

GENERAL:

The scope of this document is to provide requirements for low voltage (600 volts and below) electrical power conductors and cables.

DESIGN GUIDELINES:

1. All conductors shall be copper.
2. Dedicated neutral conductors shall be used for all single phase loads unless approved in writing by the project manager.
3. All neutral conductors will be a minimum of full size. Designer will evaluate the need for oversized neutral conductors.
4. Circuits that are dedicated to power pre-wired equipment such as office furniture partitions that require multiple branch circuits may use shared neutrals if the following conditions are met.
 - 4.1. Line to neutral voltage is 120 volts (nominal).
 - 4.2. The neutral conductor is oversized (#10 AWG minimum for a 20 amp circuit).
 - 4.3. The pre-wired equipments have oversized neutral conductors (#10 AWG minimum for a 20 amp circuit).
5. Minimum Conductor size is #12 AWG.
6. Minimum Insulation rating is 90°C.
7. Conductor Rating:
 - 7.1. For 100 amps and below: Conductor shall be rated per the 60°C table.
 - 7.2. For over 100 amps: Conductor shall be rated per the 75°C table.

NOT PERMITTED:

1. No aluminum conductors shall be used.
2. Pre-wired systems such as type AC (armored cable), type MC (metal-clad) and type NM (nonmetallic-sheathed cable) shall not be used unless approved in writing by the project manager prior to start of construction. (Exception: MC may be used for lighting fixture whips up to 6'-0" long. They must be dedicated, not daisy chained together.)