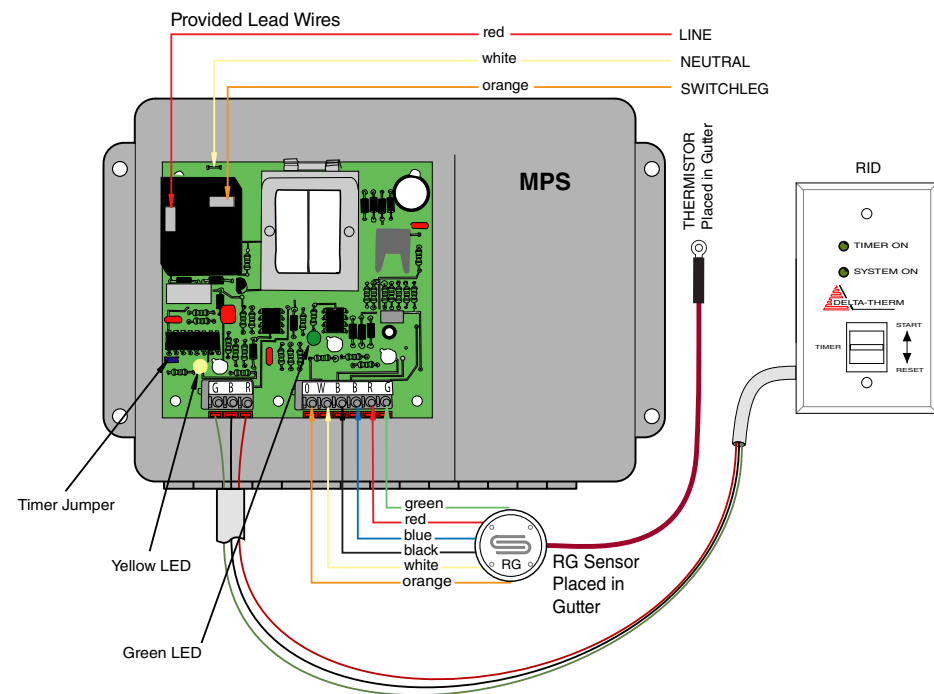


# MPS Trouble Shooting

Wednesday, February 9, 2011 Ver. 1B



**Notes**

FOR QUALIFIED PERSONNEL ONLY

- You can feed the MPS with 120 VAC, or 208/240 VAC with only one phase leg broken.
- The neutral doesn't carry the current load and may be downsized in 208/240 VAC application.
- If the jumper pin isn't set, the melting system will always be activated. Refer to low voltage connections on back side for proper jumper pin settings.

## LED INDICATOR LIGHT STATUS:

L1 — Yellow LED Indicator Light  
L2 — Green LED Indicator Light

L1 — BLINKING    MPS in ready mode, fuse is good, no moisture on sensor  
L2 — ON            Ambient temperature <40°F  
Heating cable should **not** be activated.

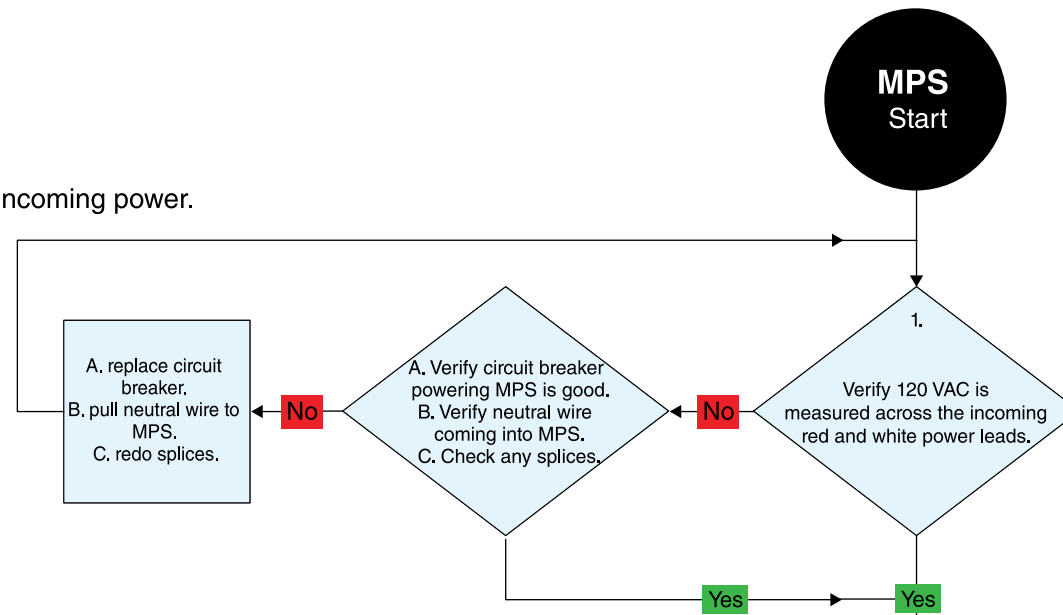
L1 — BLINKING    MPS in ready mode, fuse is good, no moisture on sensor  
L2 — OFF           Ambient temperature >40°F  
Heating cable should **not** be activated, unless previously activated under moisture / <40°F conditions, or on 5-hour timer.

L1 — OFF            Moisture on sensor  
L2 — ON            Ambient temperature <40°F  
Heating cable should be activated.

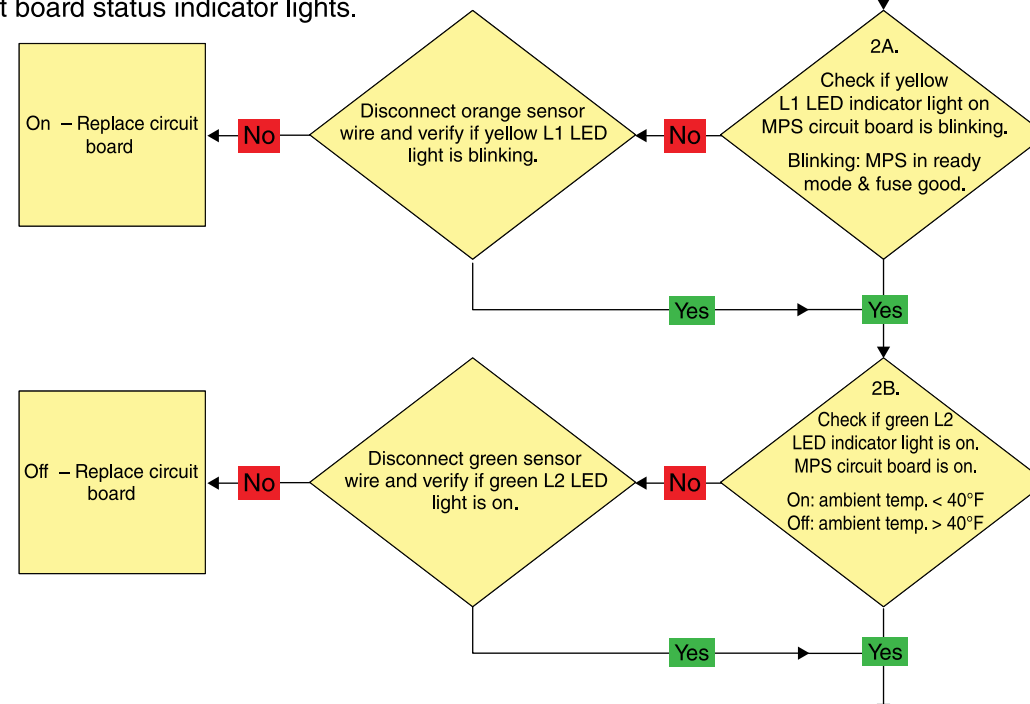
L1 — OFF  
L2 — OFF  
Replace circuit board.

L1 — ON  
L2 — ON or OFF  
Replace circuit board.

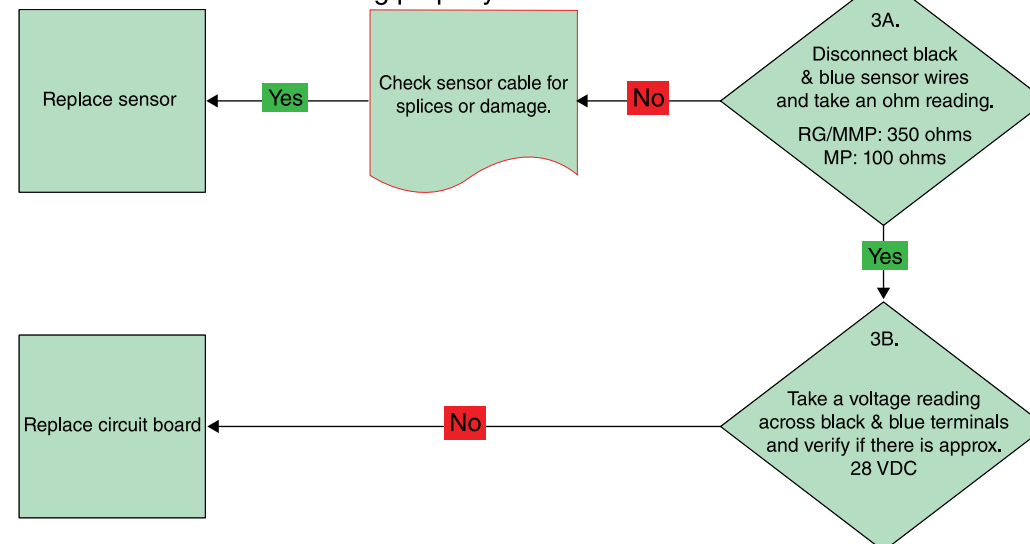
### 1. Verify incoming power.



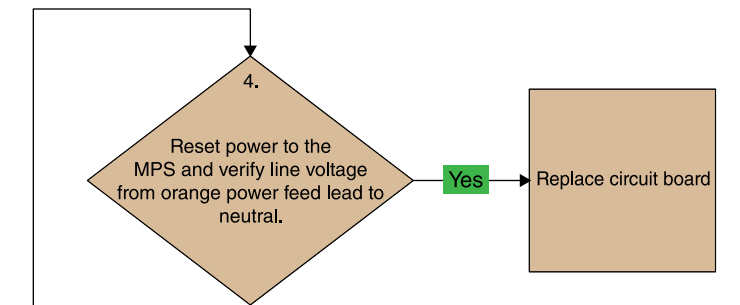
### 2. Verify circuit board status indicator lights.



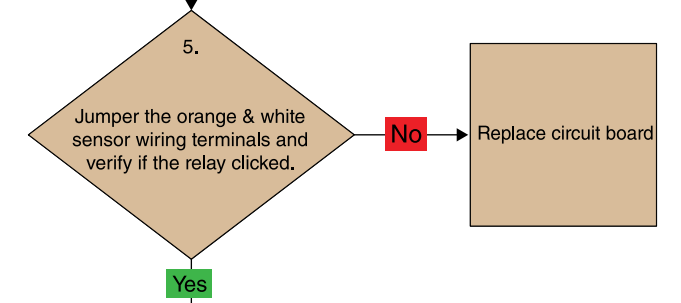
### 3. Verify if the resistor in the sensor is working properly.



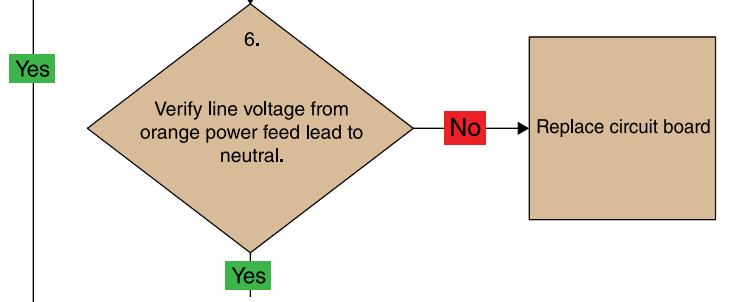
### 4. Verify if the relay is stuck closed.



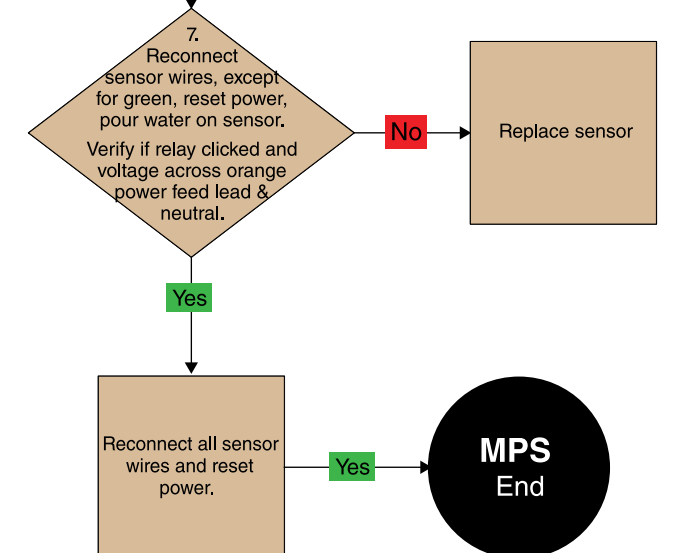
### 5. Verify if the clips on the sensor are working properly.



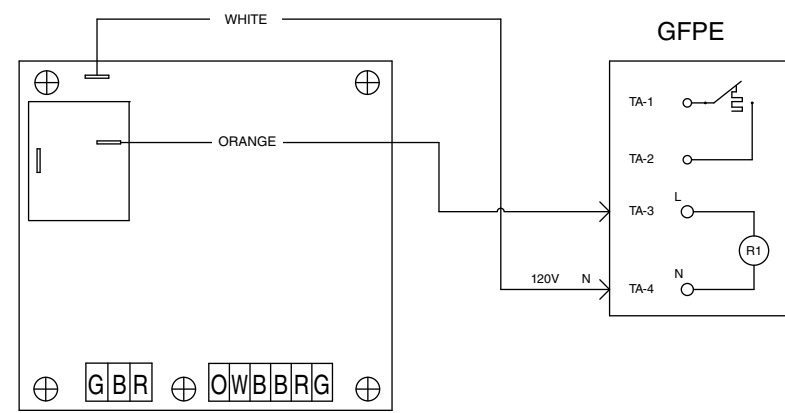
### 6. Verify if the relay opens and is working properly.



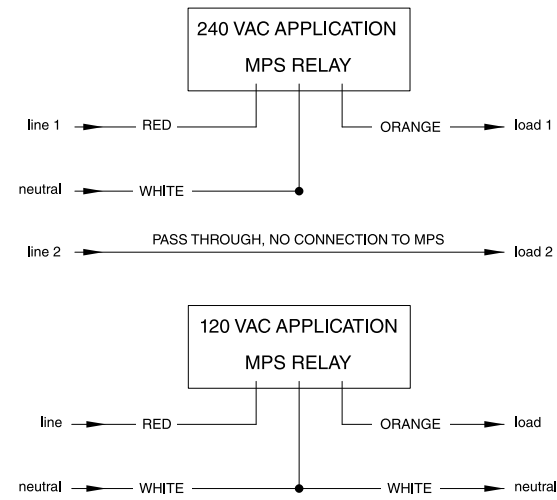
### 7. Verify all components are working properly.



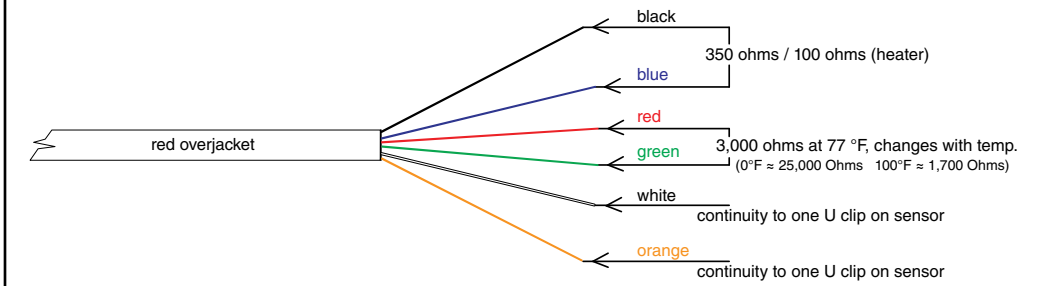
### MPS Voltage Switching with G.F.P.E. Panel



### Wiring Diagram for the MPS (30 amp max. circuit)



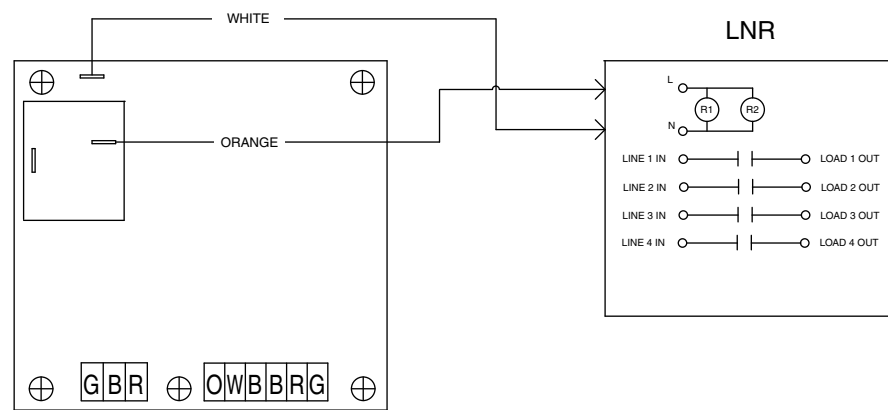
### Low Voltage Sensor Wiring Check with Ohm Meter



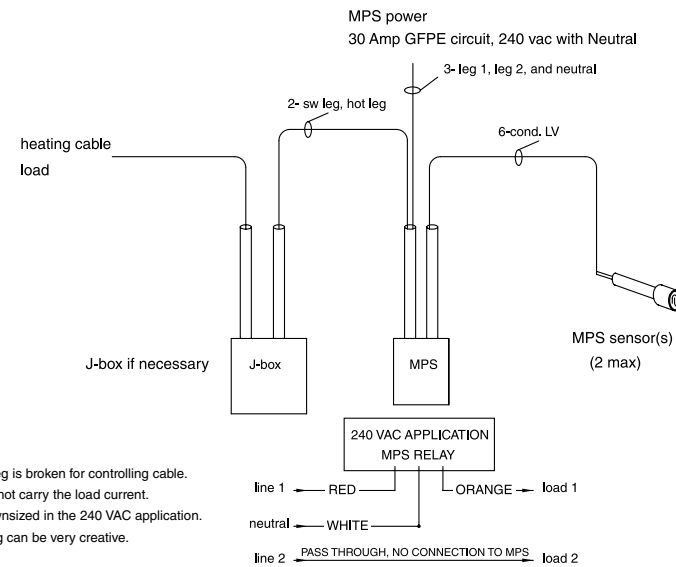
Red/Green wires are sensor thermistor wires.  
Black/Blue wires are internal resistor heating element wires.  
White/Orange wires are U clip moisture sensor wires.

350 ohms = RG & MMP Sensors  
100 ohms = MP Sensor

### MPS Voltage Switching with LNR Panel

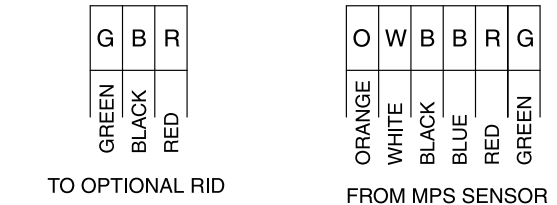


### MPS Directly Controlling 24A 240v Load



Note: Only one phase leg is broken for controlling cable.  
Note: The neutral does not carry the load current.  
The neutral may be downsized in the 240 VAC application.  
Conduit and wire routing can be very creative.  
Note: Ground per code.

### Low Voltage Connections



TO OPTIONAL RID  
(REMOTE INDICATOR/TIMER)

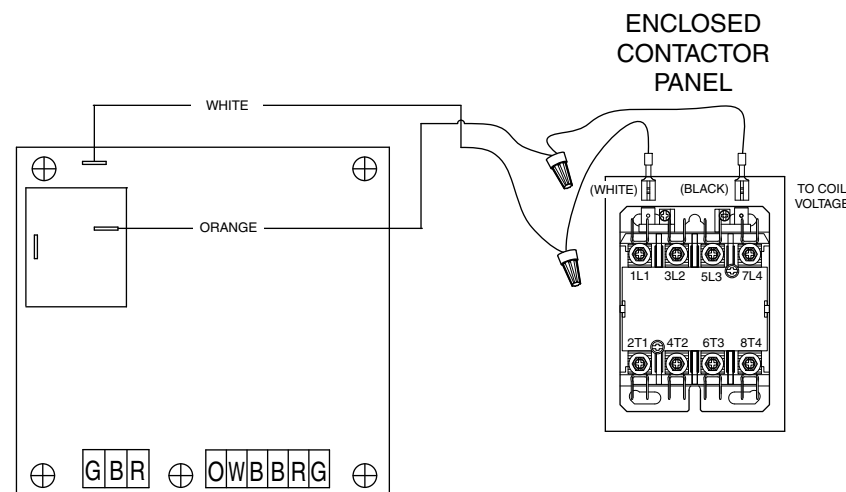
JUMPER PIN

75 minutes Roof/gutter  
5 hours Slab snow melt

UL FILE E145793

On-time after sensor is dry.

### MPS Voltage Switching with Enclosed Contactor Panel



### MPS Directly Controlling 24A 120v Load

