

# MV-90 35kV

**UL 1072, ASTM B-231, AEIC CS8, ICEA S-94-649**

Medium Voltage 35kV 100% Aluminum Conductor, Copper Wire Shielded Power Cable

## APPLICATIONS

### INDUSTRIAL AND COMMERCIAL

- Chemical Plants
- Petrochemical Plants
- Electrical Utility Plants
- Water Treatment Facilities
- Steel Mills
- Paper Mills
- Airports
- Shopping Malls
- Military Bases
- Medical Facilities
- Sports Stadiums

### INSTALLATIONS

- In Cable Tray
- Conduit in Air
- Aerial with Messenger Supported
- Direct Buried
- Underground Duct
- Wet and Dry Locations

## CONSTRUCTION

|                   |                                                                                               |
|-------------------|-----------------------------------------------------------------------------------------------|
| Conductor         | Class B compressed uncoated aluminum, watertight                                              |
| Conductor shield  | Extruded layer of semiconducting compound applied under simultaneous triple extrusion process |
| Insulation        | Extruded layer of 90°C rated TR-XLPE                                                          |
| Insulation shield | Extruded layer of semiconducting compound applied by triple extrusion process                 |
| Metallic shield   | Round Copper Wire Concentric Neutral with water blocking agent                                |
| Jacket            | Extruded layer of black LLDPE with red stripes                                                |



## Characteristic

|                                                    |                                    |
|----------------------------------------------------|------------------------------------|
| Maximum conductor operating temperature:           | +90°C                              |
| Maximum emergency overload temperature:            | +140°C                             |
| Maximum short-circuit conductor temperature:       | +250°C                             |
| Maximum sidewall pressure:                         | 1000lbs/FT                         |
| Lowest ambient temperature for fixed installation: | -40°C                              |
| Lowest installation temperature:                   | -20°C                              |
| Minimum bending radius:                            | 12xD (D-overall diameter of cable) |

## Approvals

(UL) E129949

# MV-90

## 35kV 100% INSULATION LEVEL

| Conductor Size                | Insulation Thickness | Diameter over insulation | Concentric Neutral | Jacket Thickness | Outer Diameter | Cable Weight | Ampacities*     |               |                   | Min. Bending Radius | Max. Pull Tension |
|-------------------------------|----------------------|--------------------------|--------------------|------------------|----------------|--------------|-----------------|---------------|-------------------|---------------------|-------------------|
|                               |                      |                          |                    |                  |                |              | Isolated in Air | Direct Buried | Under ground Duct |                     |                   |
| AWG kcmil                     | mils                 | inches                   | No x AWG           | mils             | inches         | Lbs / kft    | A               | A             | A                 | inches              | lbs               |
| One-Third Concentric Neutral  |                      |                          |                    |                  |                |              |                 |               |                   |                     |                   |
| 2                             | 345                  | 1.02                     | 6 # 16             | 70               | 1.39           | 810          | 160             | 165           | 120               | 16.68               | 530               |
| 1                             | 345                  | 1.06                     | 7 # 16             | 70               | 1.43           | 850          | 175             | 185           | 135               | 17.16               | 670               |
| 1/0                           | 345                  | 1.10                     | 9 # 16             | 70               | 1.46           | 840          | 200             | 215           | 155               | 17.52               | 845               |
| 2/0                           | 345                  | 1.14                     | 11 # 16            | 70               | 1.51           | 950          | 230             | 245           | 175               | 18.12               | 1065              |
| 3/0                           | 345                  | 1.19                     | 13 # 16            | 70               | 1.56           | 1080         | 270             | 275           | 200               | 18.72               | 1345              |
| 4/0                           | 345                  | 1.25                     | 17 # 16            | 70               | 1.61           | 1120         | 310             | 315           | 230               | 19.32               | 1695              |
| 250                           | 345                  | 1.30                     | 13 # 14            | 70               | 1.67           | 1320         | 345             | 345           | 250               | 20.04               | 2000              |
| 350                           | 345                  | 1.40                     | 18 # 14            | 70               | 1.85           | 1540         | 430             | 415           | 305               | 22.2                | 2800              |
| 500                           | 345                  | 1.54                     | 16 # 12            | 90               | 2.02           | 1980         | 530             | 510           | 370               | 24.24               | 4000              |
| 750                           | 345                  | 1.72                     | 24 # 12            | 90               | 2.21           | 2550         | 685             | 635           | 455               | 26.52               | 6000              |
| One- Sixth Concentric Neutral |                      |                          |                    |                  |                |              |                 |               |                   |                     |                   |
| 1000                          | 345                  | 1.87                     | 16 # 12            | 90               | 2.36           | 2760         | 825             | 740           | 525               | 28.32               | 6000              |
| 1250                          | 345                  | 2.01                     | 31 # 14            | 90               | 2.49           | 3450         | 950             | 825           | 585               | 29.88               | 6000              |
| 1500                          | 345                  | 2.13                     | 38 # 14            | 90               | 2.61           | 4220         | 1060            | 945           | 640               | 31.32               | 6000              |

\* Ampacities „Underground Duct“ per NEC 2023 Table 315.60(C)(12). Ampacities „Isolated in Air“ per NEC 2023 Table 315.60(C)(4).  
Ampacities „Direct Buried“ per NEC 2023 Table 315.60(C)(16).

### Standard print legend:

TF KABLE (SIZE) AL STRANDFILLED TYPE MV-90 (UL) TRXLPE 35kV 100% INS LEVEL 345 MILS SUN RES MADE IN POLAND (Year) ~