Installation

1. Disconnect all AC and DC power
Connect each branch circuit hot (black) to the appropriate load terminal. Connect each branch circuit neutral (white) to one of the screws on the neutral bus. Connect each branch safety ground wire (green) to one of the screws of the safety ground bus.

2. Select mounting location and cut opening
Use the wire sizing chart below to determine the proper branch and feed circuit wire sizes.

3. Install branch circuit wires

<table>
<thead>
<tr>
<th>Wire Size (AWG)</th>
<th>Outside Engine Spaces</th>
<th>Inside Engine Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>25.0</td>
<td>21.3</td>
</tr>
<tr>
<td>14</td>
<td>35.0</td>
<td>29.8</td>
</tr>
<tr>
<td>12</td>
<td>45.0</td>
<td>38.3</td>
</tr>
<tr>
<td>10</td>
<td>60.0</td>
<td>51.0</td>
</tr>
<tr>
<td>8</td>
<td>80.0</td>
<td>68.0</td>
</tr>
<tr>
<td>6</td>
<td>120.0</td>
<td>102.0</td>
</tr>
<tr>
<td>4</td>
<td>160.0</td>
<td>136.0</td>
</tr>
<tr>
<td>2</td>
<td>210.0</td>
<td>178.5</td>
</tr>
</tbody>
</table>

Note: This chart assumes wire with 105° C insulation rating and no more than 2 conductors are bundled. Not suitable for sizing flexible shore power cords.
4. Install feed circuit wires
Install the feed wires from the AC main circuit breaker panel or other AC source, referring to the wire sizing chart to select the correct wire size. Connect the black AC hot, white AC neutral and green AC safety ground to their corresponding buses. In the case of the 24 position panel, the black AC hot, white AC neutral and green AC safety ground should be connected to the middle bus structure.

5. Installation of Backlight System
The backlight board is a DC device. When installing it in an AC panel both wire leads must be connected to an appropriate DC source and ground.
Connect the yellow negative wire to a DC ground. Connect the red positive wire to any DC positive supply, usually a switch that controls the vessel’s other nighttime illumination.

6. Apply branch circuit labels and mount panel
Apply a label for each of the branch circuits from the 30 basic labels provided. If the appropriate label is not included, the Extended Label Set of 120 labels may be ordered from your marine supplier (PN 8067). Individual labels are also available from Blue Sea Systems for specific applications. Refer to the label order form for a complete listing of individual labels.
Fasten the panel to the mounting surface using the panel mounting screws supplied with the panel.

7. Testing
Using a multimeter where the power source is connected to the panel verify:
  a. 230 volts between hot and neutral (nominal, this may vary depending on source voltage)
  b. 230 volts between hot and ground.
  c. 0 volts between neutral and ground.
Turn on each branch circuit to verify power to each circuit.

8. Optional Branch LED’s
This Panel is supplied with LED’s pre-installed in all optional branch positions. For future expansion of the panel remove the hot leg of the LED from the AC Neutral Bus and connect it to the Load side of the branch circuit breaker.

Note
This Blue Sea Systems electrical distribution panel is furnished with 8 amp AC/DC circuit breakers for all branch circuits. This rating was selected to minimize the need for removing the panel’s circuit breakers and reinstalling different size circuit breakers. It is rare to have more than 8 amps of current flowing in any one circuit. Therefore, 8 amp circuit breakers will satisfy the vast majority of marine circuit protection situations.

Related Products from Blue Sea Systems
- PanelBack Insulating Covers
- High Amperage Fuses and Circuit Breakers for positive feed wires
- High Amperage Battery Switches
- Terminal Blocks and Common Bus Connectors
- AC Distribution Panels
- DC Distribution Panels
- AC and DC Digital and Analog Voltmeters and Ammeters

Useful Reference Books