



# MV-105 MC-HL CABLES 5kV

**UL 1072, IEEE 1202, AEIC CS8, ICEA S-94-649, ICEA S-93-639**

Class 1 DIV 1 three conductor continuous corrugated welded armor

## CABLE DESIGN:

Three stranded copper conductors, extruded semiconducting shield, EPR insulation, extruded semiconducting insulation shield, phase identification strips, copper tape shield with overlap applied over individual conductors, stranded copper grounding conductors, fillers, binder tape over the core, continuous corrugated aluminum sheath, PVC jacket.



## CONSTRUCTION

|                     |   |
|---------------------|---|
| Conductor           | Class B compressed stranded bare copper per ASTM B3 and ASTM B8   |
| Conductor screen    | Extruded layer of semi-conducting compound over the conductor per UL 1072   |
| Insulation          | Extruded layer of ethylene-propylene rubber (EPR) per UL 1072   |
| Insulation screen   | Extruded layer of semi-conducting compound applied by triple extrusion process over the insulation. Meets electrical and physical requirements of UL 1072 |
| Shield              | Uncoated 5 mil copper tape helically applied with 20% overlap<br>Phase identification: type id ribbon longitudinally applied under shield                 |
| Grounding conductor | Three uncoated copper grounding conductors wires per NEC/UL tables  |
| Assembly            | Three power conductors cabled with grounding conductors and fillers in the interstices, binder tape applied overall                                       |
| Metallic sheath     | Continuously corrugated welded aluminum armor   |
| Jacket              | Protective sunlight and ozone resistant PVC jacket per UL 1072<br>Yellow color for 5kV version  |

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## CHARACTERISTICS

|   |   |
|---|---|
| Conductor cross-sectional:                | 2AWG – 500 MCM                          |
| Operating conductor temperature           | Continuous operating temperature: 105°C |
|   | Emergency rating: 140°C                 |
| Short circuit conductor temperature       | Initial : +105°C                        |
|   | Final: +250°C                           |
| Lowest temperature of cable installation: | -20°C                                   |

## Construction 5 kV (133% Insulation Level):

| Size         | Conductor    |              | Grounding Conductor |     | Insulation Thickness | Diameter over Insulation | Overall Diameter Core | Overall Diameter Armor | Jacket Thickness | Approx Overall Diameter Cable | Approx Net. Weight | Standard Length | Reel Size (height) |
|--------------|--------------|--------------|---------------------|-----|----------------------|--------------------------|-----------------------|------------------------|------------------|-------------------------------|--------------------|-----------------|--------------------|
|              | Construction | No. of Wires | No. x               | AWG |                      |                          |                       |                        |                  |                               |                    |                 |                    |
| AWG<br>kcmil |              |              | No. x               | AWG | mils                 | inches                   | inches                | inches                 | inches           | inches                        | lbs/1000ft         | ft              | mm/<br>inches      |
| 2            | compressed   | 7            | 3                   | 10  | 115                  | 0.56                     | 0.65                  | 1.90                   | 0.05             | 2.00                          | 2,090              | 3,350           | 2400/<br>95        |
| 1/0          | compressed   | 19           | 3                   | 8   | 115                  | 0.64                     | 0.72                  | 2.07                   | 0.05             | 2.20                          | 2,600              | 2,650           | 2400/<br>95        |
| 2/0          | compressed   | 19           | 3                   | 7   | 115                  | 0.68                     | 0.77                  | 2.11                   | 0.05             | 2.25                          | 3,020              | 2,620           | 2400/<br>95        |
| 4/0          | compressed   | 19           | 3                   | 7   | 115                  | 0.80                     | 0.87                  | 2.30                   | 0.06             | 2.50                          | 4,100              | 1,900           | 2400/<br>95        |
| 250          | compressed   | 37           | 3                   | 6   | 115                  | 0.83                     | 0.92                  | 2.45                   | 0.06             | 2.60                          | 4,660              | 1,950           | 2400/<br>95        |
| 350          | compressed   | 37           | 3                   | 6   | 115                  | 0.95                     | 1.06                  | 2.80                   | 0.06             | 2.96                          | 6,020              | 1,400           | 2400/<br>95        |
| 500          | compressed   | 37           | 3                   | 5   | 115                  | 1.08                     | 1.20                  | 3.11                   | 0.06             | 3.28                          | 7,930              | 1,250           | 2400/<br>95        |
| 750          | compressed   | 61           | 3                   | 4   | 115                  | 1.26                     | 1.37                  | 3.53                   | 0.06             | 3.71                          | 10,840             | 850             | 2400/<br>95        |

### Approvals:

UL E231073

### Print Legend:

TF CABLE UL E231073 MC-HL OR MV-105 [#AWG or Kcmil] CU 5kV SHLD 115 MILS EPR 133% INS LEVEL 3x[#AWG] CU GRD UL 1072 SUNLIGHT RESISTANT DIR BUR FT-4 (-40°C) FOR CT USE IEEE 1202 [YEAR] [SEQUENTIAL FOOTAGE MARKINGS]

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