Cable Specification for +/- 12 V Power Supply Used in Electric Drives and Power-Pole Boards

The electric drives inverter board uses a +/- 12V power supply to power the current/voltage sensors. This power supply is also used in the power-pole board for the current sensors and PWM generation/gate drivers.

The connector on the boards for this input is a circular 5-pin DIN connector (J90 on both the drives and power-pole boards). Elpac Power Systems power supply WM072-1950-D5 with +/-12 V output was earlier used. However, this power supply is no longer in production. Elpac WM063-1950-D5 or SL Power SW301MA0012F01 has been identified as a suitable replacement. These power supplies, however, are triple output supplies with 5V and +/-12 V output voltages. The pinouts on these power supplies are different than the earlier one also.

A simple crossover cable needs to be made in order to make WM063-1950-D5 or SW301MA0012F01 compatible with the electric drives and power-pole boards. The specifications and the parts required for this cable are outlined here.

![Figure 1: Pin numbers (connector side)](image)

### Pinouts

**WM072-1950-D5**

<table>
<thead>
<tr>
<th>PIN</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIGNAL</td>
<td>COM</td>
<td>N/C</td>
<td>+12 V</td>
<td>COM</td>
<td>-12 V</td>
</tr>
</tbody>
</table>

**WM063 -1950-D5 or SW301MA0012F01**

<table>
<thead>
<tr>
<th>PIN</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIGNAL</td>
<td>COM</td>
<td>N/C</td>
<td>+5 V</td>
<td>-12 V</td>
<td>+12 V</td>
</tr>
</tbody>
</table>

### Parts Required for Cable

1. Circular 5-pin Male DIN Connector (Digikey Part Number: CP-1050-ND)
2. Circular 5-pin Female DIN Connector (Digikey Part Number: CP-1150-ND)
Cable Specification

CP-1050-ND
Male (Solder Side)
Connects to board

CP-1150-ND
Female (Solder Side)
Connects to WM063-1950-D5
or SW301MA0012F01