

# Communications Supply Corporation

## TECHNICAL DATA

### NATIONAL ELECTRICAL CODE

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The National Electrical Code (NEC) is an accumulation of guidelines, or rules, developed to ensure safe and reliable installation of wiring and equipment in residential and commercial buildings. The code is not law in and of itself; it becomes law when adopted by specific jurisdictions, such as state, city, or federal construction agencies.

#### CABLE DESIGNATION BY ENVIRONMENTAL AREAS

The NEC categorizes cables for use in various environments within a building. There are four general designations. They are: Plenum, Riser, General Purpose, and Restricted Applications. In most cases a higher listed cable can be substituted for one lower listed (see substitution hierarchy). The NEC requires that cable designation codes be imprinted on premise cable to identify them for the appropriate use. Detailed information on a specific cable type can be found in the appropriate article of the NEC book.

#### NEC CABLE IDENTIFICATION CODES AND RATINGS

| NEC MARKING        | CABLE TYPE                     | NEC ARTICLE | NEC VOLTAGE |
|--------------------|--------------------------------|-------------|-------------|
| CL2, CL2R, CL2P    | Class 2 Power Limited          | 725         | 150V        |
| CL3, CL3R, CL3P    | Class 3 Power Limited          | 725         | 300V        |
| FPL, FPLR, FPLP    | Power Limited Fire Alarm       | 760         | 300V        |
| NPLF, NPLFR, NPLFP | Non - Power Limited Fire Alarm | 760-17      | 150V        |
| CM, CMR, CMP       | Communications Cable           | 800         | 300V        |
| MP, MPR, MPP       | Multi - Purpose Cable          | 800         | 300V        |
| PLTC               | Power Limited Tray Cable       | 725         | 300V        |
| OFN, OFNR, OFNP    | Nonconductive Fiber Optic      | 770         | N/A         |
| TC, VNTC           | Tray Cable, 600V               | 340         | 600V        |
| CATV               | Community Antenna Television   | 820         | N/A         |
| CI                 | 2 Hour Burn Fire Alarm         | 760         | 300V/600V   |

**"P" Suffix = Plenum rated**

**"R" Suffix = Riser rated**

**"X" Suffix = Restricted use**

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### NEC CABLE SUBSTITUTION CROSS REFERENCE GUIDE

#### ALLOWABLE CABLE SUBSTITUTIONS

|             | MPP | CMP | FPLP | CL3P | CL2P | CMR | FPLR | CL3R | CL2R | MP | CM | FPL | CL3 | PLTC | CL2 | CMX | CL3X | CL2X |
|-------------|-----|-----|------|------|------|-----|------|------|------|----|----|-----|-----|------|-----|-----|------|------|
| <b>MPP</b>  | X   |     |      |      |      |     |      |      |      |    |    |     |     |      |     |     |      |      |
| <b>CMP</b>  | X   | X   |      |      |      |     |      |      |      |    |    |     |     |      |     |     |      |      |
| <b>FPLP</b> | X   | X   | X    |      |      |     |      |      |      |    |    |     |     |      |     |     |      |      |
| <b>CL3P</b> | X   | X   | X    | X    |      |     |      |      |      |    |    |     |     |      |     |     |      |      |
| <b>CL2P</b> | X   | X   | X    | X    | X    |     |      |      |      |    |    |     |     |      |     |     |      |      |
| <b>CMR</b>  | X   | X   | X    | X    | X    | X   |      |      |      |    |    |     |     |      |     |     |      |      |
| <b>FPLR</b> | X   | X   | X    | X    | X    | X   | X    |      |      |    |    |     |     |      |     |     |      |      |
| <b>CL3R</b> | X   | X   | X    | X    | X    | X   | X    | X    |      |    |    |     |     |      |     |     |      |      |
| <b>CL2R</b> | X   | X   | X    | X    | X    | X   | X    | X    | X    |    |    |     |     |      |     |     |      |      |
| <b>MP</b>   | X   | X   | X    | X    | X    | X   | X    | X    | X    | X  |    |     |     |      |     |     |      |      |
| <b>CM</b>   | X   | X   | X    | X    | X    | X   | X    | X    | X    | X  | X  |     |     |      |     |     |      |      |
| <b>FPL</b>  | X   | X   | X    | X    | X    | X   | X    | X    | X    | X  | X  | X   |     |      |     |     |      |      |
| <b>CL3</b>  | X   | X   | X    | X    | X    | X   | X    | X    | X    | X  | X  | X   | X   |      |     |     |      |      |
| <b>PLTC</b> | X   | X   | X    | X    | X    | X   | X    | X    | X    | X  | X  | X   | X   | X    |     |     |      |      |
| <b>CL2</b>  | X   | X   | X    | X    | X    | X   | X    | X    | X    | X  | X  | X   | X   | X    | X   |     |      |      |
| <b>CMX</b>  | X   | X   | X    | X    | X    | X   | X    | X    | X    | X  | X  | X   | X   | X    | X   | X   |      |      |
| <b>CL3X</b> | X   | X   | X    | X    | X    | X   | X    | X    | X    | X  | X  | X   | X   | X    | X   | X   | X    |      |
| <b>CL2X</b> | X   | X   | X    | X    | X    | X   | X    | X    | X    | X  | X  | X   | X   | X    | X   | X   | X    | X    |