

MDF & IDF Rack/Cabinet, Surge Protection, AC Power & Grounding Requirements

1) Power / Receptacles

- two (2) 30-amp isolated ground L5-30r twist lock receptacles on individual circuit breakers to be installed on the side wall within 6ft of the back side of the MDF/IDF rack/cabinet @ 18" AFF
- one (1) 20-amp isolated ground 120v duplex receptacle to be installed next to the two (2) L5-30r twist lock receptacles in the MDF @ 18" AFF for digital signage HDMI converters & security UPS.
- three (3) 20-amp isolated ground 120v duplex receptacles to be installed @ 18" AFF at designated security alarm panel location in the MDF

2) Rack/Cabinet Grounding

- 7ft rack
 - One (1) Hoffman (Invent) horizontal grounding bar installed on the backside of rack in the MDF/IDF connected to an earth ground source with #6 copper grounding wire. (refer to Appendix B)
- Locking Cabinet
 - One (1) Hoffman (Invent) horizontal grounding bar installed on a Hubbell mounting bracket on the rear mounting rails of the locking cabinet in the MDF/IDF connected to an earth ground source with #6 copper grounding wire. (refer to Appendix C)

3) PDUs

- Hardware
 - Two (2) Servertech rack mount 8 position power distribution units (PDUs) to be installed per data relay rack illustration. PDUs to be provided by PNC. (refer to Appendix B & C)
- Grounding
 - Two (2) M5 x 6mm course pitch screws & star washers to be provided by the project low voltage contractor for the PDU to rear mounted rack/cabinet bus bar grounding connection via a #6 copper ground wire. (refer to below illustration)

Instructions:

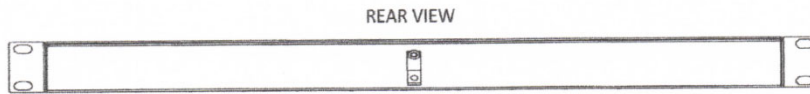
1. Connect one end of the ground wire to the equipment cabinet or local ground.
2. Locate the PDU external ground near the *Ⓧ* symbol.
3. Connect the other end with a ring terminal and a M5 screw to the PDU external ground. To ensure proper grounding to the chassis, use a star washer between the ring terminal and the PDU.



4) Circuit Surge Protection

- Grounding

- one (1) #6 copper ground wire from ITW Linx main housing rear ground screw to rack/cabinet mounted bus bar grounding connection (refer to below illustration)



Telco Demarcation (MPOP) AC Power Requirements

- 1) One (1) 20-amp isolated ground 120v duplex receptacle is required in the Telco demarcation point (demarc) or MPOP. This is for the Telco circuit hand off hardware.

Telco Entrance Cable Conduit Requirements

- 1) All new construction locations will require two (2) 4" conduits w/pull string installed from the street elevation into the MDF/demarc of the building. The project EC will provide and install the entrance conduits as part of their scope of work.
- 2) The first conduit is to be labeled 'Telco 1' and the 2nd conduit is to be labeled 'Telco 2'.

Note: The PNC Realty Services construction manager should have all the ROE (right of entry) guidelines/requirements for all locations. All Telco pathway construction requirements to meet local building codes are the responsibility of the construction company's general contractor's (GC) on-site superintendent and the local Telco field engineer.