## Description

The Modular Power System II supplies 5 VDC, 15 VDC, –15 VDC, 24 VDC, 48 VDC, and 125 VDC power to Harmony components of the Symphony™ Enterprise Management and Control System. The power system provides the operating voltages to Harmony I/O blocks, and Harmony rack I/O, controller, and communications modules as well as power to operate field devices. The power system accepts 120 VAC, 240 VAC, or 125 VDC input power.

The Modular Power System II consists of the following components:

- Chassis:
  IPCHS01 Power Module Chassis (supports Harmony rack modules only).
  IPCHS02 Power Module Chassis (supports both Harmony blocks and rack modules).
  IPFCH01 Power Fan Chassis.

- Power entry:
  IPECB11 Power Entry Circuit Breaker (AC).
  IPECB13 Power Entry Circuit Breaker (DC).
  IPESW11 Power Entry Switch (AC).
  IPESW13 Power Entry Switch (DC).

- Modules:
  IPBLC01 Harmony Power (24 VDC).
  IPFLD01 Field Power (24 VDC).
  IPFLD24 Field Power (24 VDC).
  IPFLD48 Field Power (48 VDC).
  IPFLD125 Field Power (125 VDC).
  IPMON01 Power Monitor Module.
  IPSYS01 System Power (5 VDC, 15 VDC, –15 VDC, 24 VDC).

- System fan:
  IPFAN14Power System Fan (120/240 VAC, 125 VDC).

<table>
<tr><th>Property</th><th>Characteristic/Value</th></tr>
<tr><td>Power entry switch</td><td>IPEWS11, IPEWS13</td></tr>
<tr><td>Input voltage</td><td></td></tr>
<tr><td>IPECB11, IPEWS11</td><td>102 to 264 VAC</td></tr>
<tr><td>IPECB13, IPEWS13</td><td>102 to 144 VDC</td></tr>
<tr><td>Input current</td><td>20 A maximum</td></tr>
<tr><td>Voltage drop across breaker/ switch</td><td>2 V drop at 20 A nominal</td></tr>
<tr><td>System fan</td><td>IPFAN14</td></tr>
<tr><td>Input power</td><td>0.72 A nominal at 120 VAC<br>0.42 A nominal at 240 VAC<br>0.50 A at nominal 125 VDC</td></tr>
<tr><td>Frequency</td><td>47 to 63 Hz</td></tr>
<tr><td>Weight and dimensions</td><td>
<table>
<tr><th>Module[1]</th><th>Weight kg (lb)</th><th>Height mm (in.)</th><th>Width mm (in.)</th><th>Depth[2] mm (in.)</th></tr>
<tr><td>IPBLC01</td><td>2.49 (5.46)</td><td>218.40 (8.60)</td><td>48.30 (1.90)</td><td>440.50 (17.50)</td></tr>
<tr><td>IPBLK01</td><td>0.89 (1.95)</td><td>218.40 (8.60)</td><td>48.30 (1.90)</td><td>444.50 (17.50)</td></tr>
<tr><td>IPFLD01</td><td>2.36 (5.20)</td><td>218.40 (8.60)</td><td>48.30 (1.90)</td><td>444.50 (17.50)</td></tr>
<tr><td>IPFLD24</td><td>2.49 (5.46)</td><td>218.40 (8.60)</td><td>48.30 (1.90)</td><td>444.50 (17.50)</td></tr>
<tr><td>IPFLD48</td><td>2.55 (5.62)</td><td>218.40 (8.60)</td><td>48.30 (1.90)</td><td>444.50 (17.50)</td></tr>
<tr><td>IPFLD125</td><td>2.55 (5.62)</td><td>218.40 (8.60)</td><td>48.30 (1.90)</td><td>444.50 (17.50)</td></tr>
<tr><td>IPMON01</td><td>0.71 (1.56)</td><td>218.40 (8.60)</td><td>35.56 (1.40)</td><td>401.32 (15.80)</td></tr>
<tr><td>IPSYS01</td><td>2.55 (5.60)</td><td>218.40 (8.60)</td><td>48.30 (1.90)</td><td>444.50 (17.50)</td></tr>
</table>
NOTES:<br>1. The total system weight is 48 kg (106 lb) maximum.<br>2. Dimension includes the handle.<br><br>
<table>
<tr><th>Component[1]</th><th>Weight kg (lb)</th><th>Height mm (in.)</th><th>Width mm (in.)</th><th>Depth mm (in.)</th></tr>
<tr><td>IPCHS01/02</td><td>7.55 (16.60)</td><td>223.50 (8.80)</td><td>482.60 (19.00)</td><td>444.50 (17.50)</td></tr>
<tr><td>IPECB11/13</td><td>2.55 (5.60)</td><td>114.30 (4.50)</td><td>193.04 (7.60)</td><td>162.56 (6.40)</td></tr>
<tr><td>IPESW11/13</td><td>2.55 (5.60)</td><td>114.30 (4.50)</td><td>193.04 (7.60)</td><td>162.56 (6.40)</td></tr>
<tr><td>IPFAN14</td><td>3.23 (7.10)</td><td>152.40 (6.00)</td><td>210.82 (8.30)</td><td>444.50 (17.50)</td></tr>
<tr><td>IPFCH01</td><td>10.20 (22.40)</td><td>203.20 (8.00)</td><td>482.60 (19.00)</td><td>472.44 (18.60)</td></tr>
</table>
NOTE:<br>1. The total system weight is 48 kg (106 lb) maximum.
</td></tr>
<tr><td>Electromagnetic/radio frequency interference</td><td>Meets IEC 801.3, level 3, 80 MHz to 1 GHz with no loss of function or false status information for all units.<br><br>NOTE: Do not use RFI sources producing 10 V/m or greater at 84.9 MHz within 2.2 m (7.2 ft) of the MPS II system.</td></tr>
<tr><td>Fast transient/burst susceptibility</td><td>Meets IEC 801.4, level 3, mains 2 kV at 2.5 kHz, outputs 1 kV at 5.0 kHz with no loss of function or false status information.</td></tr>
<tr><td>Transient surge</td><td>Meets IEC 801.5, level 3, 2 kV with no loss of function or false status information.</td></tr>
</table>

| Property | Characteristic/Value |
|---|---|
| Electrostatic discharge | Meets IEC 801.2, level 3 with no loss of function or false status information. |
| Environmental | |
| Temperature | |
| Operating enclosure (internal) | 0° to 70°C (32° to 158°F) |
| Operating enclosure (external) | 0° to 55°C (32° to 131°F) |
| Storage and transport | (-40° to 85°C (-40° to 185°F) |
| Relative humidity | |
| Operating | 20% to 90% up to 55°C (131°F) noncondensing<br>20% to 45% at 55° to 70°C (131° to 158°F) noncondensing |
| Altitude | |
| Operating | Sea level to 3,048 m (10,000 ft) |
| Storage and transport | Up to 9,144 m (30,000 ft) |
| Air quality | Noncorrosive per ISA S71.04 class LA, LB, LC severity level 1 |
| Overvoltage category | IEC 1010-1<br>Category III, for mains<br>Category II, for mains to the IPCHS01 and IPCHS02 chassis<br>Category I, for outputs |
| Vibration | 13.2 to 100 Hz, 0.7 Gs<br>2 to 13.2 Hz, 12 mm (0.47 in.) peak-to-peak displacement |
| Certifications | |
| Canadian Standards Association (CSA) | Certified for use as process control equipment in an ordinary (nonhazardous) location. |
| Factory Mutual (FM) | Approval for the following categories:<br>Nonincendive for Class I Division 2, Groups A,B,C,D |
| ***IPBLC01, IPFLD01, IPFLD24, IPFLD48, IPFLD125, IPSYS01*** | |
| Power input | |
| Voltage | 102 to 264 VAC; 102 to 144 VDC |
| Current | |

| Module | Full Load Input Current (A) | | |
|---|---|---|---|
| | 120 VAC | 240 VAC | 125 VDC |
| IPBLC01 | 4.7 | 2.4 | 4.7 |
| IPFLD01 | 2.2 | 1.0 | 2.2 |
| IPFLD24 | 4.7 | 2.4 | 4.7 |
| IPFLD48 | 4.4 | 2.2 | 4.4 |
| IPFLD125 | 4.7 | 2.4 | 4.7 |
| IPSYS01 | 4.3 | 2.0 | 4.3 |

Power output
Voltage/current

| Module Outputs | IPSYS01[1] | | | | IPBLC01 IPFLD01 IPFLD24 | IPFLD48 | IPFLD125 |
|---|---|---|---|---|---|---|---|
| Nominal VDC | 5.09 | 15.10 | -15.10 | 25.50 | 25.50 | 49.1 | 125.6 |
| Minimum VDC | 5.04 | 14.95 | -14.95 | 24.35 | 24.35 | 48.5 | 124.2 |
| Maximum VDC | 5.25 | 15.75 | -15.75 | 26.80 | 26.80 | 49.6 | 127.1 |
| Maximum ripple and noise ($mV_{pp}$) | 100 | 150 | 150 | 250 | 250 | 600 | 1,000 |
| Full load (A) | 17.00 | 1.80 | 1.80 | 5.60 | 5.60/11.2[2] | 5.45 | 2.3 |

**NOTES**:
1. Total module power output cannot exceed 260 W.
2. 11.2 A for IPBLC01 and IPFLD24 modules.