



Images not to scale. Follow table for dimensions

APPLICATION

POLY CAB MV 6.35/11 KV XLPE insulated with Aluminium conductor Triplex 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 each cable

CONSTRUCTION

- Conductor: Stranded Compacted Circular aluminium conductor as per AS/NZS 1125
- Conductor Screen: Extruded Semi-conductive compound
- Insulation: XLPE
- Insulation Screen: Extruded Stripable 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 (E/F current capacity – Based on requirement)
- Outer Sheath: Extruded Polyvinyl Chloride, Colour: Black
- Termite Protection: Polyamide (Nylon -12) (optional)
- (Alternative Sheath: PVC+HDPE Composite Sheath or LSZH Outer sheath, and parameters will change accordingly)
- Three Single Core Cables twisted and assembled to form triplex formation

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 3008

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 | 17 | 95 |

DIMENSIONAL CHARACTERISTICS:

| Product Code | No. of Single Cores | Core Cross sectional Area | Nominal Diameter | | |
|---------------------------|---------------------|---------------------------|------------------|------------|---------|
| | | | Over Screen | Each Phase | Overall |
| | No. | mm ² | mm | mm | mm |
| MVNZ17AXUAPH001T016SAXXXX | 3 | 16 | 16.5 | 20.0 | 44.0 |
| MVNZ17AXUAPH001T025SAXXXX | 3 | 25 | 17.8 | 22.0 | 46.0 |
| MVNZ17AXUAPH001T035SAXXXX | 3 | 35 | 18.8 | 23.0 | 49.0 |
| MVNZ17AXUAPH001T050SAXXXX | 3 | 50 | 19.9 | 24.0 | 51.0 |
| MVNZ17AXUAPH001T070SAXXXX | 3 | 70 | 21.5 | 25.0 | 54.0 |
| MVNZ17AXUAPH001T095SAXXXX | 3 | 95 | 23.1 | 27.0 | 58.0 |
| MVNZ17AXUAPH001T120SAXXXX | 3 | 120 | 24.7 | 29.0 | 61.0 |
| MVNZ17AXUAPH001T150SAXXXX | 3 | 150 | 26.0 | 30.0 | 65.0 |
| MVNZ17AXUAPH001T185SAXXXX | 3 | 185 | 27.7 | 32.0 | 68.0 |
| MVNZ17AXUAPH001T240SAXXXX | 3 | 240 | 30.0 | 34.0 | 74.0 |
| MVNZ17AXUAPH001T300SAXXXX | 3 | 300 | 32.2 | 37.0 | 79.0 |
| MVNZ17AXUAPH001T400SAXXXX | 3 | 400 | 34.9 | 40.0 | 85.0 |
| MVNZ17AXUAPH001T500SAXXXX | 3 | 500 | 38.3 | 43.0 | 93.0 |

• 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 @ ambient 45°C | | |
|--------------|---------------------------|----------------------------|----------------------------|---------------------|--------------------|-------------------|--|------------------|--------|
| | | | | | | | Buried direct in ground | In a buried duct | In Air |
| No. | mm ² | Ω/km | Ω/km | μF/km | mH/km | Ω/km | Amps | | |
| 3 x 1 | 16 | 1.91 | 2.449 | 0.17 | 0.497 | 0.156 | 78 | 67 | 84 |
| 3 x 1 | 25 | 1.2 | 1.539 | 0.2 | 0.460 | 0.144 | 100 | 87 | 110 |
| 3 x 1 | 35 | 0.868 | 1.113 | 0.22 | 0.437 | 0.137 | 119 | 103 | 132 |
| 3 x 1 | 50 | 0.641 | 0.822 | 0.25 | 0.417 | 0.131 | 140 | 122 | 158 |
| 3 x 1 | 70 | 0.443 | 0.568 | 0.28 | 0.385 | 0.121 | 171 | 150 | 196 |

| 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 @ ambient 45°C | | |
|--------------------|------------------------------------|----------------------------------|----------------------------------|------------------------|-----------------------|----------------------|--|------------------------|-----------|
| | | | | | | | Buried direct in ground | In a buried duct | In Air |
| No. | mm ² | Ω/km | Ω/km | μF/km | mH/km | Ω/km | Amps | | |
| 3 x 1 | 95 | 0.32 | 0.411 | 0.31 | 0.367 | 0.115 | 203 | 179 | 236 |
| 3 x 1 | 120 | 0.253 | 0.325 | 0.35 | 0.349 | 0.110 | 232 | 205 | 273 |
| 3 x 1 | 150 | 0.206 | 0.265 | 0.37 | 0.340 | 0.107 | 260 | 231 | 309 |
| 3 x 1 | 185 | 0.164 | 0.211 | 0.41 | 0.329 | 0.103 | 294 | 262 | 355 |
| 3 x 1 | 240 | 0.125 | 0.161 | 0.46 | 0.317 | 0.099 | 340 | 305 | 415 |
| 3 x 1 | 300 | 0.1 | 0.130 | 0.5 | 0.306 | 0.096 | 384 | 346 | 475 |
| 3 x 1 | 400 | 0.0778 | 0.102 | 0.56 | 0.296 | 0.093 | 438 | 398 | 552 |
| 3 x 1 | 500 | 0.0605 | 0.080 | 0.63 | 0.286 | 0.090 | 505 | 460 | 646 |

*: 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 |

POLY CAB TRIPLEX MV AS/NZS .1429.1 6.35/11 (12) KV POLY CAB
MV Cable AL Conductor, XLPE Insulation, Cu Screen - Triplex IDEAS. CONNECTED.

| No. of Cores | Core Cross sectional Area | Max. pulling tension on conductor | Charging Current per phase | Zero sequence impedance | Electric Stress at Conductor Screen | Short circuit rating of phase conductor |
|--------------|---------------------------|-----------------------------------|----------------------------|-------------------------|-------------------------------------|---|
| No. | mm ² | kN | Amps/Km | Ohms/Km | kV/mm | kA, 1 sec |
| 3 x 1 | 16 | 0.8 | 0.34 | 3.6 | 2.9 | 1.5 |
| 3 x 1 | 25 | 1.3 | 0.4 | 2.7 | 2.7 | 2.4 |
| 3 x 1 | 35 | 1.8 | 0.44 | 2.3 | 2.6 | 3.3 |
| 3 x 1 | 50 | 2.5 | 0.5 | 2.0 | 2.5 | 4.7 |
| 3 x 1 | 70 | 3.5 | 0.56 | 1.7 | 2.4 | 6.6 |
| 3 x 1 | 95 | 4.8 | 0.62 | 1.6 | 2.3 | 9.0 |
| 3 x 1 | 120 | 6.0 | 0.7 | 1.5 | 2.3 | 11.3 |
| 3 x 1 | 150 | 7.5 | 0.74 | 1.4 | 2.3 | 14.2 |
| 3 x 1 | 185 | 9.3 | 0.82 | 1.4 | 2.2 | 17.4 |
| 3 x 1 | 240 | 12.0 | 0.92 | 1.3 | 2.2 | 22.6 |
| 3 x 1 | 300 | 15.0 | 1 | 1.3 | 2.2 | 28.3 |
| 3 x 1 | 400 | 20.0 | 1.12 | 1.3 | 2.1 | 37.6 |
| 3 x 1 | 500 | 25.0 | 1.26 | 1.2 | 2.1 | 47.2 |