

# SERVICE DATA SHEET

318047314 (0910) Rev. A

## Electric Double Wall Ovens with Electronic Oven Control

### NOTICE

This service data sheet is intended for use by persons having electrical and mechanical training and a level of knowledge of these subjects generally considered acceptable in the appliance repair trade. **The manufacturer cannot be responsible, nor assume any liability, for injury or damage of any kind arising from the use of this data sheet.**

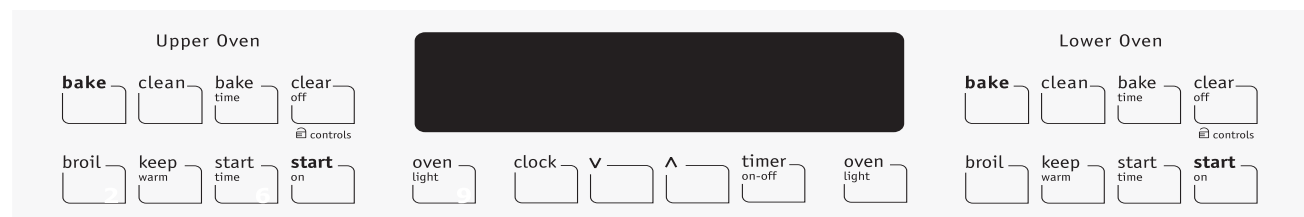
### SAFE SERVICING PRACTICES

To avoid the possibility of personal injury and/or property damage, it is important that safe servicing practices be observed. The following are some, but not all, examples of safe practices.

1. Do not attempt a product repair if you have any doubts as to your ability to complete it in a safe and satisfactory manner.
2. Before servicing or moving an appliance, remove power cord from electric outlet, trip circuit breaker to Off, or remove fuse.

3. Never interfere with the proper installation of any safety device.
4. **Use only replacement parts specified for this appliance. Substitutions may defeat compliance with safety standards set for home appliances.**
5. **Grounding:** The standard color coding for safety ground wires is **Green or green with yellow stripes**. Ground leads are not to be used as current carrying conductors. **It is extremely important that the service technician reestablish all safety grounds prior to completion of service. Failure to do will create a potential hazard.**
6. Prior to returning the product to service, ensure that:
  - All electric connections are correct and secure.
  - All electrical leads are properly dressed and secured away from sharp edges, high-temperature components, and moving parts.
  - All uninsulated electrical terminals, connectors, heaters, etc. are adequately spaced away from all metal parts and panels.
  - All safety grounds (both internal and external) are correctly and securely reassembled.
  - All panels are properly and securely reassembled.

### ELECTRONIC OVEN CONTROL (EOC)

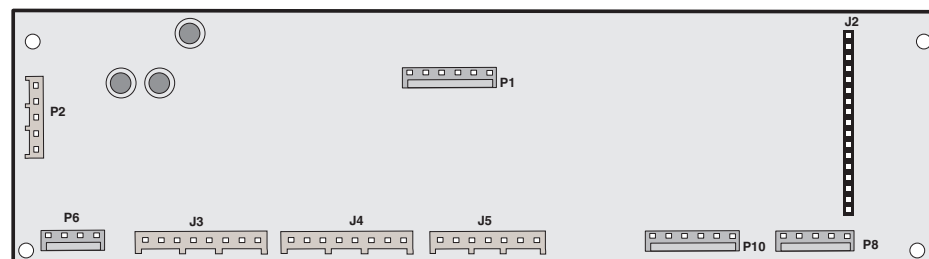


1. This EOC has a touch sensitive membrane.
2. The EOC includes a display board and a relay board.

**NOTE:** The EOC is not field repairable. Only temperature settings can be changed. See oven calibration.

**NOTE:** Appearance may vary depending on model.

### ELECTRONIC OVEN CONTROL (EOC) - Display board



#### Display Board Legend:

- J2** Keyboard connection.
- P1** Micro programming (not used).
- P2** DC power input.
- J3** Relays control outputs (bake & broil elements, light, MDL, DLB) for upper oven.

- J4** Relays control outputs (cooling fan) for both ovens.
- J5** Relays control outputs (bake & broil elements, light, MDL, DLB) for lower oven.
- P6** Temperature probe inputs.
- P8** Door switch and MDL switch for upper oven.
- P10** Door switch and MDL switch for lower oven.

# ELECTRONIC OVEN CONTROL (EOC) - Relay board

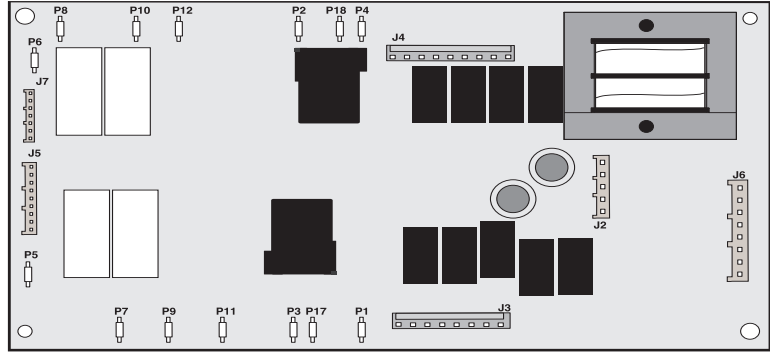
## Relay Board Legend:

- P1** Double line break, upper oven.
- P2** Double line break, lower oven.
- P3** L2 in, upper oven.
- P4** L2 in, lower oven.
- P5** L1, upper oven.
- P6** L1, lower oven.
- P7** Broil, upper oven. **P8** Broil, lower oven.
- P9** Bake, upper oven. **P10** Bake, lower oven.
- P11, P12, P17 & P18** Not used.

**J2** DC power output to display board.

**J3** AC power outputs (motor door latch, light, cooling fan) for upper oven.

**J4** AC power outputs (motor door latch, light, cooling fan) for lower oven. L1 and Neutral input.



**J5** Relays control inputs (bake & broil elements, light, motor door latch, DLB) for upper oven.

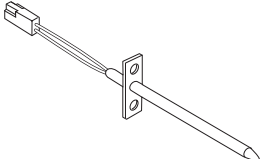
**J6** Relays control inputs (cooling fan) for both ovens.

**J7** Relays control inputs (bake & broil elements, light, motor door latch, DLB) for lower oven.

RTD SCALE		
Temp. °F	Temp. °C	Resistance (ohms)
32 ± 1.9	0.0 ± 1.1	1000 ± 4.0
75 ± 2.5	23.9 ± 1.4	1091 ± 5.3
250 ± 4.4	121.1 ± 2.4	1453 ± 8.9
350 ± 5.4	176.7 ± 3.0	1654 ± 10.8
450 ± 6.9	232.2 ± 3.8	1852 ± 13.5
550 ± 8.2	287.8 ± 4.6	2047 ± 15.8
650 ± 9.6	343.3 ± 5.3	2237 ± 18.5
900 ± 13.6	482.2 ± 7.6	2697 ± 24.4

ELECTRICAL RATING		
	27"	30"
<b>KW rating 240/208</b>	7.5/5.6	7.5/5.6
<b>Bake Element Wattage</b>	2300W/17820W	2750W/2065W
<b>Broil Element Wattage</b>	3400W/2554W	3400W/2554W

<b>Oven temperature sensor</b>	
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## UPPER OVEN CIRCUIT ANALYSIS MATRIX

	Relay Board		Display Board	Relay Board			
	ELEMENTS		Door Motor J3-5	Door Switch P8-3 / P8-5	DLB L2 out P1	Cooling Fan Low speed J3-7	Cooling Fan High speed J3-8
	Bake P9	Broil P7					
<b>Bake</b>	X	X			X	X	
<b>Broil</b>		X			X	X	
<b>Clean</b>	X	X			X	X	X
<b>Locking/ unlocking</b>				X			
<b>Light</b>			X				
<b>Door Open</b>			X	X			
<b>Door Closed</b>							

## LOWER OVEN CIRCUIT ANALYSIS MATRIX

	Relay Board		Display Board	Relay Board			
	ELEMENTS		Door Motor J4-6	Door Switch P10-3 & P10-6	DLB L2 out P2	Cooling Fan Low speed J4-8	Cooling Fan High speed J4-9
	Bake P10	Broil P8					
<b>Bake</b>	X	X			X	X	
<b>Broil</b>		X			X	X	
<b>Clean</b>	X	X			X	X	X
<b>Locking/ unlocking</b>				X			
<b>Light</b>			X				
<b>Door Open</b>			X	X			
<b>Door Closed</b>							

Relay will operate in this condition only

## ELECTRONIC OVEN CONTROL (EOC) FAULT CODE DESCRIPTIONS

**Note:** Generally speaking "F1X" implies a control failure, "F3X" an oven probe problem, and "F9X" a latch motor problem.

Code	Condition/Cause	Suggested Corrective Action
<b>F10</b>	Control has sensed a potential runaway oven condition. Control may have shorted relay, RTD sensor probe may have a gone bad.	Check RTD sensor probe and replace if necessary. If oven is overheating, disconnect power. If oven continues to overheat when power is reapplied, replace power/relay board and/or display board. Severe overheating may require the entire oven to be replaced, should damage be extensive.
<b>F11</b>	Shorted Key: a key has been detected as pressed (for more than the debounce period) will be considered a shorted key alarm and will terminate all oven activity.	<ol style="list-style-type: none"> <li>1) Press Clear or Cancel key.</li> <li>2) If fault returns, replace the keyboard (membrane).</li> <li>3) If the problem persist, replace the display board.</li> </ol>
<b>F13</b>	Control's internal checksum may have become corrupted.	<ol style="list-style-type: none"> <li>1) Press Clear or Cancel key.</li> <li>2) Disconnect power, wait 30 seconds and reapply power. If fault returns upon power-up, replace display board.</li> </ol>
<b>F14</b>	Misconnected keyboard cable.	<ol style="list-style-type: none"> <li>1) Disconnect power. Verify the flat cable connection between the keyboard membrane and the display board on J2.</li> <li>2) If the connection is good but the problem persist, replace the keyboard (membrane switch).</li> <li>3) If the problem persist, replace the display board.</li> </ol>
<b>F15</b>	Controller self check failed.	<ol style="list-style-type: none"> <li>1) Replace the display board.</li> <li>2) If problem persist, replace the relay board</li> </ol>
<b>F30</b> <b>F31</b>	<p>Open RTD sensor probe/ wiring problem. Note: EOC may initially display an "F10", thinking a runaway condition exists.</p> <p>Shorted RTD sensor probe / wiring problem.</p>	<ol style="list-style-type: none"> <li>1) Check wiring in probe circuit for possible open condition.</li> <li>2) Check RTD resistance at room temperature (compare to probe resistance chart). If resistance does not match the chart, replace the RTD sensor probe.</li> <li>3) Let the oven cool down and restart the function.</li> <li>4) If the problem persist, replace the display board.</li> </ol>
<p>Note: <b>F30</b> or <b>F31</b> is displayed when oven is in active mode or an attempt to enter an active mode is made.</p>		
<b>F62</b>	Missing zero cross signal.	<ol style="list-style-type: none"> <li>1) The 60Hz synchronization signal (zero-cross) is sent by the Relay Board to the Display Board. Verify first the connection between the Relay Board on connector J2 pin 5 and the Display Board on connector P2 pin 5 (check for continuity).</li> <li>2) If wiring is good, replace the Relay Board.</li> <li>3) If problem persists, replace the Display Board.</li> </ol>
<b>F90</b>	Door motor mechanism failure.	<ol style="list-style-type: none"> <li>1) Press CLEAR key.</li> <li>2) If CLEAR key does not eliminate problem, turn off power for 30 seconds, then turn on power.</li> <li>3) Check wiring of Lock Motor, Lock Switch and Door Switch circuits.</li> <li>4) Unplug the lock motor from the board and apply power (L1) directly to the Lock Motor. If the motor does not rotate, replace Lock Motor Assembly.</li> <li>5) Check Lock Switch for proper operation (do they open and close, check with ohmmeter). The Lock Motor may be powered as in above step to open and close Lock Switch. If the Lock Switch is defective, replace Motor Lock Assembly.</li> <li>6) If all above steps fail to correct situation, replace the display board or the relay board in the event of a motor that does not rotate.</li> </ol>

