



CONSTRUCTION

- 1- Conductor:** Compact class B stranded soft annealed bare copper as per ASTM B-496.
- 2- Conductor shield:** Extruded thermoset semi-conducting stress control layer.
- 3- Insulation:** Ethylene propylene rubber (EPR).
- 4- Insulation shield:** Extruded thermoset strippable semi-conducting insulation shield.
- 5- Copper wires shield:** One-third neutral concentric round annealed bare copper wires helically applied over the insulation shield.
- 6- Jacket:** black flame retardant, sunlight and oil resistant I polyvinyl chloride (PVC)

FEATURES AND APPLICATIONS

- EPRONAX type MV-90 is suitable for use in wet or dry locations, in open air (exposed to sunlight), raceways, troughs, ducts and direct burial.
- Typical installations include feeder or branch circuits in generating stations, industrial and commercial installations.
- Rated at maximum operating temperature of 90 °C for normal operation, 130 °C for emergency overload and 250 °C for short-circuit conditions.
- True triple and dry curing extrusion system.
- Excellent flexibility.
- Excellent corona and moisture resistance.
- Cold bend tested at -35 °C.
- NEC guidelines must be followed for proper application.
- FT4 (70,000 BTU/hr) Flame test and CT use (1/0 AWG and larger).
- UL listed as MV-90 under file E-500191.

STANDARDS

ASTM B-3 - Standard Specification for Soft or Annealed Copper Wire

ASTM B-496 - Standard Specification for Compact Round Concentric-Lay-Stranded Copper Conductors.

UL 1072 - Medium-Voltage Power Cables.

ICEA S-93-639 - 5-46 kV Shielded Power Cable for use in the Transmission and Distribution of Electric Energy

UL 1685 - Safety Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables

IEEE 1202 – Flame-propagation testing of wire and cable.

COPPER CONDUCTOR, 25 kV 100 % INSULATION LEVEL, 260 MILS

| PRODUCT CODE | COND. SIZE (AWG or kcmil) | NOMINAL CONDUCTOR DIAMETER (inches) | NOMINAL INSULATION DIAM. (inches) | NOMINAL INSULATION SHIELD DIAM. (inches) | NOMINAL DIAMETER OVER JACKET (inches) | APPROX. WEIGHT (lb/kft) | | AMPACITY (A) | | | CONDUIT SIZE (inches) |
|--------------|---------------------------|-------------------------------------|-----------------------------------|------------------------------------------|---------------------------------------|-------------------------|-------|--------------------|----------------------|----------|-----------------------|
| | | | | | | COPPER | TOTAL | CONDUIT IN AIR (1) | UNDERGROUND DUCT (2) | TRAY (3) | |
| 836801048 | 1 | 0.30 | 0.874 | 0.937 | 1.229 | 815 | 2052 | 170 | 175 | --- | 3 ½ |
| 836801049 | 1/0 | 0.33 | 0.911 | 0.974 | 1.266 | 1032 | 2324 | 195 | 200 | 195 | 3 ½ |
| 836801050 | 2/0 | 0.37 | 0.950 | 1.013 | 1.306 | 1291 | 2640 | 225 | 230 | 225 | 4 |
| 836801051 | 3/0 | 0.42 | 0.997 | 1.060 | 1.352 | 1630 | 3045 | 260 | 260 | 260 | 4 |
| 836801052 | 4/0 | 0.47 | 1.051 | 1.114 | 1.406 | 2066 | 3556 | 295 | 295 | 300 | 4 |
| 836801053 | 250 | 0.52 | 1.094 | 1.157 | 1.449 | 2433 | 3983 | 330 | 325 | 330 | 5 |
| 836801054 | 350 | 0.61 | 1.189 | 1.252 | 1.544 | 3390 | 5067 | 395 | 390 | 410 | 5 |
| 836801057 | 500 | 0.73 | 1.311 | 1.374 | 1.826 | 4868 | 7139 | 480 | 465 | 510 | 5 |
| 836801060 | 750 | 0.90 | 1.476 | 1.539 | 1.992 | 7359 | 9863 | 585 | 565 | 655 | 6 |
| 836801062 | 1000 | 1.06 | 1.631 | 1.694 | 2.147 | 9752 | 12483 | 675 | 640 | 780 | 6 |

COPPER CONDUCTOR, 25 kV 133 % INSULATION LEVEL, 320 MILS

| PRODUCT CODE | COND. SIZE (AWG or kcmil) | NOMINAL CONDUCTOR DIAMETER (inches) | NOMINAL INSULATION DIAM. (inches) | NOMINAL INSULATION SHIELD DIAM. (inches) | NOMINAL DIAMETER OVER JACKET (inches) | APPROX. WEIGHT (lb/kft) | | AMPACITY (A) | | | CONDUIT SIZE (inches) |
|--------------|---------------------------|-------------------------------------|-----------------------------------|------------------------------------------|---------------------------------------|-------------------------|-------|--------------------|----------------------|----------|-----------------------|
| | | | | | | COPPER | TOTAL | CONDUIT IN AIR (1) | UNDERGROUND DUCT (2) | TRAY (3) | |
| 838701048 | 1 | 0.30 | 0.994 | 1.057 | 1.349 | 815 | 2328 | 170 | 175 | --- | 4 |
| 838701049 | 1/0 | 0.33 | 1.031 | 1.094 | 1.387 | 1032 | 2608 | 195 | 200 | 195 | 4 |
| 838701050 | 2/0 | 0.37 | 1.071 | 1.134 | 1.426 | 1291 | 2932 | 225 | 230 | 225 | 4 |
| 838701051 | 3/0 | 0.42 | 1.117 | 1.180 | 1.472 | 1630 | 3348 | 260 | 260 | 260 | 5 |
| 838701052 | 4/0 | 0.47 | 1.171 | 1.234 | 1.526 | 2066 | 3870 | 295 | 295 | 300 | 5 |
| 838701053 | 250 | 0.52 | 1.215 | 1.278 | 1.570 | 2433 | 4306 | 330 | 325 | 330 | 5 |
| 838701054 | 350 | 0.61 | 1.309 | 1.372 | 1.724 | 3390 | 5605 | 395 | 390 | 410 | 5 |
| 838701057 | 500 | 0.73 | 1.431 | 1.494 | 1.947 | 4868 | 7540 | 480 | 465 | 510 | 6 |
| 838701060 | 750 | 0.90 | 1.596 | 1.659 | 2.112 | 7359 | 10300 | 585 | 565 | 655 | 6 |
| 838701062 | 1000 | 1.06 | 1.752 | 1.815 | 2.268 | 9752 | 12953 | 675 | 640 | 780 | 7 |

(1) Ampacities are in accordance with table 310.60(C)(74) of the NEC for insulated triplexed or three single-conductor aluminum cables in isolated conduit in air based on conductor temperatures of 90°C (194°F) and ambient air temperature of 40°C (104°F).

(2) Ampacities are in accordance with table 310.60(C)(78) of the NEC for three single-insulated aluminum conductors in underground electrical ducts (three conductors per electrical duct) based on ambient earth temperature of 20°C (68°F) electrical duct arrangement in accordance with figure 31060 detail 1 100 percent load factor thermal resistance (rho) of 90 conductor temperatures of 90°C (194°F).

(3) Ampacities are in accordance with Section 392.80(B)(2) of the NEC for single Type MV-90 conductor cables or single conductors cabled together (triplexed, quadruplexed, etc) installed in uncovered cable tray at ambient temperature of 40°C (104°F) and conductor temperatures of 90°C (194°F). The ampacities shall not exceed 75 percent of the allowable ampacities in Table 310.60(C) (70). Where the cable trays are covered for more than 18 m (6 ft) with solid unventilated covers the ampacities for 1/0 AWG and larger single conductor cables shall not exceed 93 percent of the values shown above. Jam ratio has not been considered and should be checked to avoid possible jamming.

Values are nominal and subject to manufacturing tolerances.