AMX NXA-PDU-1508-8 110V/220V Power Distribution Unit w/ 8 Monitored AC Outlets
The NXA-PDU-1508-8 Power Distribution Unit (FG673-01) provides switching of mains power to each of eight AC RMS 2020 power outlets. The two built-in AxLink bus strips provide connectivity (AxLink data / power) for up to eight AxLink connections.

**Overview**

**FIG. 1**

The NXA-PDU-1508-8 Power Distribution Unit (FG673-01) provides switching of mains power to each of eight AC RMS 2020 power outlets. The two built-in AxLink bus strips provide connectivity (AxLink data / power) for up to eight AxLink connections.

**Rear Panel Components:**

- **Power Inputs:**
  - **AC Current:**
    - 110-120VAC: Input: 15A Regulatory Derated Input Current (1-8)
    - 220-240VAC: Input: 10A @ 220VAC
    - 10A Max Load Per Outlet @ 220VAC
    - 8A Max Load Per Outlet @ 220VAC
    - 10A Max Combined Load @ 220VAC
  - **Overcurrent Notification:**
    - Single Outlet: 10A
    - Single Outlet: 8A
- **Power Outlets:**
  - 10A@110VAC / 8A@220VAC
  - 10A@110VAC / 8A@220VAC
  - 10A@110VAC / 8A@220VAC
- **AXLINK STATUS LED:**
  - Green LED illuminates to indicate AxLink communication activity between the PDU and the NetLinx Master:
    - ON: power, no master connection
    - OFF: powered, communicating with master
- **RESET pushbutton:**
  - The RESET pushbutton serves as a momentary reset switch for the MASTER AxLink power network, as well as a reset switch for the PDU itself.
    - Press/hold for 3 seconds: Resets the MASTER AxLink power connection (minimum 0.5 second toggle).
    - Note: A master powered externally from the PDU will not be reset by the RESET pushbutton.
    - Press/hold for 17 seconds: Resets the PDU (similar to a full power-cycle of the unit).
- **AXLINK POWER Connectors**
  - Power Outlets 1-8: IEC C-13, 12A/10A
  - Maximum allowable current on a single high-voltage output: 10A@110VAC / 8A@220VAC
- **Power Inlet:**
  - **AC Current:**
    - 110-120VAC: Input: 15A Regulatory Derated Input Current (1-8)
    - 220-240VAC: Input: 10A @ 220VAC
    - 10A Max Load Per Outlet @ 220VAC
    - 8A Max Load Per Outlet @ 220VAC
    - 10A Max Combined Load @ 220VAC
- **Dimensions (HWD):**
  - 13 1/16" x 17" x 9 11/16" (3.97 cm x 43.18 cm x 24.54 cm)
  - 1 RU
- **Weight:**
  - 9 lbs (4.08 kg)
- **Endorsement:**
  - Steel, black powder coated finish
- **Environmental:**
  - Operating Environment: 0°C to 40°C (32°F to 104°F)
  - Storage Environment: -10°C to 60°C (14°F to 140°F)
  - Relative Humidity: 5% - 85%, non-condensing
- **Certifications:**
  - CE
  - CB Scheme
  - UL
  - FCC
  - CSA
  - C-Tick

**Included Accessories:**

- Power Cord, NEMA 5-15P TO C13, 15A, 14/3, 6' (64-0673-01)
- Note: See Power Cord Requirements below for details.
- CC-C13-C14, C13 to C14 Power Cable (FG10-673-02)
- CC-C14-NEMA: C14 to NEMA Power Cable (FG10-673-02)
- ENV-VST-TSF, Flush Mount Temperature Sensor (FG2050-21)
- ENV-VST-TSOP, Temperature Sensor (FG2050-22)
- CC-C13-C14, C13 to C14 Power Cable (FG10-673-02)
- ENV-VST-TSF, Flush Mount Temperature Sensor (FG2050-21)
- CC-C13-C14, C13 to C14 Power Cable (FG10-673-02)
- CC-C14-NEMA: C14 to NEMA Power Cable (FG10-673-02)

**Power Cord Requirements**

Before rack mounting the PDU, pay particular attention to the following factors:

- **Power Cord:**
  - For safety, the PDU should be installed near the socket-outlet providing power (which must be easily accessible by the PDU's power cord).
  - The NXA-PDU-1508-8 is intended for indoor use only.
  - DO NOT install or operate the NXA-PDU-1508-8 in an area where the ambient temperature exceeds 40°C (104°F) or falls below 0°C (32°F).
  - DO NOT install or operate the NXA-PDU-1508-8 in an area in which the ambient relative humidity exceeds 85% or an area that is prone to condensation.
  - DO NOT install or operate the NXA-PDU-1508-8 near water or in a location which may be prone to water seepage, dripping or splashing.
  - DO NOT place objects containing liquids on the NXA-PDU-1508-8.

**SAFETY INSTRUCTIONS**

There are NO user serviceable parts within the NXA-PDU-1508-8.
- The NXA-PDU-1508-8 is for indoor use only.
- DO NOT install or operate the NXA-PDU-1508-8 in an area where the ambient temperature exceeds 40°C (104°F) or falls below 0°C (32°F).
- DO NOT install or operate the NXA-PDU-1508-8 in an area in which the ambient relative humidity exceeds 85% or an area that is prone to condensation.
- DO NOT install or operate the NXA-PDU-1508-8 near water or in a location which may be prone to water seepage, dripping or splashing.
- DO NOT place objects containing liquids on the NXA-PDU-1508-8.

**Restrictions**

- **Power Cord:** The power cord must be easily accessible by the PDU and must be connected to a properly grounded outlet.
- **Grounding:** Be sure that the supply circuit to the rack assembly is not overloaded.
- **Mechanical Loading:** Do not place any equipment on top of a rack-mounted unit.
- **Circuit Overloading:** Be sure that the supply circuit to the rack assembly is not overloaded.
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The NXA-PDU-1508-8 can be mounted in a standard 19-inch equipment rack:

1. Attach the brackets to the PDU using the bracket screws provided in the Bracket Mounting Kit (FIG. 4).

2. Mount the PDU in the rack, using 4 rack-mounting screws (not provided, see FIG. 5).

Front Panel Components

The front panel components of the NXA-PDU-1508-8 (see FIG. 1) are described below. See the Specifications table for descriptions of the LEDs on the front panel.

RESET Pushbutton

The RESET pushbutton serves as a momentary reset switch for the MASTER AxLink power connection, as well as a reset switch for the PDU.

- Press/hold for 3 seconds: Resets the MASTER AxLink power connection (minimum 0.5 second toggle).
- Press/hold for 17 seconds: Resets the PDU (similar to a full power-cycle of the unit).

Rear Panel Components

The rear panel components of the NXA-PDU-1508-8 (see FIG. 1) are described below:

AXLINK POWER Connectors 1-8

The eight AxLink connectors (labelled "AXLINK POWER") are standard 4-pin AxLink captive-wire connectors that provide data and power for up to 8 AxLink connections. The AxLink device connectors are separated into two Banks:

- BANK 1 (top) includes AxLink connectors 1-4, numbered from right-to-left (see FIG. 1)
- BANK 2 (bottom) contains AxLink connectors 5-8, numbered from right-to-left (see FIG. 1)

The PDU provides switched power to banks 1 and 2.

Note: The AxLink bus strip does not provide switching on AxLink data lines.

MASTER Connector

The 3.5mm 4-pin captive-wire AxLink connector labelled "MASTER" provides AxLink connectivity between the PDU and the NetLinx Master (see FIG. 1).

Note: This connector is always ON.

TEMP Connector

The 3.5mm 2-pin captive-wire connector labelled "TEMP" (see FIG. 1) provides the option to connect a Remote Temperature Sensor (RTS). The NXA-PDU-1508-8 comes with one ENV-VST-TSO Temperature Sensor (FG2050-22).

Connect either wire from the RTS to either pin on the TEMP connector (FIG. 6).

AxLink Wiring Guidelines

AxLink devices require 12 VDC power to operate properly. The necessary power is supplied via the AxLink cable. The maximum AxLink wiring distance is determined by power consumption, supplied voltage, and the wire gauge used for the cable.

Use the 3-step formula below to calculate the maximum wiring lengths allowable between the PDU and connected AxLink devices.

1. \(<\text{Total current consumption of all connected AxLink devices} \times \text{Resistance/foot} \times 2 = \text{voltage drop per foot}\>

2. \(<\text{Power supply voltage} - 12 \text{VDC} = \text{surplus voltage dissipation for cable run}>

3. \(<\text{surplus voltage dissipation for cable run} \times \text{voltage drop per foot} \times \text{Max. distance}>

The following table lists the resistance factors used in the formula.

<table>
<thead>
<tr>
<th>Wire gauge</th>
<th>Resistance/Foot (Solid Copper Wiring)</th>
<th>Resistance/Foot (Stranded Copper Wiring)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 AWG</td>
<td>0.00639</td>
<td>0.00692</td>
</tr>
<tr>
<td>20 AWG</td>
<td>0.0101</td>
<td>0.0109</td>
</tr>
<tr>
<td>22 AWG</td>
<td>0.0162</td>
<td>0.0190</td>
</tr>
<tr>
<td>24 AWG</td>
<td>0.0207</td>
<td>0.0277</td>
</tr>
</tbody>
</table>

Setting the Device Address of the PDU

The NXA-PDU-1508-8 firmware implements 8 AxLink device IDs, starting from the device ID denoted by the Dip Switch. The device IDs used by the NXA-PDU-1508-8 are as follows:

- Dev 1: (Power Outlet 1) + (Input Voltage) + (Temp)
- Dev 2: (Power Outlet 2) + (AxLink-Bank 2 Power)
- Dev 3-8: (Power Outlets 3-8)

Note: AxLink devices IDs are always in the range of 1-255. However, the PDU requires seven open device numbers above the PDU device number setting to accommodate its sub-devices. Therefore, device addresses 249-255 are not valid for the PDU.

To set the Device Address:

1. If connected, disconnect the power supply.
2. Set the CONFIG Dip switch according to the values shown below:

<table>
<thead>
<tr>
<th>Switch</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>16</td>
<td>32</td>
<td>64</td>
<td>128</td>
</tr>
</tbody>
</table>

The device number is set by the total value of Dip Switch positions that are in the ON position. Note that the ON position is indicated on the Dip Switch.

If you later change the device number, remove and reconnect the power connector to enter the new device number into memory.

Note: Use the "Dip Switch2" software application to calculate dip switch position values (available to download from www.amx.com).

Power Outlets 1-8

The eight 110-220VAC 50/60Hz Selectable Power Outlet Connectors provide AC power to connected devices (see FIG. 1).

Note: Maximum load on a single outlet = 10A @ 110-120 VAC / 8A @ 220-240VAC.

Powering Up The NXA-PDU-1508-8

When power is applied to the PDU for the first time, the outlets are powered in sequence (1-8), with a delay of 0.5 second between outlets.

By default, the state of all outlets upon initial power-up is ON.

Initial Response Time

Allow the PDU approximately ten seconds after it appears online to register internal processes before attempting to turn on a channel.

Persistence

Persistence of On/Off States for All Outlets

By default, Persistence is set to ON for all outlets.

Persistence can be turned off via the PERSIST Send_Command (see the Additional Documentation section).

NXA-PDU-1508-8 Operation/Reference Guide


Additional Documentation

Refer to the NXA-PDU-1508-8 Operation/Reference Guide for programming information and instructions on upgrading Firmware on the PDU.

For full warranty information, refer to the AMX Instruction Manual(s) associated with your Product(s).