PROBLEMS
4 CIRCUIT POWER CONNECTOR

✓ ESDI DOES NOT SPECIFY CRITICAL INTERNAL
  DIMENSIONS OF THE 4 CIRCUIT POWER CONNECTOR.

✓ LACK OF A DEFINED INDUSTRY STANDARD HAS CREATED PLUG
  COMPATIBILITY PROBLEMS AMONG COMPONENTS OF THE DISK
  DRIVE POWER SUPPLY DISTRIBUTION SYSTEM, WHICH INCLUDES:

  - POWER SUPPLY OUTPUT CABLE
  - POWER DISTRIBUTION HARNESS
  - DISK DRIVE POWER INPUT CONNECTOR
### NOTES:
1. Tolerances ± 0.3mm (0.015 inch) noncumulative, unless specified otherwise.
2. Dimensions listed with asterisks (*) are shown for reference only.

---

**FIGURE 13: J3/P3 POWER CONNECTOR**

**TABLE 2: J3/P3 CONNECTOR PIN ASSIGNMENTS**

<table>
<thead>
<tr>
<th>J3 Connector Pin</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>+12V DC +5%</td>
</tr>
<tr>
<td>2</td>
<td>12V RETURN</td>
</tr>
<tr>
<td>3</td>
<td>5V RETURN</td>
</tr>
<tr>
<td>4</td>
<td>5V DC +5%</td>
</tr>
</tbody>
</table>

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Enhanced Small Device Interface
PROBLEMS
4 CIRCUIT POWER CONNECTOR

✓ WE HAVE ASSUMED THIS IS AN .084 PIN SYSTEM
✓ SEVERAL CONNECTOR MANUFACTURERS HAVE TARGETED .084 PIN DIAMETER SYSTEMS WHILE OTHERS HAVE TARGETED .0825 AND .081 PIN DIAMETER
✓ ONE MANUFACTURER HAS TARGETED A 2mm PIN (.079)
✓ BASED ON THE ABOVE, INDUSTRY PIN DIAMETERS COULD RANGE FROM .077 (.079 +/- .002) TO .086 (.084 +/- .002)
PROBLEMS
4 CIRCUIT POWER CONNECTOR

THIS LARGE RANGE OF PIN DIAMETERS CAUSES:

INTERMITENT CONTACT

OR

EXTREMELY HIGH PLUGGING FORCE

✓ SUGGESTION: STANDARDIZE PIN DIAMETER AT

.0825 +/- .001

BECAUSE IT WILL MINIMIZE PROBLEMS WITH BACKWARD COMpatibility DURING AND AFTER STANDARDIZATION.

✓ SUGGESTION: SPECIFY MIN-MAX INSERTION AND WITHDRAWAL FORCES FOR THE RECEPTACLE.
PROBLEMS
4 CIRCUIT POWER CONNECTOR

✓ ANOTHER PROBLEM INVOLVES REVERSE PLUGGING
   DUE TO:
   - LACK OF DEFINED INTERNAL DIMENSIONS
     AND TOLERANCES OF THE CONNECTOR HOUSING
   - USE OF SOFT NYLONS FOR BOTH PLUG
     AND RECEPTACLE HOUSINGS

✓ THE ABOVE COMBINED WITH ANTICIPATED HIGH
   PLUGGING FORCE (DUE TO PIN DIA.) ALLOWS
   THE POLARIZATION FEATURE TO BE DEFEATED.