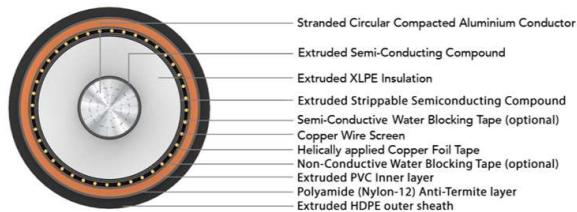


**6.35/11 (12) KV**

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



Images not to scale. Follow table for dimensions

## APPLICATION

POLY CAB MV 6.35/11 KV XLPE insulated with Aluminium conductor single 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

## 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 (E/F current capacity – Based on requirement)

### Composite sheath

Inner layer : Extruded Polyvinyl Chloride, Colour: Orange

Termite Protection: Polyamide (Nylon -12)

Outer layer: HDPE (Black)

## 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                             |

| Product Code              | No. of Cores | Core Cross sectional Area | Nominal Diameter |                          |                         |
|---------------------------|--------------|---------------------------|------------------|--------------------------|-------------------------|
|                           |              |                           | No.              | Under metallic screen mm | Over metallic screen mm |
|                           |              | mm <sup>2</sup>           |                  |                          |                         |
| MVNZ17AXUAPH001C016SAXXXX | 1            | 16                        |                  | 14.6                     | 16.5                    |
| MVNZ17AXUAPH001C025SAXXXX | 1            | 25                        |                  | 15.9                     | 17.8                    |
| MVNZ17AXUAPH001C035SAXXXX | 1            | 35                        |                  | 16.9                     | 18.8                    |
| MVNZ17AXUAPH001C050SAXXXX | 1            | 50                        |                  | 18                       | 19.9                    |
| MVNZ17AXUAPH001C070SAXXXX | 1            | 70                        |                  | 19.6                     | 21.5                    |
| MVNZ17AXUAPH001C095SAXXXX | 1            | 95                        |                  | 21.2                     | 23.1                    |
| MVNZ17AXUAPH001C120SAXXXX | 1            | 120                       |                  | 22.8                     | 24.7                    |
| MVNZ17AXUAPH001C150SAXXXX | 1            | 150                       |                  | 24.1                     | 26.0                    |
| MVNZ17AXUAPH001C185SAXXXX | 1            | 185                       |                  | 25.8                     | 27.7                    |
| MVNZ17AXUAPH001C240SAXXXX | 1            | 240                       |                  | 28.1                     | 30.0                    |
| MVNZ17AXUAPH001C300SAXXXX | 1            | 300                       |                  | 30.3                     | 32.2                    |
| MVNZ17AXUAPH001C400SAXXXX | 1            | 400                       |                  | 33                       | 34.9                    |
| MVNZ17AXUAPH001C500SAXXXX | 1            | 500                       |                  | 36.4                     | 38.3                    |
| MVNZ17AXUAPH001C630SAXXXX | 1            | 630                       |                  | 39.6                     | 41.5                    |
| MVNZ17AXUAPH001C800SAXXXX | 1            | 800                       |                  | 43.5                     | 45.4                    |
| MVNZ17AXUAPH001C01KSAXXXX | 1            | 1000                      |                  | 48                       | 49.9                    |
|                           |              |                           |                  |                          | 58.0                    |

• 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 |          |                |         |      |         |
|--------------|---------------------------|----------------------------|----------------------------|---------------------|--------------------|-------------------|---------------------------|----------|----------------|---------|------|---------|
|              |                           |                            |                            |                     |                    |                   | In ground at 20°C         | In Ducts | In air at 30°C |         |      |         |
| No.          | mm <sup>2</sup>           | Ω/km                       | Ω/km                       | μF/km               | mH/km              | Ω/km              | Flat                      | Trefoil  | Flat           | Trefoil | Flat | Trefoil |
| 1            | 16                        | 1.91                       | 2.449                      | 0.17                | 0.504              | 0.158             | 88                        | 84       | 81             | 80      | 99   | 97      |
| 1            | 25                        | 1.2                        | 1.539                      | 0.2                 | 0.479              | 0.150             | 112                       | 108      | 103            | 102     | 130  | 127     |
| 1            | 35                        | 0.868                      | 1.113                      | 0.22                | 0.456              | 0.143             | 134                       | 129      | 123            | 122     | 157  | 154     |
| 1            | 50                        | 0.641                      | 0.822                      | 0.25                | 0.435              | 0.137             | 157                       | 152      | 146            | 142     | 189  | 184     |
| 1            | 70                        | 0.443                      | 0.568                      | 0.28                | 0.402              | 0.126             | 192                       | 186      | 178            | 176     | 236  | 230     |
| 1            | 95                        | 0.32                       | 0.411                      | 0.31                | 0.383              | 0.120             | 229                       | 221      | 213            | 210     | 287  | 280     |
| 1            | 120                       | 0.253                      | 0.325                      | 0.35                | 0.364              | 0.114             | 260                       | 252      | 242            | 240     | 332  | 324     |
| 1            | 150                       | 0.206                      | 0.265                      | 0.37                | 0.353              | 0.111             | 288                       | 281      | 271            | 267     | 376  | 368     |
| 1            | 185                       | 0.164                      | 0.211                      | 0.41                | 0.341              | 0.107             | 324                       | 317      | 307            | 303     | 432  | 424     |
| 1            | 240                       | 0.125                      | 0.161                      | 0.46                | 0.327              | 0.103             | 373                       | 367      | 356            | 351     | 511  | 502     |

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| 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 |          |                |      |         |      |
|--------------|---------------------------|----------------------------|----------------------------|---------------------|--------------------|-------------------|---------------------------|----------|----------------|------|---------|------|
|              |                           |                            |                            |                     |                    |                   | In ground at 20°C         | In Ducts | In air at 30°C | Flat | Trefoil | Flat |
| No.          | mm <sup>2</sup>           | Ω/km                       | Ω/km                       | μF/km               | mH/km              | Ω/km              | Amps                      |          |                |      |         |      |
| 1            | 300                       | 0.1                        | 0.130                      | 0.5                 | 0.316              | 0.099             | 419                       | 414      | 402            | 397  | 586     | 577  |
| 1            | 400                       | 0.0778                     | 0.102                      | 0.56                | 0.306              | 0.096             | 466                       | 470      | 457            | 451  | 676     | 673  |
| 1            | 500                       | 0.0605                     | 0.080                      | 0.63                | 0.296              | 0.093             | 525                       | 530      | 510            | 505  | 760     | 750  |
| 1            | 630                       | 0.0469                     | 0.064                      | 0.69                | 0.288              | 0.091             | 580                       | 585      | 560            | 555  | 860     | 850  |
| 1            | 800                       | 0.0367                     | 0.051                      | 0.77                | 0.280              | 0.088             | 650                       | 655      | 620            | 615  | 960     | 950  |
| 1            | 1000                      | 0.0291                     | 0.043                      | 0.86                | 0.272              | 0.086             | 715                       | 705      | 670            | 665  | 1060    | 1050 |

\*: 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 |