



Images not to scale. Follow table for dimensions

## APPLICATION

POLY CAB MV 25KV EPR insulated with Copper conductor single core cable is suitable to use in conduits, ducts, troughs, trays, direct burial in wet and dry conditions for power supply to wide networks.

## CHARACTERISTICS

### Voltage Rating

Nominal Voltage: 25kV AC

### Operation Temperature

Operating temperature: -35°C to +105°C  
Emergency operating temperature: 140°C  
Max. Short Circuit Temperature: 250°C

### Bending Radius: 12D

D is overall diameter of cable

## CONSTRUCTION

- Conductor: Circular Compacted Copper conductor as per ASTM B496
- Conductor Screen: Extruded Semi-conductive compound
- Insulation: Extruded EPR (TR-XLPE will be provided on demand)
- Insulation Screen: Extruded Semi-conductive compound
- Metallic Insulation Screen: Helically applied copper tape  
(Round wire / Corrugated copper screen will be provided on demand)
- Outer Sheath: Extruded Polyvinyl Chloride, Colour: Black  
(Alternative Sheath: CPE Outer Sheath or LSZH Outer sheath, and parameters will change accordingly)

### AC High Voltage Test :

100% Level - 52 kV AC  
133% Level - 64 kV AC

## OUTSTANDING FEATURES

- Sunlight resistant
- Oil, Acid and Alkalies resistant
- Corona resistant
- Treeing resistant
- Moisture resistant

## STANDARD FOLLOWS

ASTM B496  
ICEA S-93-639 (NEMA WC-74)  
UL 1072  
UL 1685 / FT-1  
IEEE 1202  
UL 2556

## COMPLIANCE

Conductor resistance - ICEA S-93-639  
Insulation resistance - ICEA S-93-639  
Vertical Tray Flame - UL 1685  
Smoke release - UL 1685  
Flame Test - IEEE 1202

## OUR ACCREDITATIONS



## APPROVAL



## NOTES

# POLY CAB MV SC SCR ICEA S-93-639 25KV

## MV Cable with Copper Conductor, EPR Insulation and Copper Screen

**POLY CAB**  
IDEAS. CONNECTED.

### DIMENSIONS, WEIGHT AND AMPACITY:

133% insulation:

| Product Code              | No. of Cores | Core Cross sectional Area | Nominal Diameter      |                      |         | Weight (Approx.) | Current rating *          |        |
|---------------------------|--------------|---------------------------|-----------------------|----------------------|---------|------------------|---------------------------|--------|
|                           |              |                           | Under metallic screen | Over metallic screen | Overall |                  | Directly buried in ground | In air |
| No.                       | AWG / MCM    | mm                        | mm                    | mm                   | Kg/Km   | Amps             |                           |        |
| MVIC32CRUAYF001C002AA001P | 1            | 2 AWG                     | 25.5                  | 26.0                 | 30.0    | 1250             | 140                       | 210    |
| MVIC32CRUAYF001C001AA001P | 1            | 1 AWG                     | 26.3                  | 26.9                 | 31.0    | 1350             | 160                       | 240    |
| MVIC32CRUAYF001C1X0AA001P | 1            | 1/0 AWG                   | 27.3                  | 27.8                 | 32.0    | 1500             | 185                       | 285    |
| MVIC32CRUAYF001C2X0AA001P | 1            | 2/0 AWG                   | 28.3                  | 28.8                 | 33.0    | 1650             | 215                       | 330    |
| MVIC32CRUAYF001C3X0AA001P | 1            | 3/0 AWG                   | 29.5                  | 30.0                 | 34.0    | 1900             | 245                       | 385    |
| MVIC32CRUAYF001C4X0AA001P | 1            | 4/0 AWG                   | 30.8                  | 31.3                 | 35.5    | 2150             | 285                       | 445    |
| MVIC32CRUAYF001C250CA001P | 1            | 250 MCM                   | 32.1                  | 32.6                 | 36.5    | 2400             | 315                       | 500    |
| MVIC32CRUAYF001C350CA001P | 1            | 350 MCM                   | 34.5                  | 35.1                 | 39.0    | 2950             | 385                       | 625    |
| MVIC32CRUAYF001C500CA001P | 1            | 500 MCM                   | 37.6                  | 38.1                 | 42.0    | 3800             | 470                       | 765    |
| MVIC32CRUAYF001C600CA001P | 1            | 600 MCM                   | 40.2                  | 40.7                 | 44.5    | 4400             | 520                       | 855    |
| MVIC32CRUAYF001C750CA001P | 1            | 750 MCM                   | 42.6                  | 43.1                 | 47.0    | 5200             | 585                       | 970    |
| MVIC32CRUAYF001C01KCA001P | 1            | 1000 MCM                  | 46.1                  | 46.6                 | 52.0    | 6650             | 675                       | 1155   |

100% insulation:

| Product Code              | No. of Cores | Core Cross sectional Area | Nominal Diameter      |                      |         | Weight (Approx.) | Current rating *          |        |
|---------------------------|--------------|---------------------------|-----------------------|----------------------|---------|------------------|---------------------------|--------|
|                           |              |                           | Under metallic screen | Over metallic screen | Overall |                  | Directly buried in ground | In air |
| No.                       | AWG / MCM    | mm                        | mm                    | mm                   | Kg/Km   | Amps             |                           |        |
| MVIC32CRUAYF001C002AA002P | 1            | 2 AWG                     | 22.5                  | 23.0                 | 27.0    | 1050             | 140                       | 210    |
| MVIC32CRUAYF001C001AA002P | 1            | 1 AWG                     | 23.3                  | 23.8                 | 28.0    | 1150             | 160                       | 240    |
| MVIC32CRUAYF001C1X0AA002P | 1            | 1/0 AWG                   | 24.2                  | 24.7                 | 29.0    | 1300             | 185                       | 285    |
| MVIC32CRUAYF001C2X0AA002P | 1            | 2/0 AWG                   | 25.3                  | 25.8                 | 30.0    | 1500             | 215                       | 330    |
| MVIC32CRUAYF001C3X0AA002P | 1            | 3/0 AWG                   | 26.5                  | 27.0                 | 31.0    | 1700             | 245                       | 385    |
| MVIC32CRUAYF001C4X0AA002P | 1            | 4/0 AWG                   | 27.8                  | 28.3                 | 32.5    | 1950             | 285                       | 445    |
| MVIC32CRUAYF001C250CA002P | 1            | 250 MCM                   | 29.1                  | 29.6                 | 33.5    | 2150             | 315                       | 500    |
| MVIC32CRUAYF001C350CA002P | 1            | 350 MCM                   | 31.5                  | 32.0                 | 36.0    | 2750             | 385                       | 625    |
| MVIC32CRUAYF001C500CA002P | 1            | 500 MCM                   | 34.5                  | 35.0                 | 39.0    | 3550             | 470                       | 765    |
| MVIC32CRUAYF001C600CA002P | 1            | 600 MCM                   | 36.5                  | 37.1                 | 42.5    | 4250             | 520                       | 855    |
| MVIC32CRUAYF001C750CA002P | 1            | 750 MCM                   | 39.0                  | 39.5                 | 45.0    | 5000             | 585                       | 970    |
| MVIC32CRUAYF001C01KCA002P | 1            | 1000 MCM                  | 42.5                  | 43.0                 | 48.5    | 6300             | 675                       | 1155   |

\* Current Rating based on Table 310.16 (20°C Ambient Ground Temperature) and Table 310.17 (30°C Ambient Air Temperature) of National Electric Code

**POLY CAB MV SC SCR ICEA S-93-639 25KV**  
**MV Cable with Copper Conductor, EPR Insulation and Copper Screen**

**POLY CAB**  
 IDEAS. CONNECTED.

**ELECTRICAL CHARACTERISTICS:**

**133% insulation:**

| No. of Cores | Core Cross sectional Area | Nom. DC Resistance at 25°C | Nom. AC Resistance at 90°C | Approx. Capacitance | Approx. Inductance | Approx. Reactance | Max. pulling tension on conductor | Charging Current per phase | Positive sequence impedance | Electric Stress at Conductor Screen | Short circuit rating Phase conductor | Metallic screen |
|--------------|---------------------------|----------------------------|----------------------------|---------------------|--------------------|-------------------|-----------------------------------|----------------------------|-----------------------------|-------------------------------------|--------------------------------------|-----------------|
| No.          | AWG / MCM                 | Ω/km                       | Ω/km                       | μF/km               | mH/km              | Ω/km              | kN                                | Amps/Km                    | Ohms/Km                     | kV/mm                               | kA/S                                 |                 |
| 1            | 2 AWG                     | 0.531                      | 0.666                      | 0.15                | 0.50               | 0.19              | 2.4                               | 1.39                       | 0.69                        | 5.8                                 | 4.8                                  | 3.3             |
| 1            | 1 AWG                     | 0.423                      | 0.528                      | 0.16                | 0.48               | 0.18              | 3.0                               | 1.48                       | 0.56                        | 5.6                                 | 6.1                                  | 3.4             |
| 1            | 1/0 AWG                   | 0.335                      | 0.420                      | 0.17                | 0.47               | 0.18              | 3.7                               | 1.57                       | 0.46                        | 5.3                                 | 7.7                                  | 3.5             |
| 1            | 2/0 AWG                   | 0.266                      | 0.331                      | 0.18                | 0.44               | 0.17              | 4.7                               | 1.68                       | 0.37                        | 5.1                                 | 9.7                                  | 3.6             |
| 1            | 3/0 AWG                   | 0.211                      | 0.266                      | 0.19                | 0.42               | 0.16              | 6.0                               | 1.81                       | 0.31                        | 4.9                                 | 12.2                                 | 3.8             |
| 1            | 4/0 AWG                   | 0.167                      | 0.210                      | 0.21                | 0.41               | 0.15              | 7.5                               | 1.94                       | 0.26                        | 4.7                                 | 15.3                                 | 3.9             |
| 1            | 250 MCM                   | 0.141                      | 0.177                      | 0.22                | 0.40               | 0.15              | 8.9                               | 2.07                       | 0.23                        | 4.5                                 | 18.1                                 | 4.1             |
| 1            | 350 MCM                   | 0.101                      | 0.128                      | 0.25                | 0.38               | 0.14              | 12.4                              | 2.32                       | 0.19                        | 4.3                                 | 25.4                                 | 4.4             |
| 1            | 500 MCM                   | 0.071                      | 0.092                      | 0.28                | 0.35               | 0.13              | 17.7                              | 2.62                       | 0.16                        | 4.1                                 | 36.2                                 | 4.8             |
| 1            | 600 MCM                   | 0.059                      | 0.076                      | 0.31                | 0.35               | 0.13              | 21.3                              | 2.88                       | 0.15                        | 3.8                                 | 43.5                                 | 5.1             |
| 1            | 750 MCM                   | 0.047                      | 0.066                      | 0.33                | 0.34               | 0.13              | 26.6                              | 3.11                       | 0.14                        | 3.7                                 | 54.4                                 | 5.4             |
| 1            | 1000 MCM                  | 0.035                      | 0.052                      | 0.37                | 0.33               | 0.12              | 35.4                              | 3.46                       | 0.13                        | 3.6                                 | 72.5                                 | 5.9             |

**100% insulation:**

| No. of Cores | Core Cross sectional Area | Nom. DC Resistance at 25°C | Nom. AC Resistance at 90°C | Approx. Capacitance | Approx. Inductance | Approx. Reactance | Max. pulling tension on conductor | Charging Current per phase | Positive sequence impedance | Electric Stress at Conductor Screen | Short circuit rating Phase conductor | Metallic screen |
|--------------|---------------------------|----------------------------|----------------------------|---------------------|--------------------|-------------------|-----------------------------------|----------------------------|-----------------------------|-------------------------------------|--------------------------------------|-----------------|
| No.          | AWG / MCM                 | Ω/km                       | Ω/km                       | μF/km               | mH/km              | Ω/km              | kN                                | Amps/Km                    | Ohms/Km                     | kV/mm                               | kA/S                                 |                 |
| 1            | 2 AWG                     | 0.531                      | 0.666                      | 0.17                | 0.48               | 0.18              | 2.4                               | 1.58                       | 0.69                        | 6.5                                 | 4.8                                  | 2.9             |
| 1            | 1 AWG                     | 0.423                      | 0.528                      | 0.18                | 0.46               | 0.17              | 3.0                               | 1.68                       | 0.56                        | 6.2                                 | 6.1                                  | 3.0             |
| 1            | 1/0 AWG                   | 0.335                      | 0.420                      | 0.19                | 0.45               | 0.17              | 3.7                               | 1.80                       | 0.45                        | 6.0                                 | 7.7                                  | 3.1             |
| 1            | 2/0 AWG                   | 0.266                      | 0.331                      | 0.21                | 0.42               | 0.16              | 4.7                               | 1.94                       | 0.37                        | 5.7                                 | 9.7                                  | 3.2             |
| 1            | 3/0 AWG                   | 0.211                      | 0.266                      | 0.22                | 0.41               | 0.15              | 6.0                               | 2.08                       | 0.31                        | 5.5                                 | 12.2                                 | 3.4             |
| 1            | 4/0 AWG                   | 0.167                      | 0.210                      | 0.24                | 0.39               | 0.15              | 7.5                               | 2.25                       | 0.26                        | 5.3                                 | 15.3                                 | 3.6             |
| 1            | 250 MCM                   | 0.141                      | 0.177                      | 0.26                | 0.38               | 0.14              | 8.9                               | 2.41                       | 0.23                        | 5.1                                 | 18.1                                 | 3.7             |
| 1            | 350 MCM                   | 0.101                      | 0.128                      | 0.29                | 0.36               | 0.14              | 12.4                              | 2.70                       | 0.19                        | 4.9                                 | 25.4                                 | 4.0             |
| 1            | 500 MCM                   | 0.071                      | 0.092                      | 0.33                | 0.34               | 0.13              | 17.7                              | 3.07                       | 0.16                        | 4.7                                 | 36.2                                 | 4.4             |
| 1            | 600 MCM                   | 0.059                      | 0.076                      | 0.35                | 0.34               | 0.13              | 21.3                              | 3.32                       | 0.15                        | 4.5                                 | 43.5                                 | 4.7             |
| 1            | 750 MCM                   | 0.047                      | 0.066                      | 0.38                | 0.33               | 0.12              | 26.6                              | 3.61                       | 0.14                        | 4.4                                 | 54.4                                 | 5.0             |
| 1            | 1000 MCM                  | 0.035                      | 0.052                      | 0.43                | 0.31               | 0.12              | 35.4                              | 4.03                       | 0.13                        | 4.3                                 | 72.5                                 | 5.4             |