Fast Track Trouble shooting

IMPORTANT SAFETY NOTICE – "For Technicians Only" This service data sheet is intended for use by persons having electrical, electronic, and mechanical experience and knowledge at a level generally considered acceptable in the appliance repair trade. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible, nor assume any liability for injury or damage of any kind arising from the use of this data sheet.

Model: DV56H9000

Publication # SM-DV56H9000
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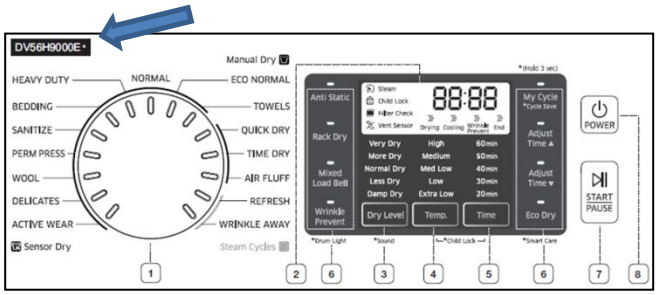
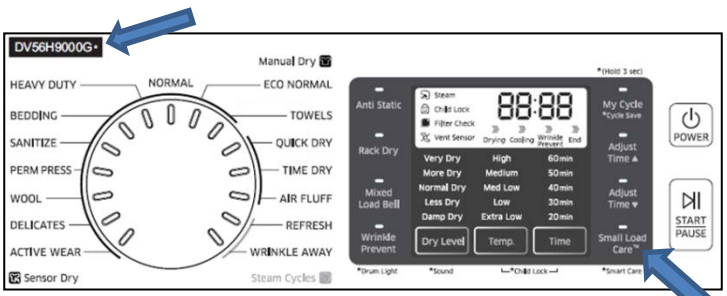
Support Information:

HELP: 1-888-751-4086 (Tech Sup. – ASC/SSD)
1-866-894-0637 (Tech Sup. - FE/ME)
GSPN: http://gspn3.samsungcsportal.com/main.jsp
PLUS ONE: http://my.plus1solutions.net/clientPortals/samsung

Bulletins:





SERVICE MODE

TO ENTER:

DRYER MUST BE ON **PRESS:** **MIXED LOAD BELL** + **TEMP** **HOLD FOR 3 SECONDS**

Unit will beep and the **SENSOR BAR TOUCH DATA** will display. This is the initial 1st default check in **SERVICE MODE**.
To return to NORMAL MODE – repeat (Mixed Load Bell + Temp for 3 seconds)

CYCLE COUNT **PRESS:** **MIXED LOAD BELL** **WHILE IN SERVICE MODE**

Displays the total number of cycles the dryer has performed

SOFTWARE VERSION **PRESS:** **TEMP** **UNTIL BEEPS - WHILE IN SERVICE MODE**

Displays the software version. To return to SERVICE MODE press the **TEMP** key again

CONTINUOUS RUN **PRESS:** **MIXED LOAD BELL** + **DRY LEVEL** **HOLD FOR 7 SECONDS**

ERROR ITEMS AND DIAGNOSTIC CODES

When an error occurs, the dryer will sound an error tone for 5 seconds and show one of the following Error Codes in its display continuously.

Error Display	Trigger	Action Taken
tE	The Thermistor resistance is very low or high.	Check for: - Clogged lint screen. - Restricted vent system. - Check Thermistor resistance.
dE	Dryer running with door open.	Check for: - Close the door and run the dryer. - Check for loose or open wire terminals in Door Sensing circuit.
dF	Invalid door condition.	Check for: - Loose or open wire terminals in Door Sense circuit.
bE2	Key on display panel in invalid state.	Check for: - Check if display PCB circuit has short.
FE	Invalid power source frequency.	Check for: - Not using regular power source frequency. - Faulty power frequency sense circuit.
9E1	Electronic control problem. (Over Voltage Error)	Check for: - Check PCB and Wire harness. - Check Power supply.
AE	Electronic Control Problem. (Communication Error)	Check for: - Check PCB and Wire harness. - Replace PCB.
EEE	Invalid state of Eeprom communication.	Check for : - PCB with Eeprom circuit.
HE	Invalid heating Temp in running the dryer.	Call customer service.

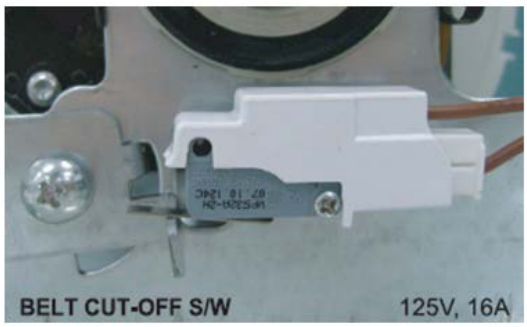
TROUBLE SHOOTING

Doesn't run.	• Make sure the door is latched shut. • Be sure the power cord is plugged into a live electrical outlet. • Check your home's circuit breakers or fuses. • Press the Start/Pause button again if the door is opened during the cycle.
Doesn't heat.	• Check your home's circuit breakers or fuses. • Select a heat setting other than Air Fluff. • On a gas dryer, check that the gas supply is on. • Clean the lint filter and exhaust duct. • Dryer may have moved into the cool-down phase of the cycle.
Doesn't dry.	• Check all of the above, plus... • Be sure the exhaust hood outside the home can open and close freely. • Check the exhaust system for lint buildup. Ducting should be inspected and cleaned annually. • Use a 4" rigid metal exhaust duct. • Do not overload. 1 wash load = 1 dryer load. • Sort heavy items from lightweight items. • Large, bulky items like blankets or comforters may require repositioning to ensure even drying. • Check that the washer is draining properly to extract adequate water from the load. • Load may be too small to tumble properly. Add a few towels.
Has an odor.	• Household odors from paint, varnish, strong cleaners, etc. may enter the dryer with the surrounding room air. This is normal as the dryer draws the air from the room, heats it, pulls it through the tumbler, and exhausts it outside. • When these odors linger in the air, ventilate the room completely before using the dryer.
Shuts off before load is dry	• The dryer load is too small. Add more items or a few towels and restart the cycle. • The dryer load is too large. Remove some items and restart the dryer.
Lint on clothes	• Make sure the lint filter is cleaned before every load. With some loads that produce high amounts of lint, it may be necessary to clean the filter during the cycle. • Some fabrics are lint producers (for example, a fuzzy white cotton towel) and they should be dried separately from clothes that are lint trappers (for example, a pair of black linen pants). • Divide larger loads into smaller loads for drying • Check pockets thoroughly before washing and drying clothes.
Is noisy.	• Check the load for objects such as coins, loose buttons, nails, etc. Remove promptly. • It is normal to hear the dryer gas valve or heating element cycle on and off during the drying cycle. • Be sure the dryer is leveled properly as outlined in the installation instruction. • It is normal for the dryer to hum due to the high velocity of air moving through the dryer drum and exhaust system.
Dries unevenly.	• Seams, pockets, and other similarly heavy areas may not be completely dry when the rest of the load has reached the selected dryness level. This is normal. Select the Very Dry setting if desired. • If one heavy item is dried with a lightweight load, such as one towel with sheets, it is possible that the heavy item will not be completely dry when the rest of the load has reached the selected dryness level. Sort heavy items from lightweight items for best drying results.
Garments still wrinkled after Wrinkle Release	• Small loads of 1 to 4 items work best. • Load fewer garments. Load similar-type garments.
Odors remain in clothing after Air Fluff.	• Fabrics containing strong odors should be washed in a normal cycle.

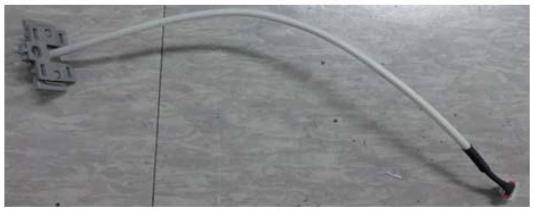
.Thermistor resistance 10K Ω @ 25°C 77°F
.Thermostat 1 resistance < 1Ω

.Thermostat 3 resistance < 1Ω
-If resistance is infinity, replace thermostat 3.
. Thermostat 2 resistance < 1Ω
-If resistance is infinity, replace thermostat 2.
. Heater resistance 13 Ω (PIN 2-3)
Heater resistance 34 Ω (PIN 1-2)
-If resistance is infinity, replace Heater.

Terminal : "COM" - "NC" (1-3) : ∞ Ω
Terminal : "COM" - "NO" (1-2) < 1Ω
. Belt Cut-off S/W



-- Lever open: Resistance value < 1Ω
-- Lever push: Resistance value : ∞ Ω
-□ Vent Sensing – Thermistor Resistance



. Measure resistance of the following terminal
-1) Door switch : Off
Terminal : "COM" - "NC" (1-3) : <1Ω
Terminal : "COM" - "NO" (1-2) : ∞ Ω
-2) Door switch : On

Terminal : "COM" - "NC" (1-3) : ∞ Ω
Terminal : "COM" - "NO" (1-2) < 1Ω
. Belt Cut-of S/W

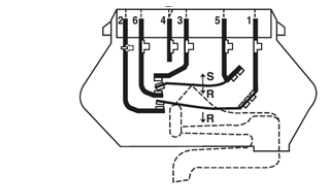
Function	1M	2M	3M	5M	6M
Start			●	●	
Run	●	●		●	●

.□ Motor (Electronic & GAS)
Contacts
.□ = Contact closed

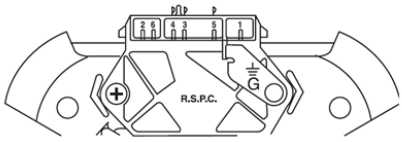
-Centrifugal Switch (Motor)

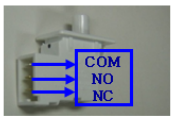
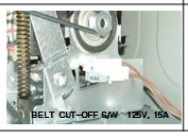
2.0Ω between
Pin# 3 and 4

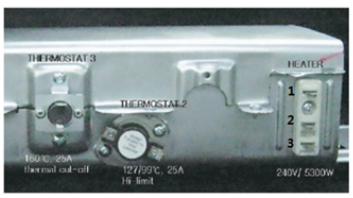
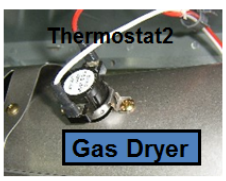
2.3Ω between
Pin# 4 and 5

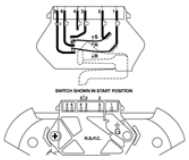


SWITCH SHOWN IN START POSITION

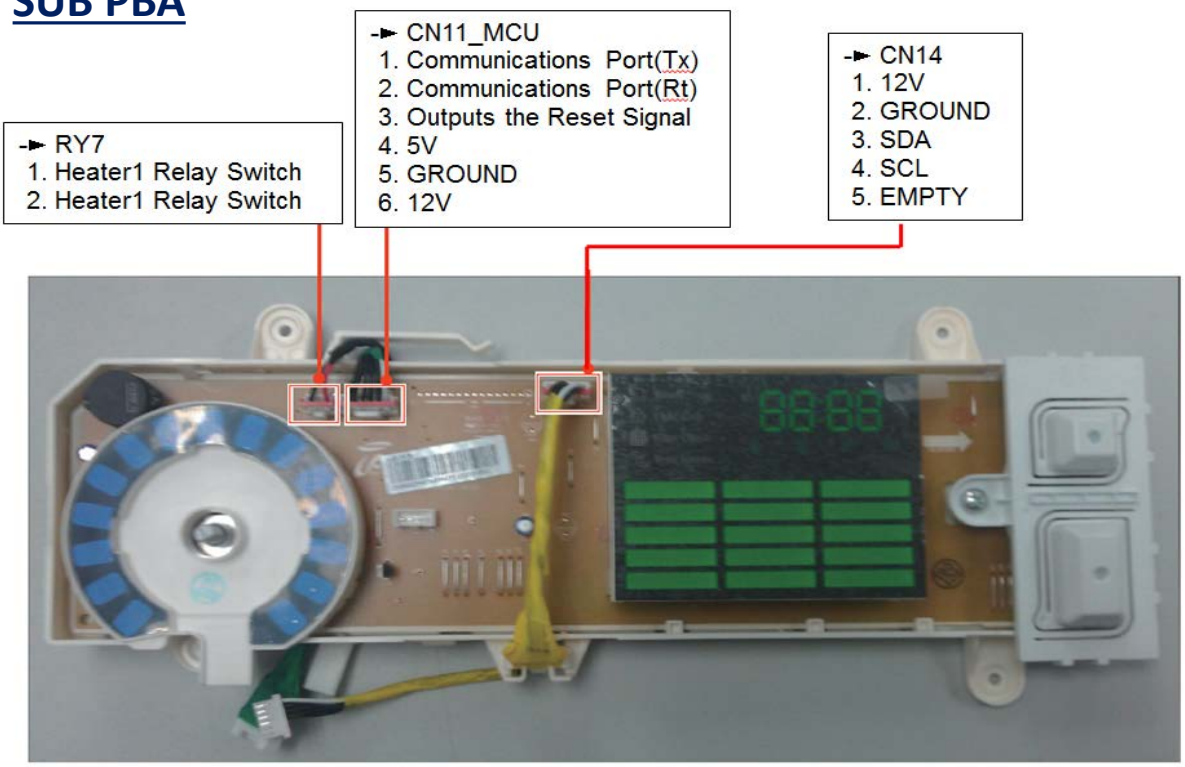


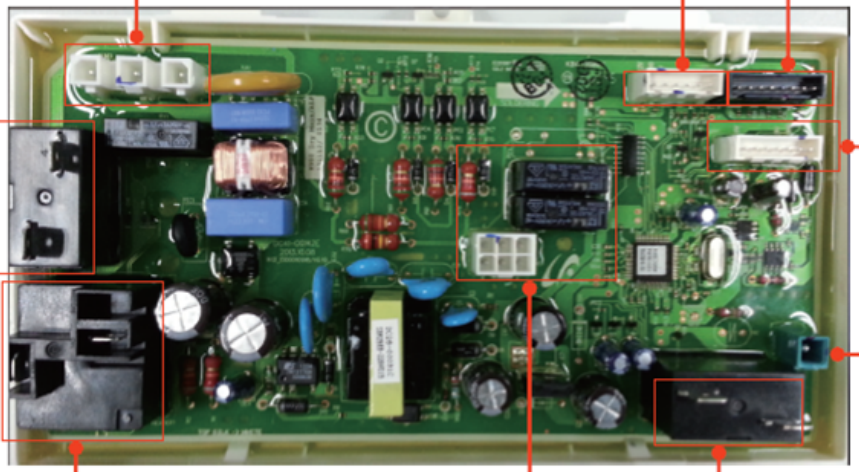
Parts	Image	Description	Value
[Gas]		[Electric]	
Thermistor		Unplug connector and test from wire insertion side. Pin #2 and Pin #6 of CN6	10 KΩ @ 77° F/25°C
Door Switch		Unplug connectors and test switch terminals. Door open terminals COM to NC Door open terminals COM to NO Door closed terminals COM to NC Door closed terminals COM to NO	Infinity Less than 1 Ω Infinity Less than 1 Ω
Lamp		Unplug connectors and test switch terminals. Check across terminals	DC12V
Belt Switch		Unplug connectors and test switch terminals. Check across terminals switch closed Check across terminals switch open	Less than 1 Ω Infinity

Parts	Spec	Description	Value
			
Thermostat 1	Thermostat Cut Off 185°F/85°C, 25A	Unplug connector and measure its resistance	Less than 1 Ω
Thermostat 2	Hi Limit 260°F/127°C, 25A (Electric) 230°F/110°C, 25A (Gas)	Unplug connector and measure its resistance	Less than 1 Ω
Thermostat 3	Thermostat Cut Off 320°F/160°C, 25A	Unplug connector and measure its resistance	Less than 1 Ω
Heater	240V / 5200W (3700+1500)W	Unplug connectors and test Heater terminals	3700W : 13Ω 1500W : 34Ω

Parts	Image	Description	Value
Radiant Sensor (Gas)		Unplug connectors and test sensor terminals.	Closed
Sensor Bars		Unplug connector and measure its resistance. Pin #4 to Pin # 5 of CN6	Infinity dry load 190 Ω ± 10% wet load
Motor		Unplug harness connector and test motor circuits. Pin #4 and Pin #5 (Windings) Pin #1 and Pin #2 (Centrifugal switch) Refer to 5-2 wiring for differences between Electric & Gas	2 Ω Open
Gas Valve		Unplug connectors and test valve terminals (its numbering is from the front terminal.) Check across terminals #1 and #3 (Booster Coil). Check across terminals #1 and #2 (Holding Coil). Check across terminals #4 and #5 (Secondary Coil).	560 Ω 1365 Ω 1325 Ω

SUB PBA





-► CN1
1. PIN1 - AC Power Port
2. PIN2 - Door Detection Sensor
3. PIN3 - Motor Switch Check

-► CN2
1. Communications Port (Rx)
2. Communications Port (Tx)
3 SUB RESET
4 5V
5. DGND
6. 12V

-► CN3

1. 5V	5. CLOCK
2. SO	6. FLMDO
3. SI	7. DGND
4. RESET	8. Empty Pin

-► CN4
1. DGND
2. 5V
3. TEMP Sensor1
4. Fabric Detection Sensor
5. Fabric Detection Sensor
6. 5V
7. TEMP Sensor2

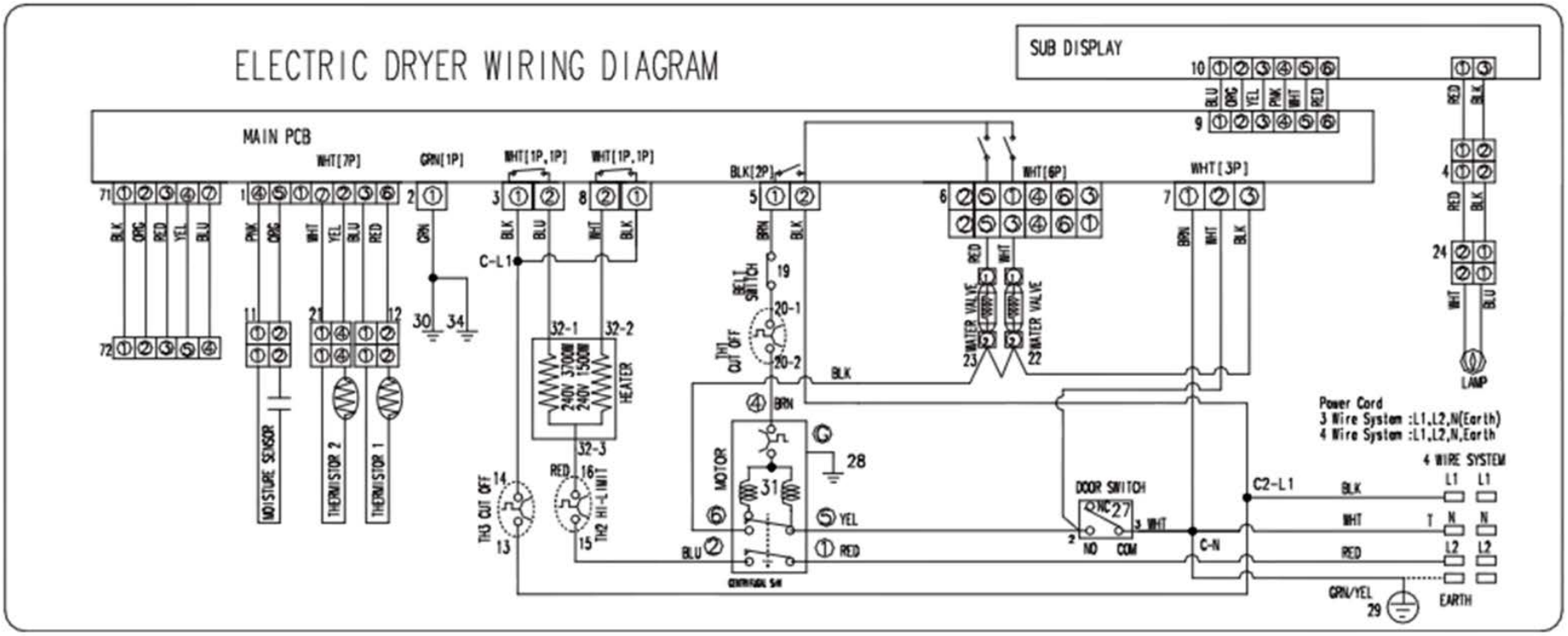
-► RY5
1. Motor Relay Switch
2. Motor Relay Switch

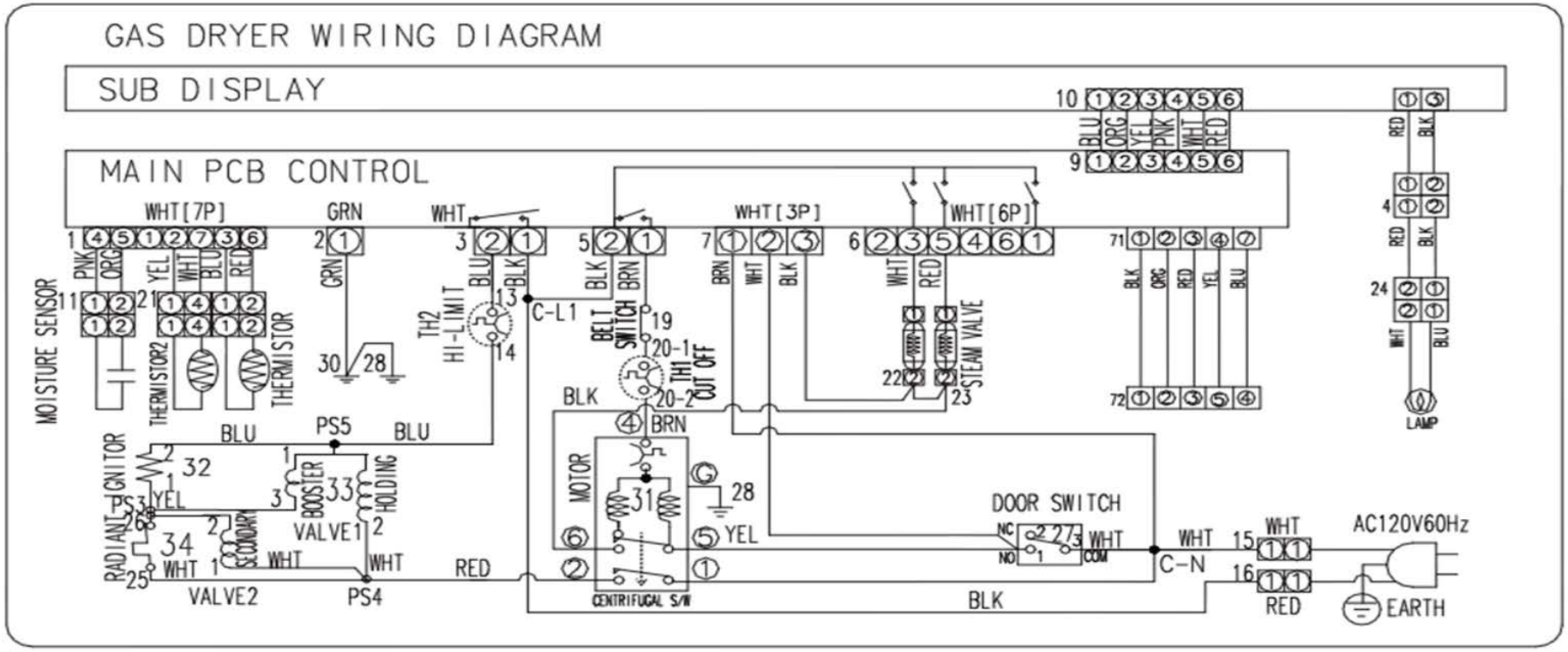
-► CN6
-1. SET GND

-► RY7
1. Heater1 Relay Switch
2. Heater1 Relay Switch

-► CN5
1. PIN1 - Steam Valve 1 Switch
2. PIN2 - Steam Valve 2 Switch
- Steam Model Only

-► RY6
1. Heater2 Relay Switch
2. Heater2 Relay Switch


ELECTRIC DRYER WIRING DIAGRAM
SUB DISPLAY
MAIN PCB
WHT[7P]
GRN[1P]
WHT[1P,1P]
WHT[1P,1P]
BLK[2P]
WHT[6P]
WHT[3P]
MOISTURE SENSOR
THERMISTOP 2
THERMISTOP 1
C-L1
32-1
32-2
32-3
HEATER
3700W
240V 1500W
240V
CUT OFF
THS CUT OFF
TH2 HI-LIMIT
MOTOR
CENTRIFUGAL S/W
WATER VALVE
WATER VALVE
DOOR SWITCH
NC
NO
COM
C-N
C2-L1
LAMP
Power Cord
3 Wire System :L1,L2,N(Earth)
4 Wire System :L1,L2,N,Earth
4 WIRE SYSTEM
BLK
WHT
RED
GRN/YEL
EARTH


GAS DRYER WIRING DIAGRAM
SUB DISPLAY
MAIN PCB CONTROL
MOISTURE SENSOR
THERMISTOR2
THERMISTOR
IGNITOR
RADIANT
PS3
PS5
PS4
BOOSTER
HOLDING
VALVE1
SECONDARY
VALVE2
TH2
HI-LIMIT
C-L1
BELT SWITCH
TH1
CUT OFF
MOTOR
CENTRIFUGAL S/W
STEAM VALVE
DOOR SWITCH
C-N
LAMP
AC120V60Hz
EARTH
WHT[7P]
WHT[3P]
WHT[6P]
GRN
WHT
BLU
BLK
BRN
RED
YEL
ORG
PNK
WHT
BLK