

SECTION 27 11 26
Communications Rack Mounted Power Protection and Power Strips

Part 1 General

1.1 SUMMARY

- 1.1.1 Provide all labor, materials, and equipment for the complete installation of work called for in the Contract Documents.

1.2 RELATED DOCUMENTS

- 1.2.1 The latest versions of the following codes, standards, and best practices shall be followed. Bring to the immediate attention of CCS if construction documents or conditions differ from requirements in codes, standards, guidelines and specifications.

- 1.2.2 The following codes, as required by law:

Ontario Electrical Safety Code (OESC)

Ontario Building Code (OBC)

CSA C22.2 (UPS for Canada)

- 1.2.3 The following standards:

NECA/BICSI-568-2006, Standard for Installing Commercial Building Telecommunications Cabling

TIA-569-C Commercial Building Standard for Telecommunications Pathways and Spaces

ANSI/TIA--607-B - Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises

ANSI/TIA-942 Telecommunications Infrastructure Standard for Data Centers, 2005

IEC/EN 60950-1 (information technology equipment – Safety)

IEC/EN 62040-1 (UPS Safety)

IEC/EN 62040-2 (UPS EMC)

IEC/EN 62040-3 (UPS Performance)

IEC 61000-6-2 (Immunity in industrial environment)

IEC 61000-6-4 (Emission in industrial environment)

IEC 61000-4-1 (overview of IEC 61000-4 series)

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1.2.4 The following best practices:

- BICSI, Telecommunications Distribution Methods Manual (TDMM)
- BICSI, Information Transport Systems Installation Methods Manual (ITSIMM)
- ANSI/BICSI 002-2011, Data Center Design and Implementation Best Practices
- BICSI, Information Transport Systems Installation Methods Manual (ITSIMM)
- BICSI-003 Information Technology Systems Design and Implementation Best Practices for Educational Institutions and Facilities

Part 2 Products

2.1 Power Distribution Unit (PDU)

- .1 The vertical power strip shall be a rated 30Amp/208V Power Strip with a Minimum of thirty (30) C13, six (6) C19. Three phase shall have an additional two (2) 5-20R
- .2 The power strip shall have 30A Thermal Breaker over current protection.
- .3 The power strip shall have a LED power ON indicator.
- .4 The power strip shall NOT have any power on/off switches.
- .5 The power strip shall have a 3 metre long cord and be vertically mounted at the back of each rack or cabinet.
- .6 Vertical power strip to be minimum of 60" (2.36m) in length with outlets evenly distributed along length.
- .7 Horizontal power strips shall be 19" rack mountable with two rows of 10 Receptacles.

2.1.1

	Description	Specified Product:			
		Length	Width	Depth	Part Number
Panduit	SmartZone™ G5 Monitored Input (MI Series) Rack PDU 3 phase WYE Black	68.898"	2.047"	2.1 "	P38D28M
Panduit	SmartZone™ G5 Monitored Input (MI Series) Rack PDU single phase Black	68.898"	2.047"	2.1 "	P38D25M
Panduit	2 post PDU bracket Black				R2PPDUB

Note: Provide one of each PDU for each rack/cabinet. Provide one bracket for each PDU.

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2.2 Uninterruptible Power Supply (UPS)

This specification provides a continuous-duty, on-line, solid state uninterruptible power system.

The UPS shall operate in conjunction with the existing building electrical system to protect electronic equipment from power disturbances that may occur in utility power such as voltage fluctuations, brown-outs and blackouts, power surges and sags. The UPS shall provide high-quality AC power for sensitive electronic equipment loads.

The UPS shall operate as an on-line double-conversion UPS with the following modes:

Normal mode

Hi efficiency mode

Battery mode

By-Pass mode

Standby mode

	Description	Specified Product:			
		Height	Width	Depth	Part Number
Eaton	6000 VA 5400 Watts UPS Input L6-30P Output (2) L6-30R, (2) L6-20R.	5.1"	17.3"	28.4 "	9PX6K-10
Eaton	2 post rail kit				RK2PC

Note: Provide one (1) UPS for each rack/cabinet. Provide one (1) bracket for each UPS.

Part 3 Execution

- .1 Supply all materials and labour for the installation and assembly of the power strips, PDUs and UPS's into all racks and cabinets as per the accompanying drawings, documents and manufacturer's specifications.
- .2 Prior to ordering of power strips and UPS's, coordinate location of electrical outlets provided by Others to ensure that the 3 metre long cord is of sufficient length. Provide longer cords as necessary to reach electrical outlets when the 3 metre cord is too short.
- .3 For overhead cable tray distribution sites, the power strips to be mounted such that the cord end is at the top of the rack or cabinet and is plugged into twistlock outlets mounted on the side or underside of the overhead cable tray. UPS to be mounted at the bottom of the rack.
- .4 All powerstrips, PDUs and UPS's shall be labelled with lamicoid Communications Identification Label in accordance to requirements of Section 27 05 53.

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- .5 For access floor distribution sites, the power strips to be mounted such that the cord end is at the bottom of the rack or cabinet and is plugged into twistlock outlets mounted at the bottom of the rack or cabinet or under the access floor.
- .6 Provide all necessary brackets, mounting posts and mounting extensions to mount power strips and UPS's such that the current monitoring display is in a prominent visible location and all receptacles have unobstructed access to them. The mounted power strip must not obstruct the rack or cabinets mounting rails or any other component that may be installed in the rack or cabinet.
- .7 All devices shall be able to be monitored over the Network and communicates with SNMPv3 and IPv4/6
- .8 The PDU's and UPS's shall be compatible with Eaton Intelligent Power Software Suite.
- .9 The PDU's and UPS's shall have a warranty that covers the PDU, UPS and batteries for 2 years.

End of Section 27 11 26