

Instruction Sheet 7270185 Rev. 2

Application Qualified Installation of Microboard Kit 2270185
Retrofit to replace old style Main PCB and Power
supply to new 12V DC Power Supply

Model 3850, 3950, 3951, 3951GP Reach-In Incubators

Caution Replacement of the microprocessor board must be performed by
qualified service personnel. ▲



Caution When replacing components, the micro board, power supply and
CO₂ sensor assembly with harness must be replaced as a set. Do not
replace one, and not replace the other. Damage will occur on power-up. ▲

Tools required:

Phillips head screwdriver

Included in this kit:

192094	SMT Microboard
296877	400218 Power Supply Service Kit
192348	Service harness for 3850, 3950,3951 and 3951GP

Microprocessor Board Replacement

If the existing board is operational, note the existing setpoints for re-entry into the new board after installation. Check:

- Operating temperature, CO₂, if applicable and Overtemp setpoints. See **Incubator Start-Up** in the operating manual.
- In Config menu, changes to the factory defaults. See **Configuration** in the operating manual.

Disassembly and Installation

1. Turn the unit off and disconnect the power cord.
2. Put on the static wrist strap and connect it to a ground. Do not use the incubator as it is not grounded when disconnected.
3. Remove the five screws in the top housing cover, remove the cover, and locate the micro PCBA and the switch-mode power supply.

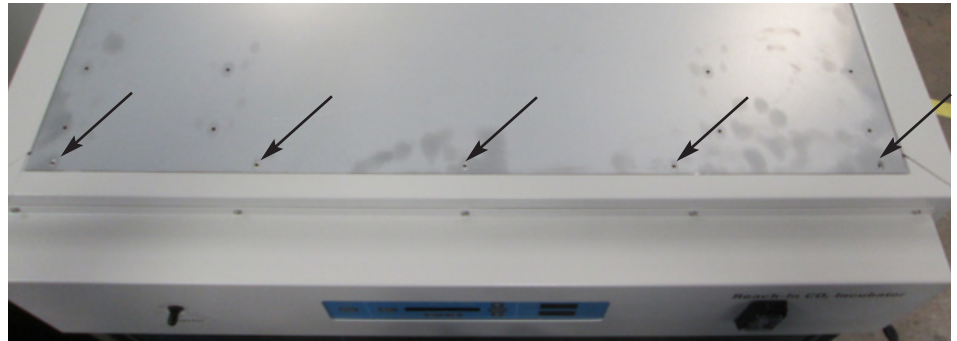


Figure 1. Screw Locations

4. Remove and replace the switch-mode power supply.

Note: While installing on a model 3950 or 3951, verify that the CO₂ jumper is in place.

5. Disengage the ribbon cable from the board. Detach all connections. Note connection locations for reinstallation. See Figure 2.
6. Remove the four Phillips screws securing the micro board assembly to the housing. Discard the board.

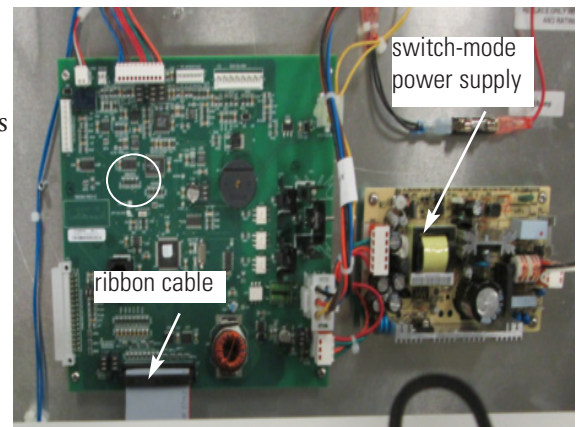


Figure 2. Connection Locations

Disassembly and Installation (continued)

7. Mount the new micro board assembly to the top housing with the screws.
8. Attach the ribbon cable in the same orientation as previously. Install all connections as noted. Make sure connections are fully seated. Replace housing cover.
9. Remove the 4 screws securing the power supply board to the drawer. Discard the power supply.
10. Install plate to new power supply before installation.
11. Replace with 296877 power supply service kit, mount it with screws. Refer to Figure 3.

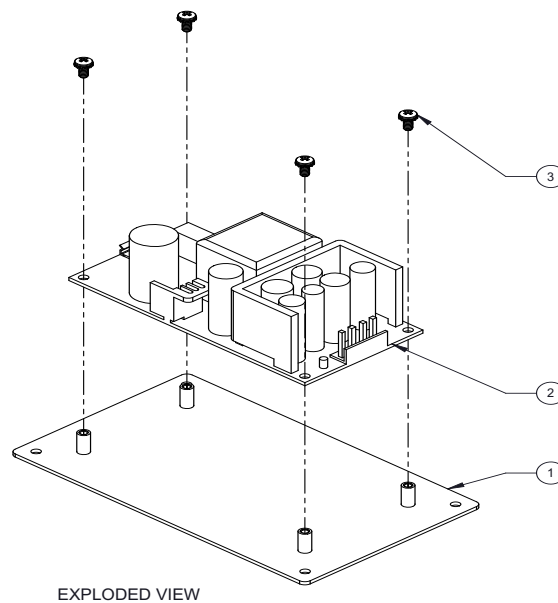


Figure 3. Power supply metal plate mounting

12. Cut off the original AC connector from the wire harness and discard. Refer to Figure 4.



Figure 4. Discard AC connector

**Disassembly and Installation
(continued)**

- Using the 296880 AC input cord splice the wires in place of the previously removed AC connector using the closed end crimp connectors 370398. White wire to white wire and black wire to black wire. Refer to Figure 5.



Figure 5. Connect black to black using 370398

- Make connection to power supply as per Figure 6, White is the neutral and Black is line.



Figure 6. Power supply AC connection

**Disassembly and Installation
(continued)**

15. Using harness 192105 connect the power supply DC output to Micro board DC input connector. Refer to Figure 7.

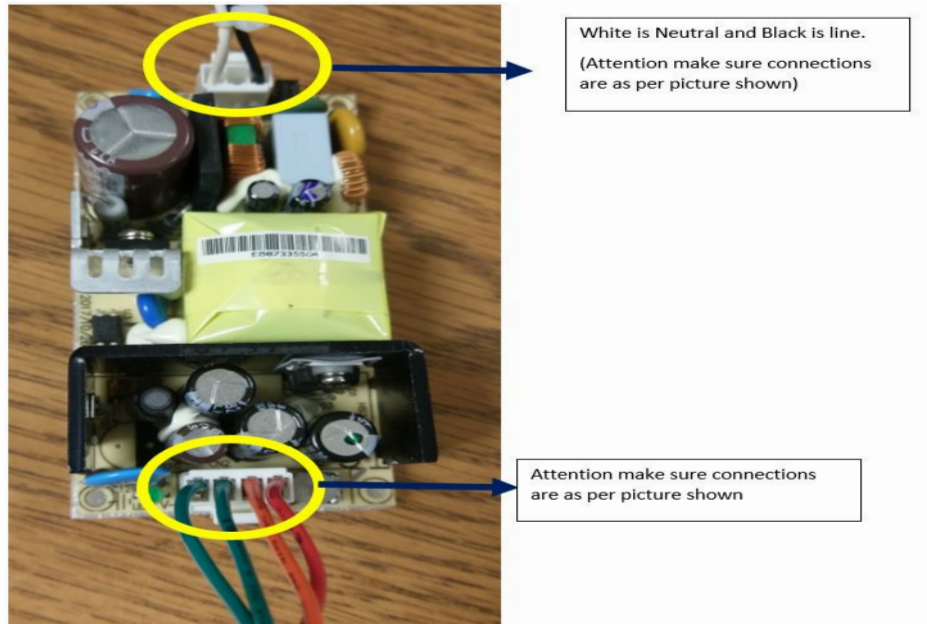


Figure 7. Power Supply for Service

16. As per 7180506 replace the CO₂ sensor assembly for reach-in, it is important to replace the CO₂ sensor assembly with micro-board and power supply.
17. Replace the original 12 pin connector harness with the 192348 harness, ensure to add cable ties at same location as were on the original harness removed.

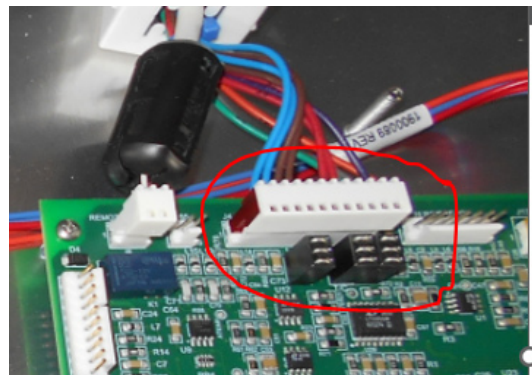


Figure 8. 12 Pin connector

18. Close the control panel drawer and secure with the two screws. Be careful not to pinch wiring in the drawer when closing.

**Disassembly and Installation
(continued)**

19. Connect the power cord and turn the unit on.
20. Enter the operating temperature, overtemperature and CO₂ setpoints. See **Incubator Start-Up** in the operating manual.
21. Enter settings other than factory defaults in Config mode (**Configuration** in the operating manual).
22. For T/C CO₂ sensor Model 3950/3951, the T/C zero and span numbers must be entered in Config mode. See Configuration in the operating manual. If the numbers were not noted previously, a label is located in the control area at the top of the unit, and the CO₂ sensor itself.
23. Allow the unit to stabilize and calibrate the temperature, and CO₂ (RH - optional). See Calibration in the operating manual.
24. Verify proper operation of the unit.

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2	ECNM-002597	06/20/23	Added steps to Disassembly and Installation in page 3 and 5. Added 192348 and replaced 400202 with 296877 in page 1.	TFI
1	ECNM-000980	05/25/22	Specified model numbers in page 1.	TFI
0	41283	1/24/18	Original	bpg
Rev	ECR/ECN	Date	Description	By