

SERVICE DATA SHEET

318047460 (0910) Rev. A

Gas & Electric Appliances with Electronic Oven Control (ES100)

NOTICE

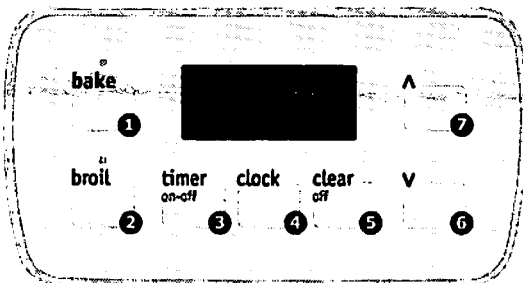
This service data sheet is intended for use by persons having electrical and mechanical training and a level of knowledge of these subjects generally considered acceptable in the appliance repair trade. **The manufacturer cannot be responsible, nor assume any liability, for injury or damage of any kind 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 limited 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 cataloged 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 so will create a potential hazard.**
6. Prior to returning the product to service, ensure that:
 - All electric and gas connections are correct and secure.
 - All gas connections are tested for leaks. **Do not test for gas leaks with a flame.**
 - 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.

ES100 ELECTRONIC OVEN CONTROL



- Note:**
- 1) The ES100's are not field repairable.
 - 2) Depending on model, the size and shape of touch pads may vary.

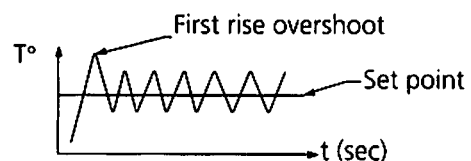
NORMAL BAKE

Electric Models: During a normal bake mode, the control preheats the oven by alternate bake & broil elements. When the desired temperature is reached, the control adds top heat by cycling the broil element on for approx. 5 seconds per minute. The bake element is on for the remaining time of the minute. Both elements use full power when they are on but they are never on at the same time.

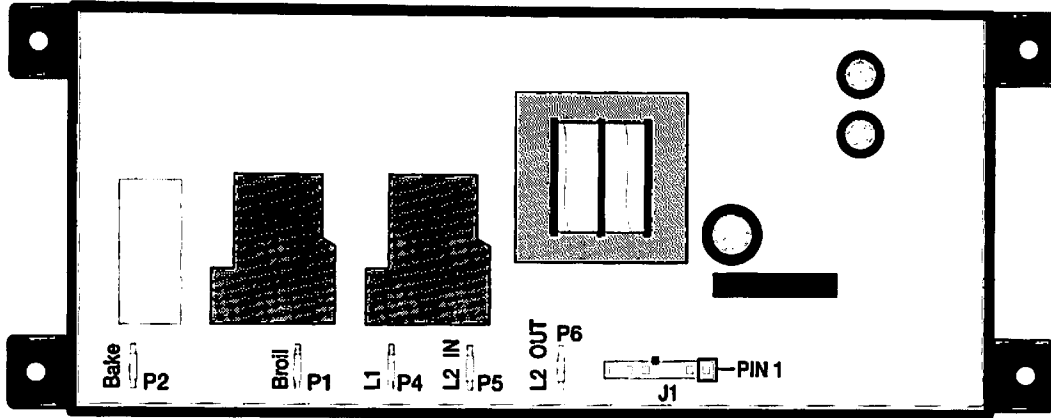
Gas Models: Only the bake burner is used all the time.

FIRST RISE

It is normal to see a temperature overshoot in the first rise of all modes when you monitor the temperature.

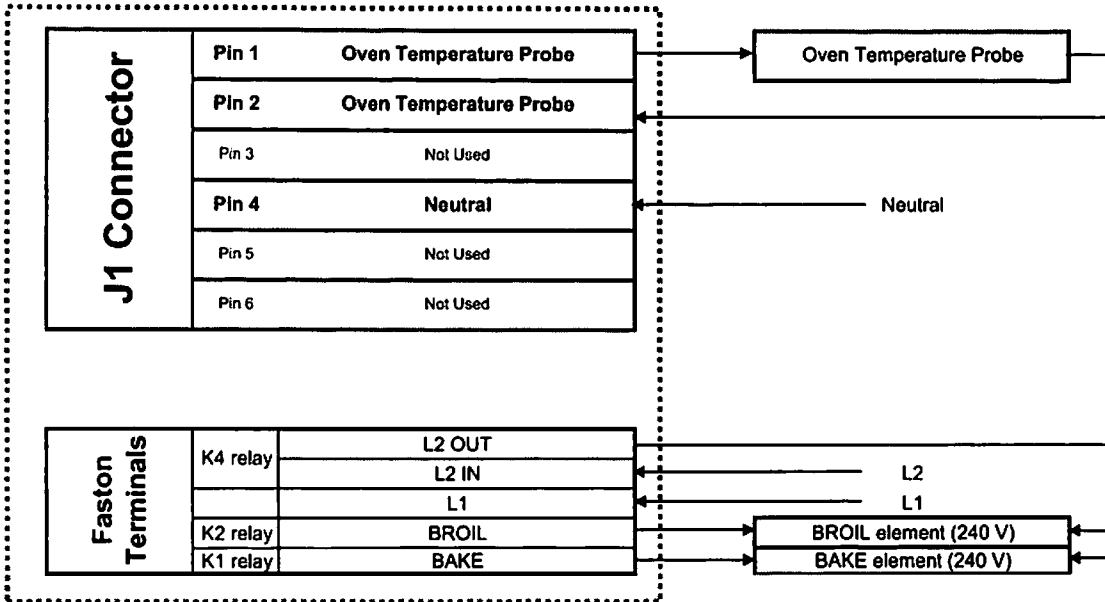


ELECTRONIC OVEN CONTROL

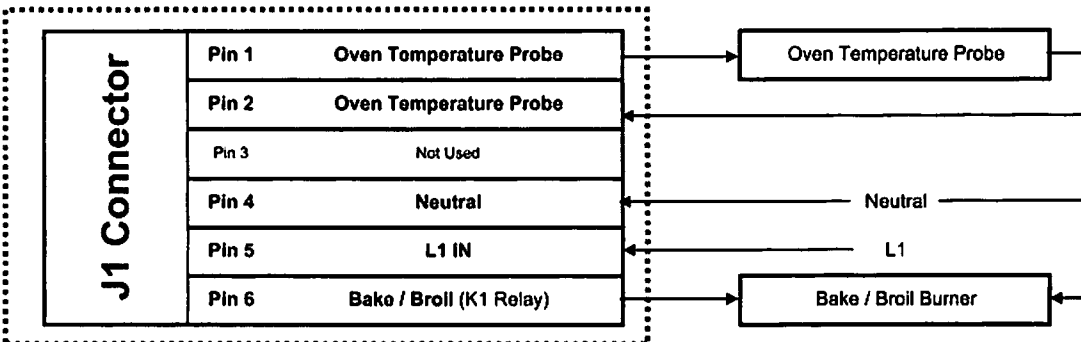


BLOC DIAGRAMS

Electronic Oven Control ES100/ES105 Electric



Electronic Oven Control ES100/ES105 Gas



OVEN CALIBRATION

Set the electronic oven control for normal baking at 350°F. Obtain an average oven temperature after a minimum of 5 cycles. The oven calibration can be modified using the oven control display. Please refer to the Owner's Guide manual.

Note: Changing calibration affects all the cooking modes but not the clean and the broil modes.

ELECTRONIC OVEN CONTROL FAULT CODE DESCRIPTIONS AND RTD SCALE

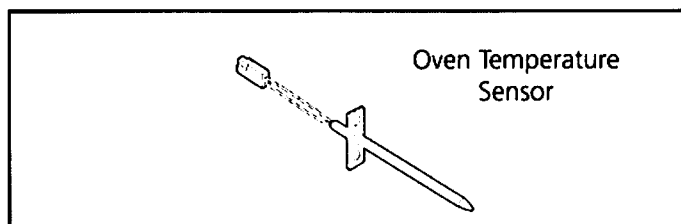
Note: Generally, "F1X" implies a control failure, and "F3X" an oven probe problem.

Fault Code	Likely Failure Condition/Cause	Suggested Corrective Action
F10	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.
F11	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.	<ul style="list-style-type: none"> ● Press CLEAR key. ● If the problem persists, replace the EOC.
F13	Control's internal checksum may have become corrupted.	<ul style="list-style-type: none"> ● Press CLEAR key. ● Disconnect power, wait 30 seconds and reapply power. If fault returns upon power-up, replace the EOC.
F30	Open RTD sensor probe/wiring problem. Note: EOC may initially display an "F10", thinking a runaway condition exists.	<ul style="list-style-type: none"> ● Check wiring in probe circuit for possible open or short condition. ● Check RTD resistance at room temperature (compare to probe resistance chart). If resistance does not match the chart, replace the RTD sensor probe.
F31	Shorted RTD sensor probe / wiring problem.	<ul style="list-style-type: none"> ● Let the oven cool down and restart the function. ● If the problem persists, replace the display board.

Note: **F30** or **F31** is displayed when oven is in active mode or an attempt to enter an active mode is made.

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



CIRCUIT ANALYSIS MATRIX (Electric Models)

Function	Bake Element	Broil Element
Bake	X*	X*
Broil		X

CIRCUIT ANALYSIS MATRIX (Gas Models)

Function	Bake Burner
Bake	X
Broil	X

* Denotes broil element alternate with bake element.

ELECTRICAL RATING (24" Electric Models)

Kw Rating 240 / 208V	3.4 / 2.5
Bake Element Wattage	2100W / 1577W
Broil Element Wattage	3400W / 2554W

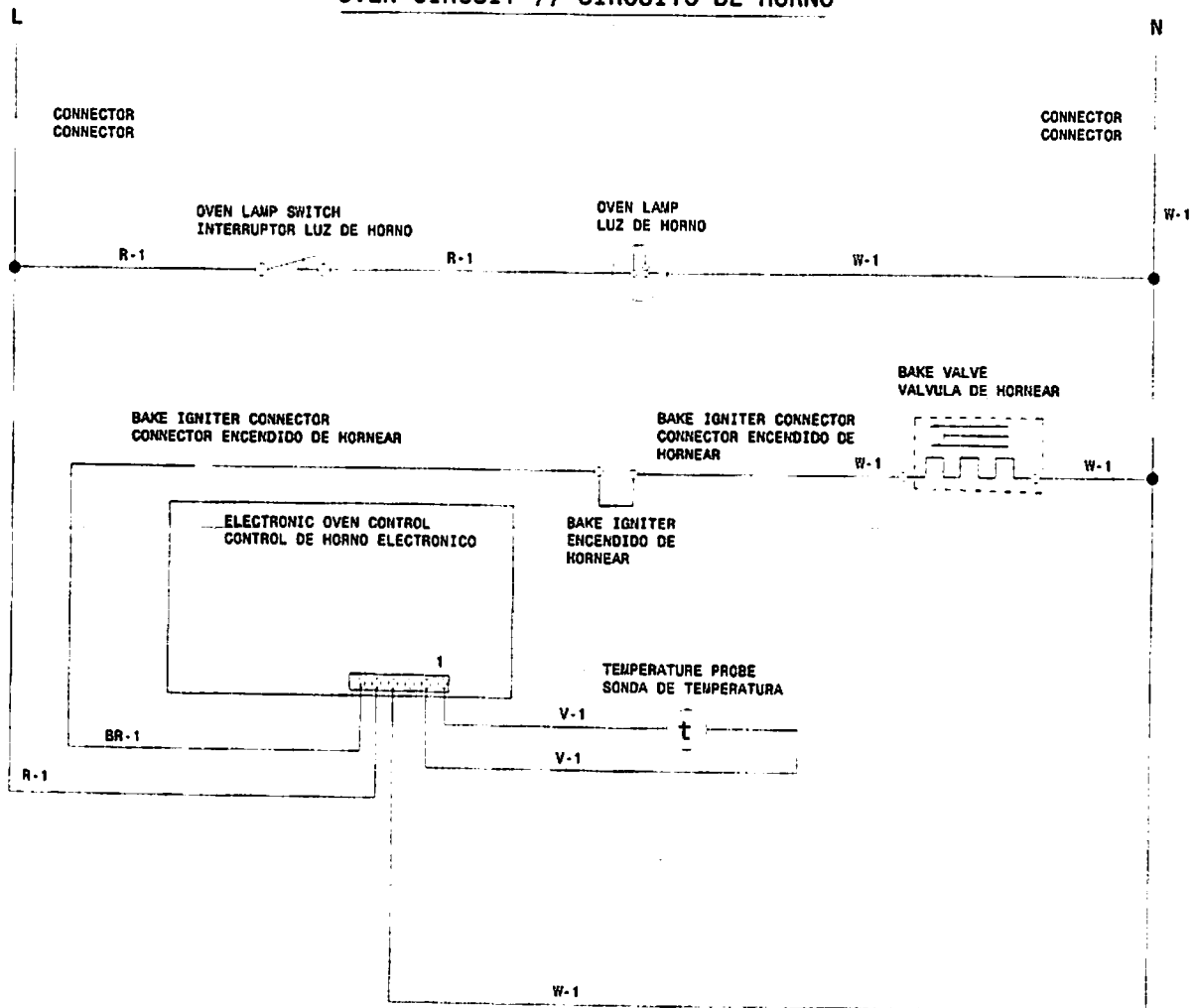
ELECTRICAL RATING (30" Electric Models)

Kw Rating 240 / 208V	3.0 / 2.3
Bake Element Wattage	2750W / 2066W
Broil Element Wattage	3400W / 2554W

ELECTRICAL RATING (40" Electric Models)

Kw Rating 240 / 208V	3.0 / 2.3
Bake Element Wattage	3000W / 2253W
Broil Element Wattage	2750W / 2066W

OVEN CIRCUIT // CIRCUITO DE HORNO



CAUTION:
 LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS. WIRING ERROR CAN CAUSE IMPROPER AND DANGEROUS OPERATION. VERIFY PROPER OPERATION AFTER SERVICING.

AVISO:
 ETIQUETE TODOS LOS ALAMBRES ANTES DE DESCONECTAR PAR REALIZAR ET MANTENIMIENTO DE LOS CONTROLES. ERROR DE ALAMBRAJE PUEDE CAUSAR UN FUNCIONAMIENTO INCORRECTO Y PELIGROSO. VERIFIQUE SI EL FUNCIONAMIENTO ESTA CORRECTO DESPUES DEL MANTENIMIENTO.

COLOR CODE/CODIGOS DE COLOR

G. - GREEN/VERDE
 W. - WHITE/BLANCO
 R. - RED/ROJO
 O. - ORANGE/NARANJA
 Y. - YELLOW/AMARILLO
 BR. - BROWN/CAFE
 BL. - BLUE/AZUL
 BK. - BLACK/NEGRO

WIRE ALAMBRE	GUAGE MEDIDA	TEMP. C	CSA	UL
1	18	125	CL1251	3173

CAUTION: DISCONNECT POWER BEFORE SERVICING UNIT.
AVISO: DESCONECTE LA ENERGIA ANTES DE REALIZAR EL MANTENIMIENTO DEL ELECTRODOMESTICO.

318046317 REV:A

