

# SERVICE DATA SHEET

Electric Ranges with ES100 Electronic Oven Control - 230/400V 3 Phase, 50Hz

**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

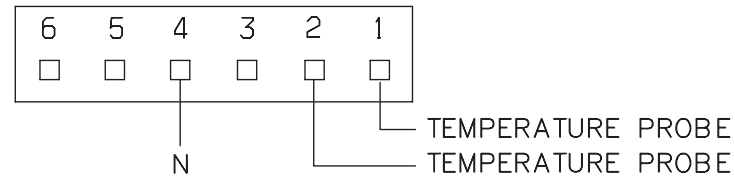
To avoid the possibility of personal injury and/or property damage, it is important that safe servicing practices be observed. The following are examples, but without limitation, of such practices.

1. Before servicing or moving an appliance remove power cord from electrical outlet, trip circuit breaker to OFF, or remove fuse.
2. Never interfere with the proper installation of any safety device.
3. **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 so will create a potential safety hazard.**
4. 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.

## OVENCALIBRATION

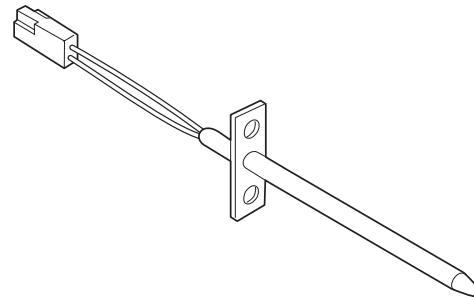
Set the electronic oven control for normal baking at 350°F. Obtain an average oven temperature after a minimum of 5 cycles. Press **CANCEL** or **CLEAR** to end bake mode.

## E.O.C. CONTROL CONNECTIONS (J1)



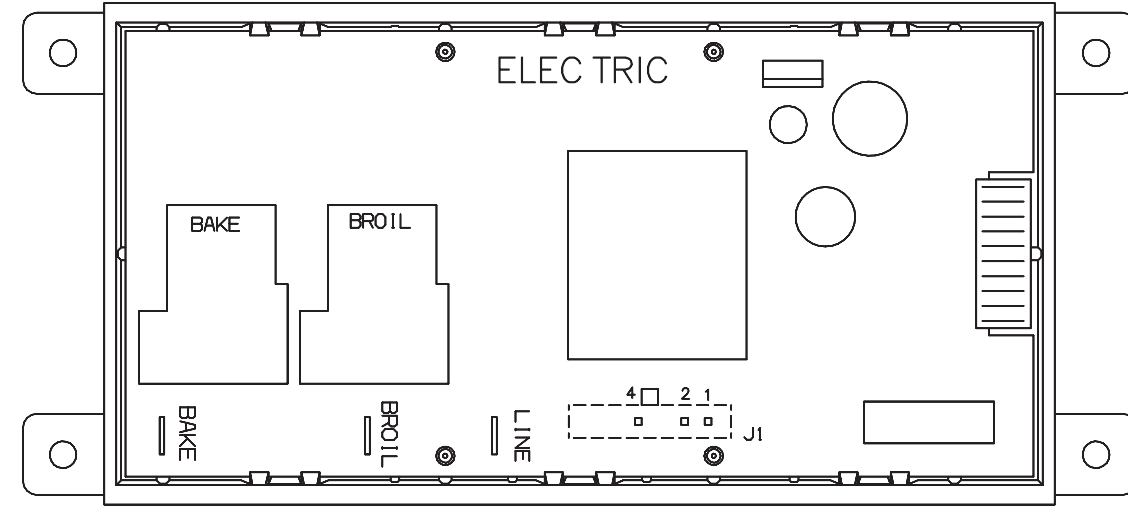
RTD SCALE	
Temperature (°F)	Resistance (ohms)
32 ± 1.9	1000 ± 4.0
75 ± 2.5	1091 ± 5.3
250 ± 4.4	1453 ± 8.9
350 ± 5.4	1654 ± 10.8
450 ± 6.9	1852 ± 13.5
550 ± 8.2	2047 ± 15.8
650 ± 9.6	2237 ± 18.5
900 ± 13.6	2697 ± 24.4

## RESISTANCE TEMPERATURE DETECTOR



**IMPORTANT**  
**DO NOT REMOVE THIS BAG**  
**OR DESTROY THE CONTENTS**  
 WIRING DIAGRAMS AND SERVICE  
 INFORMATION ENCLOSED  
**REPLACE CONTENTS IN BAG**

## ELECTRONIC OVEN CONTROL (rear view)



## ELECTRONIC OVEN CONTROL FAULT CODE DESCRIPTIONS (ES100 CONTROL)

**Note:** Only two fault codes are displayed by this control - **F1** or **F3**. Generally, **F1** display implies the electronic oven control itself has detected an internal malfunction. **F3** implies the control has detected a sensor probe failure. In either case, an alarm will accompany a displayed **F1** or **F3**.

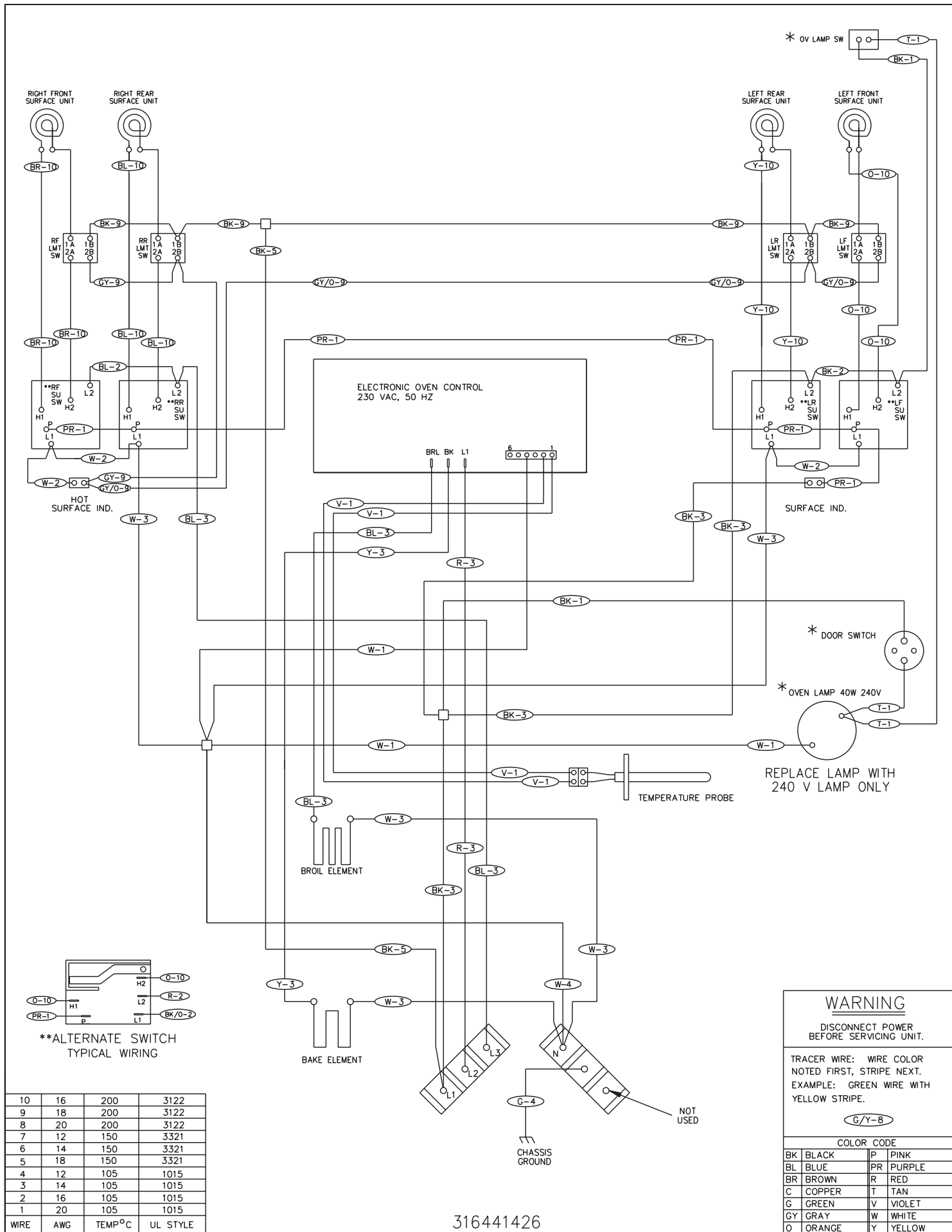
Fault Code	Likely Failure Condition/Cause	Suggested Corrective Action
<b>F1</b>	<ol style="list-style-type: none"> <li>1. Shorted keypad.</li> <li>2. Control's internal checksum may have become corrupted.</li> <li>3. Control has sensed a potential runaway oven condition. Control may have shorted relay, RTD sensor probe may have gone bad.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace EOC.</li> <li>2. Disconnect power, wait 30 seconds and reapply power. If fault returns upon power-up, replace EOC.</li> <li>3. Check RTD sensor probe and replace if necessary. If oven is overheating, disconnect power. If oven continues to overheat when the power is reapplied, replace EOC. Severe overheating may require the entire oven to be replaced, should damage be extensive.</li> </ol>
<b>F3</b>	<ol style="list-style-type: none"> <li>1. Open RTD sensor probe. Note: The EOC will initially display an <b>F1</b> for this condition. The EOC thinks a runaway oven condition exists. Shorted RTD sensor probe. Note: The <b>F3</b> for shorted probe should only occur when the oven is active or when an attempt is made to enter a mode.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check resistance at room temperature and compare to RTD sensor resistance chart. If resistance does not match the chart, replace RTD sensor probe.</li> <li>2. Check resistance at room temperature, if less than 500 ohms, replace RTD sensor probe.</li> </ol>

## CIRCUIT ANALYSIS MATRIX (ES100 CONTROL)

	EOC Relays		Door Switch COM-NC
	L1 to Bake	L1 to Broil	
Bake	X	X*	
Broil		X	
Door Open			X
Door Closed			

Note: X=Check listed circuits. \*=Alternates with Bake element.

**TROUBLESHOOTING WIRING DIAGRAM**



**TROUBLESHOOTING WIRING SCHEMATIC**

