

AL-7108

Maritime Stabilized VSAT System

TEC35-0148-002



Technical Note

SDU power modules replacement



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1 INTRODUCTION

1.1 Overview

The SDU provide power to the SBC/LCU (system controller. The SDU is equipped with 2 Power supply modules (PS) marked PCMA. Those are solid state AC-DC molded units. They producing 3 voltages: +5VDC provided by PCMA50S05 and +/-12VDC provided by PCMA30D12. In case one of the voltages they provide is low (indicated by blinking LED on SDU or controller) the respective unit has to be replaced.



We strongly recommend replacing both units at the same time if repair is need

1.2 Scope

This Technical Note provides information and procedures required for replacing the 2 Power supply modules (PS)

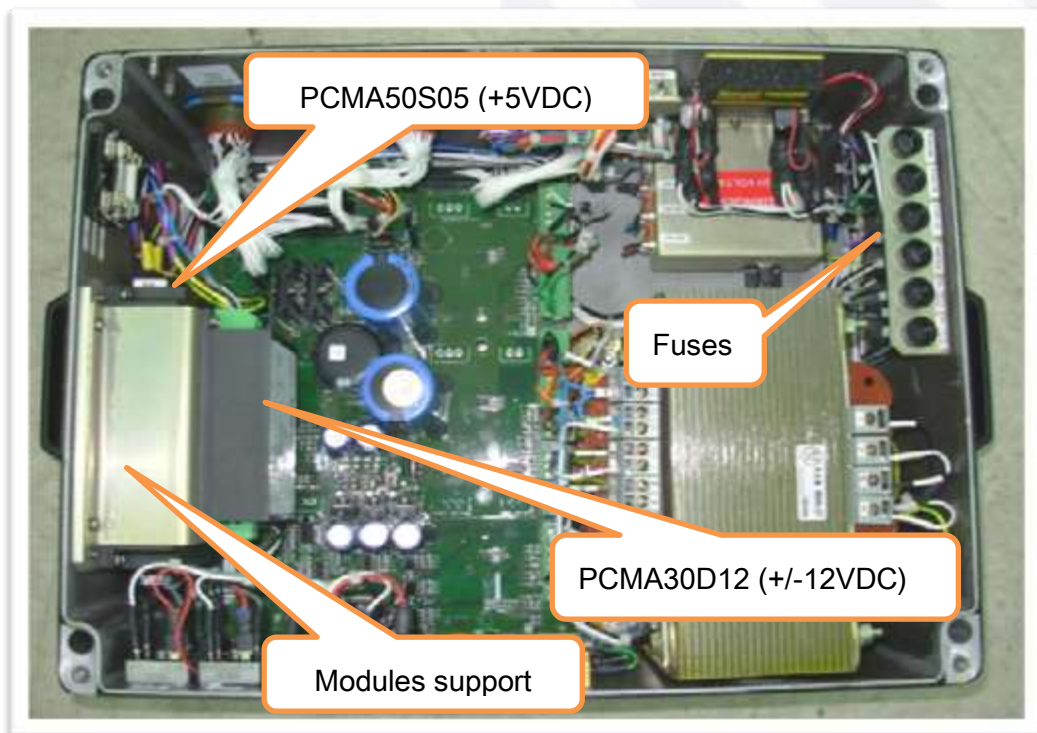


Figure 1 CCU – With Cover Removed

1.3 Required Tools

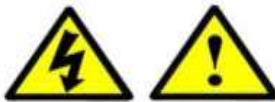
1. Medium Philips screw driver.
2. Small Philips screw driver
3. Side Cutter.
4. Pliers.
5. DVM

1.4 Safety Precautions



Warning!

Before disconnecting any wires inside the SDU verifies the P4 (power) connector is removed. Keep clear from the dome when the system powered



Danger High voltage!

Use extra caution when handling the PS modules. The units are powered by the mains voltage. If you need to do measurement inside the SDU turn on only the “LCU” switch

2 INSTRUCTIONS

2.1 Disassembly

1. Remove SDU cover. Open the 4 Philips bolts that securing the cover.



Figure 2 SDU –Cover bolts

2. Remove the 4 Philips screws from the right wall of the SDU that securing the PS modules support.

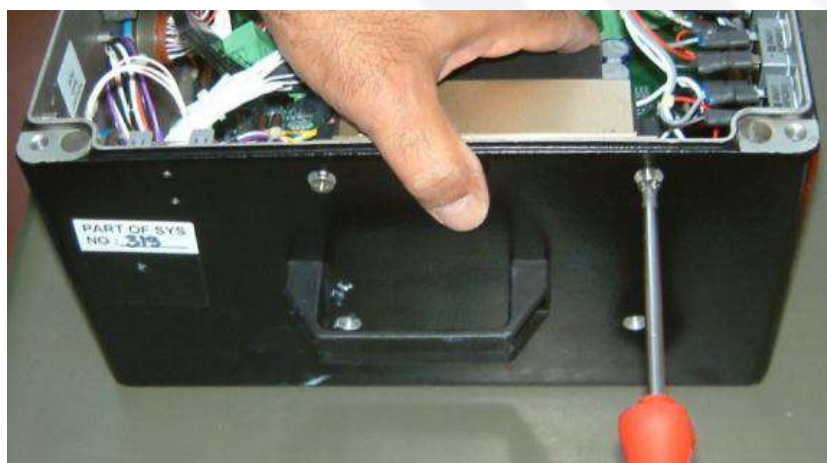
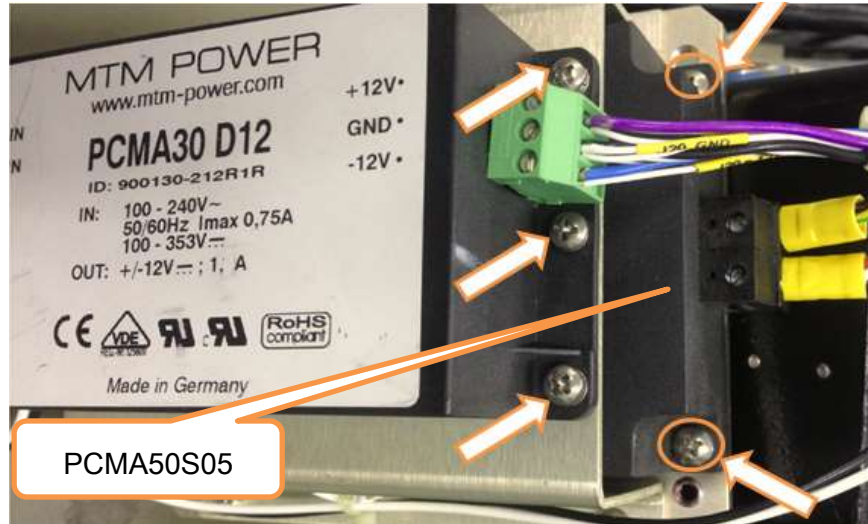


Figure 3 SDU –PS modules support bolts

3. Take out the PS module support outside of the SDU case.

4. With the modules outside remove all the wiring and take the faulty unit out.



The PCMA50S05 is located under the SUPPORT

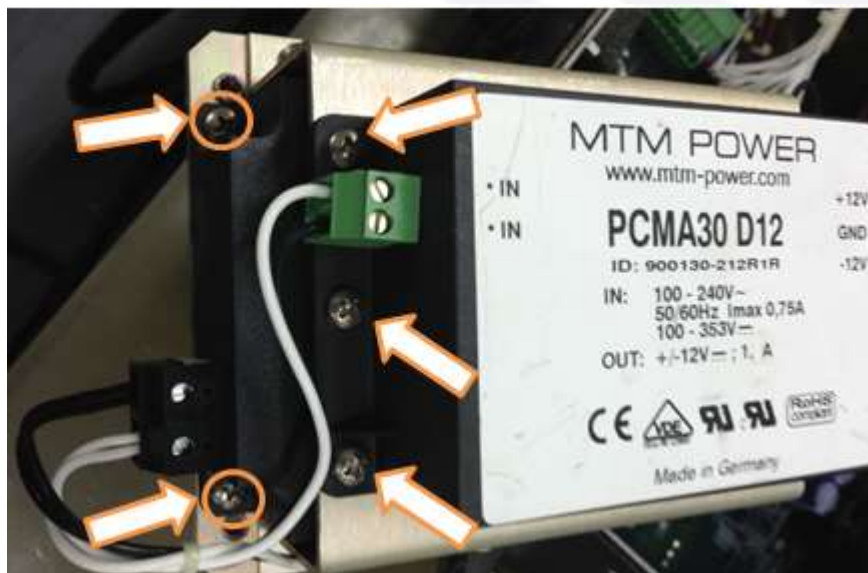


Figure 4 PS modules bolts

2.2 Assembly

1. Install new module in reverse order.
2. Pay close attention to module orientation (AC and DC side)



3 REPAIR VERIFICATION.

1. Before installing back the PS modules support.
2. Power on the SDU. Turn on the LCU switch only



Figure 5 SDU power -SDU and LCU power switches

3. Measure the AC input and DC output of each module.

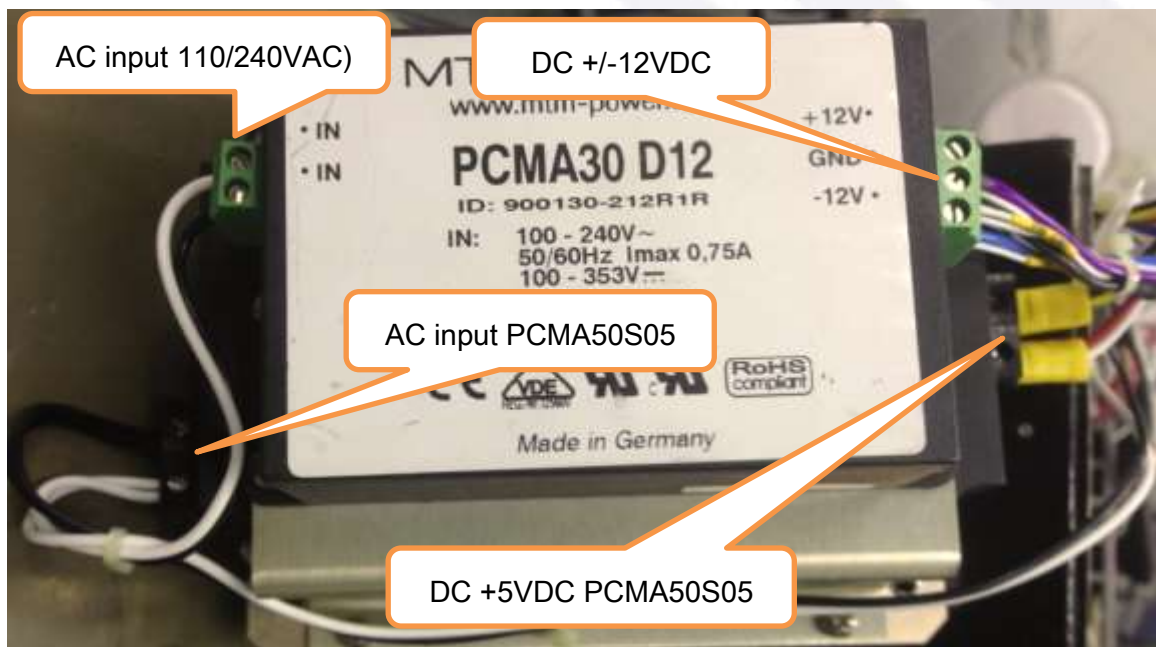


Figure 4 PS modules AC and DC connections

4. If voltage missing check/replace fuse.



Figure 5 SDU fuses

5. Install back the PS modules support and SDU cover.
6. Turn on both SDU and LCU power switches
7. Verify CCU felids are populated and the system moving (going to zenith) after 3 minutes.

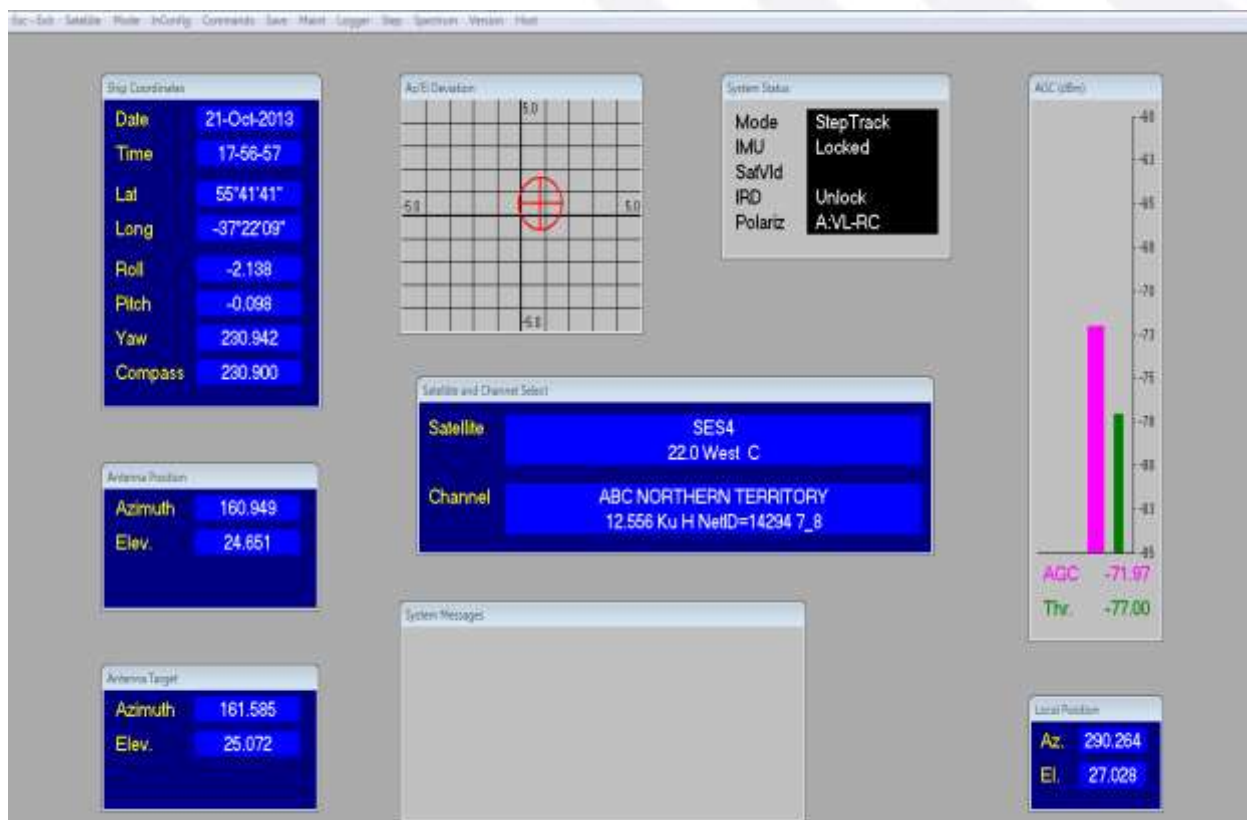


Figure 6 MtsLink SW with fields populated