

**MELDAS FR-SF Series**

**Troubleshooting FR-SF  
[No Led's Lit] Condition At Power Up**

USA-E99651 -008\*

**mitsubishi** ELECTRIC AUTOMATION

**USA**

## List of Past Revisions

Suffix	Date of Revision	Detail
*	2/24/98	First edition created

## FR-SF

Symptom: NO LED's

### REMEDIES:

1. Disconnect U, V, W motor wires from the lower right corner of the spindle drive.
2. Pull off SF-CA board
3. Mark the 3 long, black, thin connectors as 101,102, & 103 from top to bottom. Unscrew connectors 101, 102, & 103 and then push them into the base.
4. Re-seat the SF-CA board.
5. Turn on the power to the machine. If no LED's light up, then the SF-PW is bad, order an exchange; or if none are available, send in for repair and return. If you see, the amber LED on the SF-PW then its ok. The problem is in the base, probably a base power transistor is bad. Proceed with steps 6 & 7.
6. In order to check the base, you first need to open the hinge panel that the SF-CA board is attached. Behind the hinge is the component that makes up the base. Locate 3-5 large capacitors. On these capacitors you should see two bus bars. One on the right is **P** and the other is **N**. Together they provide the P & N voltage to the transistor and diode. Check the transistors by measuring the resistance between the following points.

<b>P - U</b>	<b>N - U</b>	{ U, V & W refer to the motor Terminal strip }
<b>P - V</b>	<b>N - V</b>	
<b>P - W</b>	<b>N - W</b>	

**You** should measure anywhere between **7Kohms -----70k ohms**. Anything below that means that The transistor pack is bad. Due to P & N leakage, you might measure resistance in mega ohm Range which is O.K. your main concern is that all the transistor pack are above 7Kohms and consistent with each other.

7. Next, you need to check out your diode packs. To the left of the motor terminal strip you should see a Magnetic Contactor. The wires connected to the top of it are labeled R3, S3, & T3. In some case they are labeled as X1,X2, &X3. You need to check the resistance between the following points.

<b>P - R3</b>	<b>N - R3</b>
<b>P - S3</b>	<b>N - S3</b>
<b>P - T3</b>	<b>N - T3</b>

You should measure the same resistance as you did with the transistor pack. Again, anything under 7K ohms is bad.

After completion of this test call **MITSUBISHI** and contact **Service Engineers** for further instructions.