Module Power Supplies
NPSMO

WARNING

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Description

Module Power Supplies mount in the Module Power Pane (Product Instruct on E93 909 2). These power supplies provide +5 V dc, +15 V dc and 30 V dc which is used to power system components such as the Controller Module and Log Master Module.

The nomenclature for Module Power Supplies is given in Table A.

<table>
<thead>
<tr>
<th>Nomenclature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPSMO1</td>
<td>120 V ac 50/60 Hz : 375 W</td>
</tr>
<tr>
<td>NPSMO2</td>
<td>120 V ac 50/60 Hz : 750 W</td>
</tr>
<tr>
<td>NPSMO3</td>
<td>240 V ac 50/60 Hz : 375 W</td>
</tr>
<tr>
<td>NPSMO4</td>
<td>240 V ac 50/60 Hz : 750 W</td>
</tr>
</tbody>
</table>

TABLE A Nomenclature and Description of Module Power Supplies
Receiving, Handling and Storage

Upon receipt, the unit should be examined for possible damage. If damage is found or if there is any evidence of rough handling, a damage claim should be filed with the responsible transportation company and the nearest Bayley Sales Office. The unit should be noted for future reference.

Storage should be made using the original packing material and container. The storage environment should be protected and should be free of the following: extreme temperatures, moisture, and a quality condition.

Installation and Operation

Follow the procedures outlined in the section of Product Instructions for E93.909.2 for the Module Power Panel (NMPP01 or NMPP02) used in the system.

NOTE: If the Module Power Supply is not connected to the Module Power Panel, at a 50 watt load, it required on the 5 V output. The power supply for proper regulation of the +15.25, 15.28 and 30.5 V outputs.

The input of each supply is fused as shown below. The fuses are 10 A fuses.

<table>
<thead>
<tr>
<th>Nominal Voltage</th>
<th>Type</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 V ac</td>
<td>ABC 20</td>
<td>20 A^1</td>
</tr>
<tr>
<td>240 V ac</td>
<td>ABC 20</td>
<td>20 A^1</td>
</tr>
<tr>
<td>120 V ac</td>
<td>ABC 20</td>
<td>20 A^2</td>
</tr>
<tr>
<td>240 V ac</td>
<td>ABC 12</td>
<td>12 A^2</td>
</tr>
</tbody>
</table>

Pioneer Magnet CS Supply Bayley P/N 1947319F
^1Power Supply (ACDC) Bayley P/N 1947509

Service and Replacement

If a supply goes out of specification, the following procedures should be followed:

NOTE: When not powered from a Power Entry Panel (PEP), an external switch on the power supply is required on power input. Eats of the 1947509 supply (Ths is a VDE 0875 Level 1 requirement to prevent shows on other system operated even from conducted EM).

Mnor Voltage Adjustment

Measure that a 50 watt or spec fied module oad is connected to the primary channel of the system. If necessary, rotate VOLTAGE ADJUSTMENT pots to proper setting. (See front panel figures 1 and 2). Do not go through completion of adjustment procedure.

Comp eted Voltage Adjustment (a steps must be completed)

CHANNEL 1

A. Voltage Adjustments

1. Connect input and output leads to proper terminal. Place a 50 ohm load across the output terminals. Do not nst a load.

2. Rotate VOLTAGE ADJUST pot fully counterclockwise.

3. Turn on power, if no voltage appears, set the correct voltage by turning VOLTAGE ADJUST pot clockwise. If the voltage drops as pot is rotated clockwise, rotate OVERVOLTAGE pot (See Figs. 1 and 2) fully counterclockwise temporarily. Set VOLTAGE ADJUST pot to specified voltage. Turn off power.

4. Even if no voltage appears, continue adjustment procedures as problems may evolve CURRENT LIMIT adjustment.

B. Current Limit Adjustment

1. Remove screw for access to CURRENT LIMIT adjustment pot (See Figs. 1 and 2).

2. Rotate CURRENT LIMIT adjustment pot fully clockwise. Turn on power, if not selected, a procedure until a defective lead voltage appears, verify by adjusting voltage. (Voltage adjustment)

3. Turn off power.

4. Connect a 110% oad to the supply. An ammeter meter is used to range to be checked.

Load Resistor Voltage Current

For example: For 110% oad for 50 ampere 5 volt supply P 5 0909 ohms
Load reservoir wattage required voltage x current or in this case, 2/5 watts minimum Resistor must be at very temperature stable under continuous load.

5. Supply power to unit and rotate CURRENT LIMIT adjustment pot clockwise so unit ammeter just starts to read; decrease current. Turn off power.

C. Over-voltage adjustments

1. Remove load from supply Leave voltmeter connected.
2. Rotate OVERVOLTAGE pot fully counterclockwise if not done in step A3.
3. Supply power to unit and rotate VOLTAGE ADJUST to even at which over-voltage meter should work (if within range of mode to be adjusted).
4. Rotate OVERVOLTAGE adjust pot slowly clockwise so output voltage d appears.
5. Turn off power.
6. Rotate VOLTAGE ADJUST pot slowly clockwise so output voltage d appears.
7. Apply power to unit.
8. Rotate VOLTAGE ADJUST pot clockwise so to spec fed operating voltage

Adjustment is complete.

CHANNELS 2 and 3

1. Assert that a 50 watt or spec fed minimum oad is connected to the primary channel for adjustment.
2. Repeat Channel 1 procedures except current meter and OVP adjust pots are accessed by removing the top cover.

System Checkout

After nsta at on n a system, make a final voltage measurement and reset VOLTAGE ADJUST Pots if required.
### Specifications

**Physical Aspects**
- Width: 17.25 in (43.8 cm)
- Height: 8.75 in (22.2 cm)
- Length: 19.75 in (50.2 cm)

**Bus Voltage**
- Set Point (at MPP jacks)
  - 5 V
  - 15 V
  - 28 V
  - 15 V
  - 30 V

**Output Current Environmental Operating Range**
- Humidity: 5 to 95% without condensation
- Temperature: 0°C to 70°C
- Refer to Table B

**Output Voltage Range at Sense Point**
- Channel 1: 4.5 V dc to 5.5 V dc
- Channel 2: 13.5 V dc to 16.5 V dc
- Channel 3: 19.5 V dc to 16.5 V dc
- Channel 4: 27.5 V dc to 31.5 V dc

**Performance**
- Voltage: 102 to 132 V ac or 204 to 264 V ac
- Frequency: 50/60 Hz ± 3 Hz
- Harmonic Distortion: ± 3%
- Maximum Interruption: 0.5 cycle
- Maximum Line Noise: +100% of ne amp tude for 2 usec
  - once every half cycle
- System AC Power Data: Refer to Table C

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

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### Table B

<table>
<thead>
<tr>
<th>Supply</th>
<th>(+) 5 V @ A</th>
<th>(+) 15 V</th>
<th>(-) 15 V each @ A</th>
<th>( ) 30 V @ A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-50 0-55 0-60 0-65 0-70</td>
<td>0-50 0-55 0-60 0-65 0-70</td>
<td>0-50 0-55 0-60 0-65 0-70</td>
<td>0-50 0-55 0-60 0-65 0-70</td>
</tr>
<tr>
<td>NPSM02</td>
<td>100 95 24 90 48 85 71 80 95</td>
<td>700 667 633 600 567</td>
<td>100 95 90 86 81</td>
<td>100 95 90 86 81</td>
</tr>
<tr>
<td>us ng 1947319-2</td>
<td>or NPSM04</td>
<td>using 1947509</td>
<td>or NPSM04</td>
<td>using 1947509-4</td>
</tr>
<tr>
<td>NPSM02</td>
<td>110 102 14 94 29 86 43 78 57</td>
<td>500 464 429 393 357</td>
<td>100 93 86 79 71</td>
<td>100 93 86 79 71</td>
</tr>
<tr>
<td>using 1947509-2</td>
<td>or NPSM04</td>
<td>using 1947509-4</td>
<td>or NPSM03</td>
<td>using 1947319-1</td>
</tr>
<tr>
<td>NPSM01</td>
<td>50 00 47 62 45 24 42 86 40 48</td>
<td>300 286 271 257 243</td>
<td>100 93 86 79 71</td>
<td>100 93 86 79 71</td>
</tr>
</tbody>
</table>

*TABLE B: Maximum Output Current Over Temperature Range °C* Averaged Operation Using NMPP02
<table>
<thead>
<tr>
<th>Nomem.</th>
<th>Supply Part Number</th>
<th>Size</th>
<th>Line Voltage</th>
<th>Input Current RMS</th>
<th>Inrush Current</th>
<th>Power Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPSM01</td>
<td>1947319-1</td>
<td>375W</td>
<td>120 V ac</td>
<td>7.0A</td>
<td>80A*</td>
<td>8</td>
</tr>
<tr>
<td>NPSM02</td>
<td>1947319-2</td>
<td>375W</td>
<td>120 V ac</td>
<td>13.9A</td>
<td>100A*</td>
<td>8</td>
</tr>
<tr>
<td>NPSM03</td>
<td>1947319-3</td>
<td>750W</td>
<td>240 V ac</td>
<td>3.5A</td>
<td>80A*</td>
<td>8</td>
</tr>
<tr>
<td>NPSM04</td>
<td>1947509-2</td>
<td>750W</td>
<td>240 V ac</td>
<td>7.0A</td>
<td>80A*</td>
<td>8</td>
</tr>
<tr>
<td>NPSM02+</td>
<td>1947319-4</td>
<td>375W</td>
<td>120 V ac</td>
<td>13.9A</td>
<td>100A*</td>
<td>8</td>
</tr>
<tr>
<td>NPSM04+</td>
<td>1947509-4</td>
<td>750W</td>
<td>240 V ac</td>
<td>7.0A</td>
<td>80A*</td>
<td>8</td>
</tr>
</tbody>
</table>

NPSM frequency range: 48-62 Hz

†Alternate vendor: EDCO Catorcs, Stycor RE754, 0-3 sec. soft start

*Approximate fastest peak value stated. The inrush decays within 10 cycles at the connection frequency. These values are dependent upon capacitive of the device but on system.

**TABLE C** System AC Power Data