

POLYCAB 3 CORE ANTI-TERMITE MV AS/NZS 1429.1 6.35/11 (12) KV

MV Cable with AL Conductor, XLPE Insulation, Cu Screen and UA

POLYCAB
IDEAS. CONNECTED.



Images not to scale. Follow table for dimensions

APPLICATION

POLYCAB 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: 20D

During Installation: 30D

D is diameter over nylon

OUTSTANDING FEATURES

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

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 |

Composite sheath

- Inner layer : Extruded Polyvinyl Chloride, Colour: Orange
- Termite Protection: Polyamide (Nylon -12)
- Outer layer: HDPE (Black)

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UA

DIMENSIONAL CHARACTERISTICS:

| Product Code | No. of Cores | Core Cross sectional Area | Nominal Diameter | | |
|---------------------------|--------------|---------------------------|-----------------------|----------------------|---------|
| | | | Under metallic screen | Over metallic screen | Overall |
| | No. | mm ² | mm | mm | mm |
| MVNZ15AXUAPH003C016SAXXXX | 3 | 16 | 14.6 | 16.1 | 39.0 |
| MVNZ15AXUAPH003C025SAXXXX | 3 | 25 | 15.9 | 17.4 | 43.0 |
| MVNZ15AXUAPH003C035SAXXXX | 3 | 35 | 16.9 | 18.4 | 45.0 |
| MVNZ15AXUAPH003C050SAXXXX | 3 | 50 | 18 | 19.5 | 47.0 |
| MVNZ15AXUAPH003C070SAXXXX | 3 | 70 | 19.6 | 21.1 | 51.0 |
| MVNZ15AXUAPH003C095SAXXXX | 3 | 95 | 21.2 | 22.7 | 55.0 |
| MVNZ15AXUAPH003C120SAXXXX | 3 | 120 | 22.8 | 24.3 | 58.0 |
| MVNZ15AXUAPH003C150SAXXXX | 3 | 150 | 24.1 | 25.6 | 61.0 |
| MVNZ15AXUAPH003C185SAXXXX | 3 | 185 | 25.8 | 27.3 | 65.0 |
| MVNZ15AXUAPH003C240SAXXXX | 3 | 240 | 28.1 | 29.6 | 70.0 |
| MVNZ15AXUAPH003C300SAXXXX | 3 | 300 | 30.3 | 31.8 | 75.0 |
| MVNZ15AXUAPH003C400SAXXXX | 3 | 400 | 33 | 34.5 | 82.0 |
| MVNZ15AXUAPH003C500SAXXXX | 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 ² | Ω/km | Ω/km | μF/km | mH/km | Ω/km | Amps | | |
| 3 | 16 | 1.91 | 2.449 | 0.17 | 0.642 | 0.202 | 78 | 67 | 84 |
| 3 | 25 | 1.2 | 1.539 | 0.2 | 0.607 | 0.191 | 100 | 87 | 110 |
| 3 | 35 | 0.868 | 1.113 | 0.22 | 0.586 | 0.184 | 119 | 103 | 132 |
| 3 | 50 | 0.641 | 0.822 | 0.25 | 0.566 | 0.178 | 140 | 122 | 158 |
| 3 | 70 | 0.443 | 0.568 | 0.28 | 0.536 | 0.168 | 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 | | |
|--------------|---------------------------|----------------------------|----------------------------|---------------------|--------------------|-------------------|---------------------------|------------------|--------|
| | | | | | | | 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 | 95 | 0.32 | 0.411 | 0.31 | 0.520 | 0.163 | 203 | 179 | 236 |
| 3 | 120 | 0.253 | 0.325 | 0.35 | 0.502 | 0.158 | 232 | 205 | 273 |
| 3 | 150 | 0.206 | 0.264 | 0.37 | 0.493 | 0.155 | 260 | 231 | 309 |
| 3 | 185 | 0.164 | 0.211 | 0.41 | 0.482 | 0.151 | 294 | 262 | 355 |
| 3 | 240 | 0.125 | 0.161 | 0.46 | 0.471 | 0.148 | 340 | 305 | 415 |
| 3 | 300 | 0.1 | 0.129 | 0.5 | 0.460 | 0.145 | 384 | 346 | 475 |
| 3 | 400 | 0.0778 | 0.101 | 0.56 | 0.451 | 0.142 | 438 | 398 | 552 |
| 3 | 500 | 0.0605 | 0.079 | 0.63 | 0.441 | 0.139 | 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. 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 | 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 |