

SECTION 271126 - RACK MOUNTED POWER PROTECTION AND POWER STRIPS

PART 1 - GENERAL

1.1 SUBMITTALS

- A. Product Data:
 - 1. Bill of Materials.
 - 2. Product Datasheets.
- B. Shop Drawings:
 - 1. Power Distribution Diagram(s):
 - a. Depict the power products and the AC power distribution configuration for each rack:
 - 1) Identify the Device.ID for each rack.
 - 2) Include a rack layout depicting the location of power products within the rack.
 - 3) Depict UPSs, PDUs, sequencers, receptacle strips, remote power modules, modular power strips and other distribution products.
 - 4) Identify the interconnectivity between sequencers and the products the sequencer controls.
 - 5) Identify the power up and power down sequence.
- C. Closeout Submittal:
 - 1. Product Data:
 - a. Bill of Materials.
 - b. Product Datasheets.
 - 2. As-Built Drawings:
 - a. Power Distribution Block Diagram(s).

1.2 SYSTEM DESCRIPTION

- A. General:
 - 1. Equipment racks, furniture and enclosures that house communications and security (where applicable) equipment shall be equipped with a functional local AC power distribution system for delivery of power from the building power system to the product(s) they house.
 - 2. Each distribution system shall be sufficient to support the powered products.

3. Each distribution system shall feature sufficient connectivity to accommodate each powered product, plus an additional 20-percent spare receptacle count usable for future use. Each designated “spare” outlet shall be accessible and usable without the removal or movement of existing cables, plugs or other product.
 4. Selected distribution systems shall feature one or more locally installed uninterruptible power supplies for maintaining power to connected equipment in the event there is a loss of incoming building power.
 5. Communications backboards, countertops/work-surfaces and other locations where insufficient building power receptacles are present shall be equipped with local power distribution equipment with sufficient outputs to serve the locally installed equipment.
- B. Provide UPS and power distribution equipment as shown on the detail drawings and as required to protect and power communications and security equipment.
- C. Following is a baseline of requirements for the Project, unless additional quantities are indicated.
1. Equipment Racks for Horizontal Cable and/or Network Switches:
 - a. Each rack shall be equipped with a full-time un-switched power distribution system.
 - b. Each rack used for Network Switches equipment shall be equipped with a minimum of one (1) independent full-length vertical power strip.
 - c. Each rack shall be equipped with a minimum of (1) Type-A 3kVA UPS.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Products furnished of each Type shall be manufactured by a single manufacturer, bear the same brand name, be the same finish color and texture, and be from the same product model series, except where otherwise indicated.

2.2 UNINTERRUPTIBLE POWER SUPPLIES (UPS)

- A. Manufacturer: Subject to compliance with requirements, provide products from one (1) of the following manufacturers:
- a. Liebert.
 - b. APC.
 - c. Eaton.
- B. Type A – 120V:
1. 3kVA Size:

- a. True on-line double conversion.
- b. (3000VA/2700W)
- c. Furnish with power management software.
- d. 120VAC input and output.
- e. Transient voltage surge suppression.
- f. EMI/RFI Filters.
- g. 19-inch EIA rack mounting hardware.
- h. Six (6) NEMA 5-20R output receptacles.
- i. One (1) NEMA L5-30R output receptacle.
- j. 10' cord with NEMA L5-30p plug.
- k. Basis of Design: Liebert GXT4 Series.

2.3 VERTICALLY MOUNTED RECEPTACLE STRIPS

- A. Manufacturers: Subject to compliance with requirements, provide products from one (1) of the following manufacturers:
 1. Middle Atlantic Products.
 2. Hammond Manufacturing.
 3. Chatsworth Products.
 4. Leviton.
 5. .
- B. Type VA:
 1. 15 Amp capacity.
 2. 120VAC input.
 3. NEMA 5-15R receptacles (14 – 24 outlets).
 4. 45 to 72 inches lengths.
 5. 9-foot power cord with NEMA 5-15P plug.
 6. Manufacturer accessory mounting brackets.
 7. Basis of Design: Middle Atlantic Products PD-1415C-NS with PB-5A brackets.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Surge Suppression
 1. Where independent outboard surge suppression products are used, connect the surge-suppression products to incoming branch power first, then derive power for downstream power distribution products from the surge suppression device.
- B. Uninterruptible Power Supplies (UPS):
 1. Connect UPS units to un-switched AC building power.

2. Rackmount power supply(s) and the accessory batteries that are designed for rack mounting.

C. Vertical Receptacle Strips:

1. In racks, mount vertical receptacle strips inside and in the rear of the rack in an accessible location that does not interfere with the mounting of the equipment served or with future mounting of equipment.
2. When UPS products are present, derive power for the strips from the output receptacle(s) of the UPS.
3. Mount receptacle strips securely.
4. Mount strips using the accessories and hardware recommended by the manufacturer.

END OF SECTION 271126