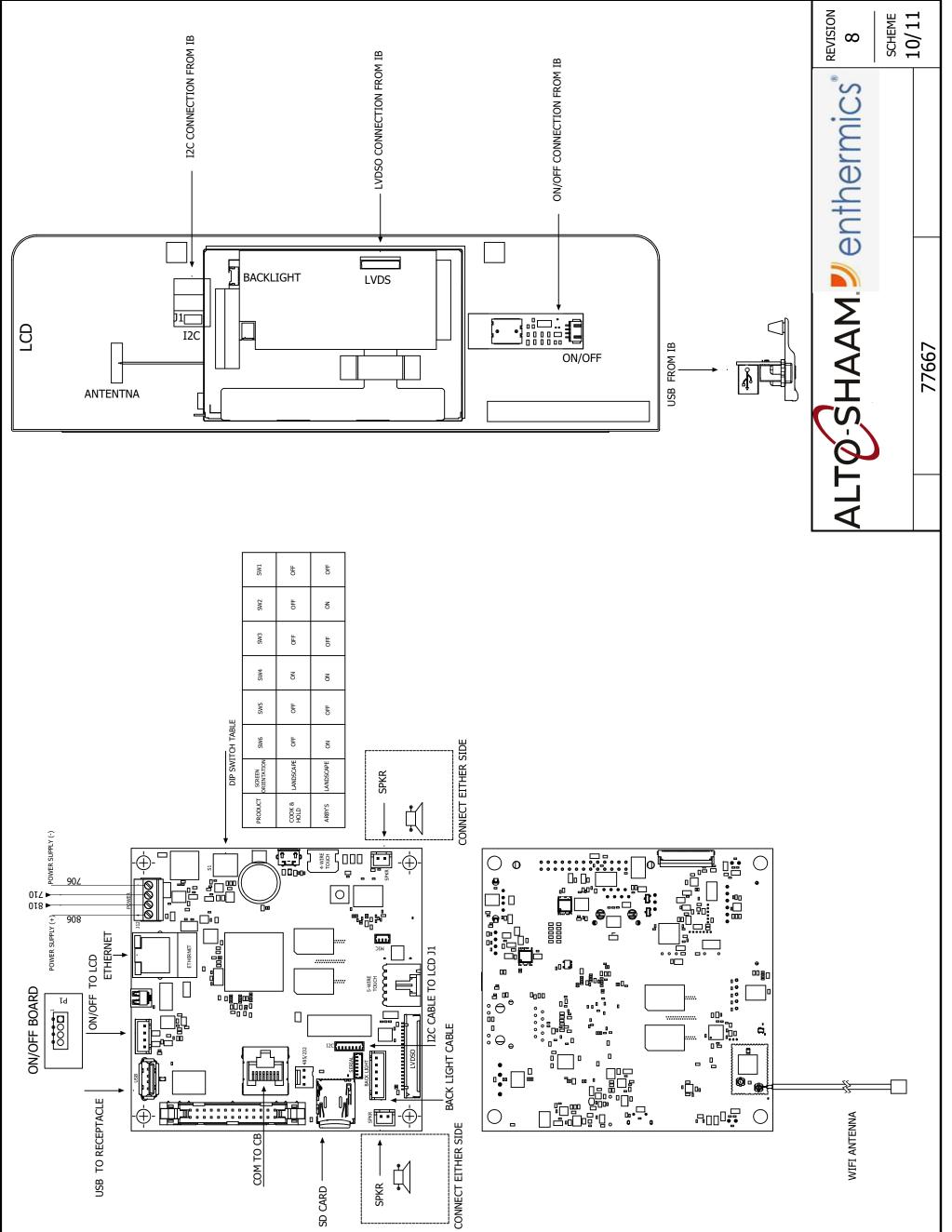








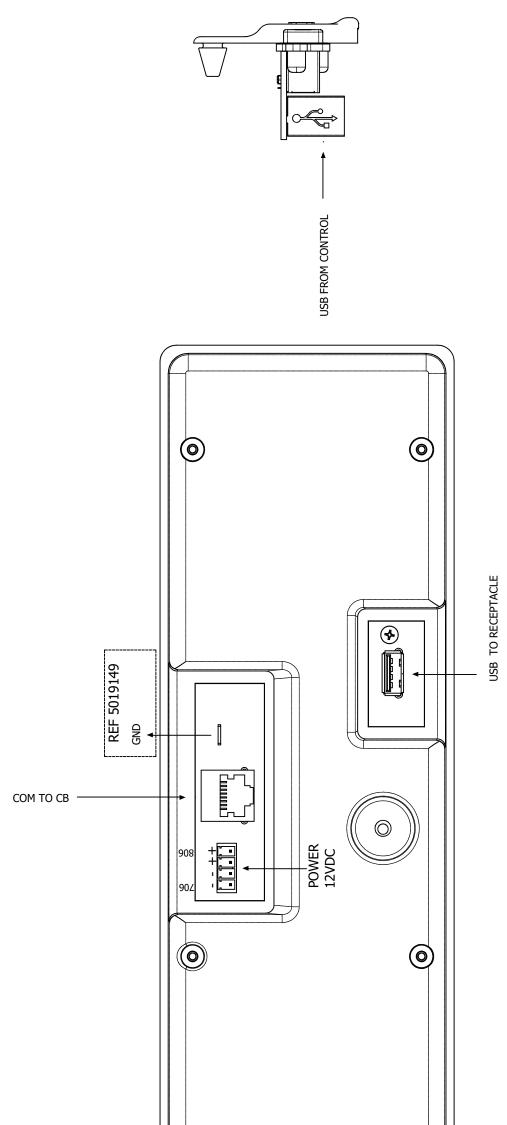


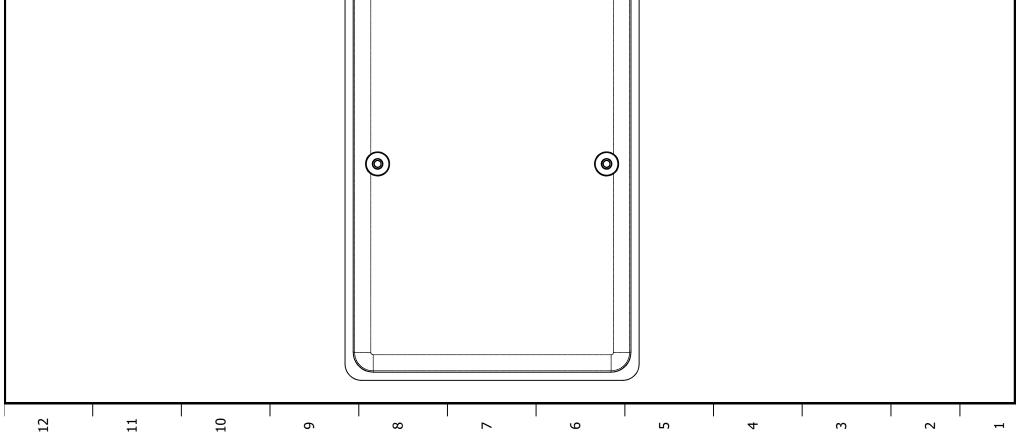
















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