Field Service Spares Replacement Procedure – Mean Well, 150W 24VDC Power Supply Kit

Approval:

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Revision History

Rev.	ECO	Description of Change	Date
A	9629	Initial release	03-15-2012

Field Service Replacement Procedure – Mean Well 150W, 24VDC Power Supply Kit

1. Brief Summary:

Troubleshooting document for diagnosing a fault with and replacing the Mean Well 150W, 24VDC power supply unit.

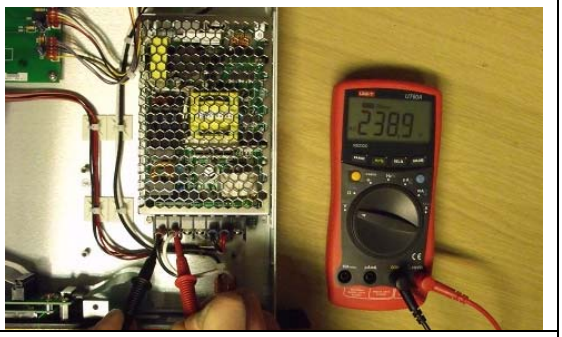
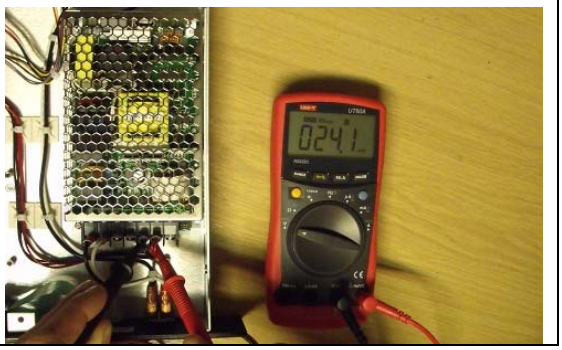
2. Checklist:

- Verify AC Voltage is present entering the power supply
- Verify DC Voltage is present exiting the power supply

3. Theory of Operation:

The Mean Well 150W power supply is switch mode and will convert either 110VAC or 220VAC into 24VDC. This component is universally used in the DAC-2202, XX97 and XX06 pedestal power supplies, XX09 and XX10 PCU's, the 4012 ICU and NJRC 24VDC BUC power supplies meaning only a single unit is needed as a spare to cover a wide range of applications.

4. Troubleshooting:

1. Measure the input voltage into the power supply on the connectors for the black (-) and white (+) cables on the left of the connection block, 110 - 240 volts AC should be present. If no AC voltage is present verify the unit is switched on. If there is still no voltage present troubleshoot the source.	
2. Now measure the output voltage from the power supply on the connectors for the red (+) and black (-) cables on the right of the connection block, the output should be 24VDC.	

If the units AC input has been verified and the 24VDC is not present, the power supply is defective and needs to be replaced. If the power supply is outputting the 24VDC consistently then the power supply is operational and the problem lies elsewhere (possible failure with the PCU, DAC motherboard or harness connection).

5. Replacing the 4012 Mean Well Pedestal Power Supply:

5.1. Tools.

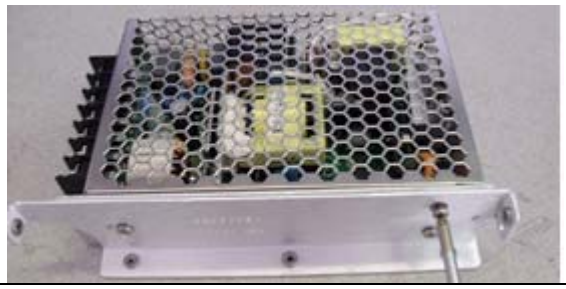
- 5/16" Wrench/Spanner
- 7/16" Wrench/Spanner
- 7/16" Socket
- #1 Phillips Screwdriver
- #2 Phillips Screwdriver
- Small Phillips Screwdriver
- ***Note:** Tools may vary depending on application

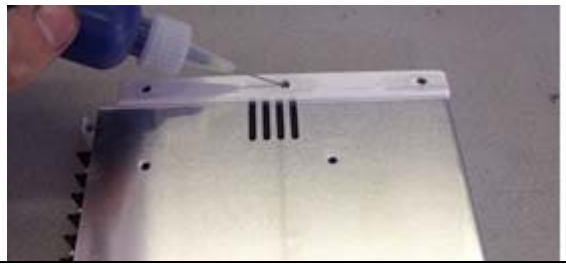
5.2. Procedure.

Procedure for replacing the Mean Well power supply unit, Sea Tel kit part number: 135341-1 (Mean Well PSU part number: 133562-6). ***Note:** Procedure shows the replacement of the 4012 pedestal power supply; however the principal is the same across other applications.

***Caution:** Power down the pedestal before following this procedure. 1. Disconnect the GPS antennas RJ-45 connector from the ICU.	
2. Disconnect the AC power connector from the ICU.	
3. Disconnect the RF power connector from the ICU.	

4. Disconnect the RF SMA cables from the ICU using a 5/16" wrench (note their orientation).	
5. Remove the D-sub connectors from the ICU using a 2mm flat blade screwdriver.	
6. Undo the 4 mounting bolts using a 7/16" wrench and socket (or a pair of wrenches) and remove the ICU assembly. ***Note:** Support the pedestal while removing the ICU as this will affect the balance of the system.	
7. Remove the 11 screws securing the ICU cover using a #1 Phillips screwdriver. Remove the cover, saving the hardware for future use.	
8. Make a note of the orientations of the connections to the power supply as these may vary depending on the application.	

9. Remove the plastic cover from the front of the power terminals.	
10. Remove the power cables from the defective power supply using a #2 Phillips screwdriver.	
11. Using a small Phillips screw driver remove the 5 countersunk screws securing the power supply to the ICU case (from the underneath). Save the hardware for future use.	
12. Remove the screw securing the rear of the power supply to the ICU case using a #1 Phillips screw driver. Save the hardware for future use.	
13. Remove the defective power supply and remove the 3 screws securing the mounting bracket to it using a #1 Phillips screwdriver. Save the hardware for future use.	

14. Apply Loctite 242 to the 3 mounting points and install the bracket to the replacement power supply using the hardware removed in the previous step.	
15. Apply Loctite 242 to the 5 countersunk threads removed in step 11 and install the replacement power supply to the ICU case from the underside using a small Phillips screwdriver.	
16. Apply Loctite 242 to the thread and install the screw securing the rear of the power supply to the ICU case using the hardware removed in step 12.	
17. Reconnect the power cable to the replacement power supply in the orientation documented in step 10. 18. Reinstall the plastic cover across the connections.	
19. Reinstall the ICU cover using the 11 screws removed in step 7 using a #1 Phillips screwdriver, apply Loctite 242 to the threads.	

20. Reinstall the ICU assembly to the pedestal using the hardware removed in step 6, apply Loctite 242 to the threads.	
21. Reconnect the AC power cable to the ICU. 22. Reconnect the RF power cable to the ICU.	
23. Reconnect the D-sub connectors to the ICU.	
22. Reconnect the GPS antennas RJ-45 connector to the ICU.	
24. Reconnect the SMA cable to the ICU in the configuration recorded in step 4.