



Images not to scale. Follow table for dimensions

## APPLICATION

POLY CAB MV 6.35/11 KV XLPE insulated with Aluminium conductor Three core cable is suitable to use for power supply to wide networks i.e. Commercial, Industrial and Urban / Residential.

## CHARACTERISTICS

### Voltage Rating

Nominal Voltage: 6.35/11 (12) kV

### Operation Temperature

Min. installation temperature: 0°C

Operating temperature: -25°C to +90°C

Emergency operating temperature: 105°C

(max. operation of 36hrs, at 3 periods for 12 consecutive months use)

Max. Short Circuit Temperature: 250°C

### Bending Radius:

Fixed Installation: 12D (PVC) / 15D (HDPE)

During Installation: 18D (PVC) / 25D (HDPE)

D is overall diameter of cable

## CONSTRUCTION

- Conductor: Stranded Compacted Circular aluminium conductor as per AS/NZS 1125
- Conductor Screen: Extruded Semi-conductive compound
- Insulation: XLPE
- Insulation Screen: Extruded Strippable Semi-conductive compound
- Longitudinal Water blocking : Water blocking tape above and below copper screen (Optional)
- Metallic Insulation Screen: Copper Wire Screen + helically applied copper tape
- binder tape / sheath over assembled cores
- Metallic Sheath: Lead Alloy (optional)
- Outer Sheath: Extruded Polyvinyl Chloride, Colour: Black
- Insect attack Protection: Polyamide Nylon (optional)
- (Alternative Sheath: PVC + HDPE Outer Sheath or LSZH Outer sheath and parameters will change accordingly)

## OUTSTANDING FEATURES

- Long life
- UV resistant
- Resistant to chemical exposure
- Resistant to water (AD7/AD8 with HDPE)
- Resistant to weather exposure

## STANDARD FOLLOWS

AS/NZS 1429.1

AS/NZS 1125

AS/NZS 3808

## COMPLIANCE

- |                         |               |
|-------------------------|---------------|
| • Conductor resistance  | AS/NZS 1125   |
| • Insulation resistance | AS/NZS 1429.1 |
| • Voltage test          | AS/NZS 1429.1 |

## OUR ACCREDITATIONS



## APPROVAL



## NOTES

| High Voltage Test (kV AC) | Partial discharge test (kV AC) |                       | Impulse test Voltage (kV peak) |
|---------------------------|--------------------------------|-----------------------|--------------------------------|
|                           | 200% to rated voltage          | 150% to rated voltage |                                |
| 21                        | 13                             | 10                    | 95                             |

**DIMENSIONAL CHARACTERISTICS:**

| Product Code              | No. of Cores | Core Cross sectional Area | Nominal Diameter      |                      |         |
|---------------------------|--------------|---------------------------|-----------------------|----------------------|---------|
|                           |              |                           | Under metallic screen | Over metallic screen | Overall |
|                           | No.          | mm <sup>2</sup>           | mm                    | mm                   | mm      |
| MVNZ17AXUAPH003C016SAXXXX | 3            | 16                        | 14.6                  | 16.1                 | 39.0    |
| MVNZ17AXUAPH003C025SAXXXX | 3            | 25                        | 15.9                  | 17.4                 | 42.0    |
| MVNZ17AXUAPH003C035SAXXXX | 3            | 35                        | 16.9                  | 18.4                 | 44.0    |
| MVNZ17AXUAPH003C050SAXXXX | 3            | 50                        | 18                    | 19.5                 | 47.0    |
| MVNZ17AXUAPH003C070SAXXXX | 3            | 70                        | 19.6                  | 21.1                 | 51.0    |
| MVNZ17AXUAPH003C095SAXXXX | 3            | 95                        | 21.2                  | 22.7                 | 54.0    |
| MVNZ17AXUAPH003C120SAXXXX | 3            | 120                       | 22.8                  | 24.3                 | 58.0    |
| MVNZ17AXUAPH003C150SAXXXX | 3            | 150                       | 24.1                  | 25.6                 | 61.0    |
| MVNZ17AXUAPH003C185SAXXXX | 3            | 185                       | 25.8                  | 27.3                 | 65.0    |
| MVNZ17AXUAPH003C240SAXXXX | 3            | 240                       | 28.1                  | 29.6                 | 70.0    |
| MVNZ17AXUAPH003C300SAXXXX | 3            | 300                       | 30.3                  | 31.8                 | 75.0    |
| MVNZ17AXUAPH003C400SAXXXX | 3            | 400                       | 33                    | 34.5                 | 81.0    |
| MVNZ17AXUAPH003C500SAXXXX | 3            | 500                       | 36.4                  | 37.9                 | 89.0    |

• Above mentioned parameters are based on 3kA/sec earth fault current capacity of copper screen

**ELECTRICAL CHARACTERISTICS:**

| No. of Cores | Core Cross sectional Area | Max. DC Resistance at 20°C | Max. AC Resistance at 90°C | Approx. Capacitance | Approx. Inductance | Approx. Reactance | Continuous Current Rating |                  |        |
|--------------|---------------------------|----------------------------|----------------------------|---------------------|--------------------|-------------------|---------------------------|------------------|--------|
|              |                           |                            |                            |                     |                    |                   | Buried direct in ground   | In a buried duct | In Air |
| No.          | mm <sup>2</sup>           | Ω/km                       | Ω/km                       | μF/km               | mH/km              | Ω/km              | Amps                      |                  |        |
| 3            | 16                        | 1.91                       | 2.449                      | 0.17                | 0.640              | 0.201             | 78                        | 67               | 84     |
| 3            | 25                        | 1.2                        | 1.539                      | 0.2                 | 0.605              | 0.190             | 100                       | 87               | 110    |
| 3            | 35                        | 0.868                      | 1.113                      | 0.22                | 0.583              | 0.183             | 119                       | 103              | 132    |
| 3            | 50                        | 0.641                      | 0.822                      | 0.25                | 0.565              | 0.177             | 140                       | 122              | 158    |
| 3            | 70                        | 0.443                      | 0.568                      | 0.28                | 0.535              | 0.168             | 171                       | 150              | 196    |

**POLY CAB 3 CORE. MV AS/NZS 1429.1 6.35/11 (12) KV  
MV Cable AL Conductor, XLPE Insulation, Cu Screen and UA**

**POLY CAB**  
IDEAS. CONNECTED.

| No.<br>of<br>Cores | Core<br>Cross<br>sectional<br>Area | Max. DC<br>Resistance<br>at 20°C | Max. AC<br>Resistance<br>at 90°C | Approx.<br>Capacitance | Approx.<br>Inductance | Approx.<br>Reactance | Continuous Current<br>Rating     |                        |           |
|--------------------|------------------------------------|----------------------------------|----------------------------------|------------------------|-----------------------|----------------------|----------------------------------|------------------------|-----------|
|                    |                                    |                                  |                                  |                        |                       |                      | Buried<br>direct<br>in<br>ground | In a<br>buried<br>duct | In<br>Air |
| No.                | mm <sup>2</sup>                    | Ω/km                             | Ω/km                             | μF/km                  | mH/km                 | Ω/km                 | Amps                             |                        |           |
| 3                  | 95                                 | 0.32                             | 0.411                            | 0.31                   | 0.518                 | 0.163                | 203                              | 179                    | 236       |
| 3                  | 120                                | 0.253                            | 0.325                            | 0.35                   | 0.501                 | 0.157                | 232                              | 205                    | 273       |
| 3                  | 150                                | 0.206                            | 0.264                            | 0.37                   | 0.492                 | 0.154                | 260                              | 231                    | 309       |
| 3                  | 185                                | 0.164                            | 0.211                            | 0.41                   | 0.481                 | 0.151                | 294                              | 262                    | 355       |
| 3                  | 240                                | 0.125                            | 0.161                            | 0.46                   | 0.470                 | 0.148                | 340                              | 305                    | 415       |
| 3                  | 300                                | 0.1                              | 0.129                            | 0.5                    | 0.459                 | 0.144                | 384                              | 346                    | 475       |
| 3                  | 400                                | 0.0778                           | 0.101                            | 0.56                   | 0.450                 | 0.141                | 438                              | 398                    | 552       |
| 3                  | 500                                | 0.0605                           | 0.079                            | 0.63                   | 0.440                 | 0.138                | 505                              | 460                    | 646       |

Current ratings are in accordance with IEC 60502-2\*: Current Ratings are based on IEC 60502-2 & IEC 60287, Max. Conductor Temperature at 90°C, Ambient temperature at 30°C in Air / at 20°C in Ground, Thermal resistivity of Soil 1.5 k.m/W & for earthenware ducts 1.2k.m/W and Depth of Laying 0.8m.

Current rating de-rating factors for other than 30°C ambient air temperature.

|      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|
| 20   | 25   | 35   | 40   | 45   | 50   | 55   | 60   |
| 1.08 | 1.04 | 0.96 | 0.91 | 0.87 | 0.82 | 0.76 | 0.71 |

Current rating de-rating factors for other than 20°C ground temperature.

|      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|
| 10   | 15   | 25   | 30   | 35   | 40   | 45   | 50   |
| 1.07 | 1.04 | 0.96 | 0.93 | 0.89 | 0.85 | 0.80 | 0.76 |

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| No.<br>of<br>Cores | Core<br>Cross<br>sectional<br>Area | Max.<br>pulling<br>tension<br>on<br>conductor | Charging<br>Current<br>per phase | Zero<br>sequence<br>impedance | Electric<br>Stress at<br>Conductor<br>Screen | Short<br>circuit<br>rating of<br>Phase<br>conductor |
|--------------------|------------------------------------|---|----------------------------------|-------------------------------|--|---|
| No.                | mm <sup>2</sup>                    | kN  | Amps/Km                          | Ohms/Km                       | kV/mm  | kA, 1 sec   |
| 3                  | 16                                 | 0.8   | 0.34                             | 3.61                          | 2.9  | 1.4   |
| 3                  | 25                                 | 1.25  | 0.4                              | 2.70                          | 2.7  | 2.3   |
| 3                  | 35                                 | 1.75  | 0.44                             | 2.27                          | 2.6  | 3.1   |
| 3                  | 50                                 | 2.5   | 0.5                              | 1.98                          | 2.5  | 4.5   |
| 3                  | 70                                 | 3.5   | 0.56                             | 1.73                          | 2.4  | 6.2   |
| 3                  | 95                                 | 4.75  | 0.62                             | 1.57                          | 2.3  | 8.5   |
| 3                  | 120                                | 6   | 0.7                              | 1.48                          | 2.3  | 10.7  |
| 3                  | 150                                | 7.5   | 0.74                             | 1.42                          | 2.3  | 13.4  |
| 3                  | 185                                | 9.25  | 0.82                             | 1.37                          | 2.2  | 16.5  |
| 3                  | 240                                | 12  | 0.92                             | 1.32                          | 2.2  | 21.4  |
| 3                  | 300                                | 15  | 1                                | 1.29                          | 2.2  | 26.8  |
| 3                  | 400                                | 20  | 1.12                             | 1.26                          | 2.1  | 35.5  |
| 3                  | 500                                | 25  | 1.26                             | 1.24                          | 2.1  | 44.7  |