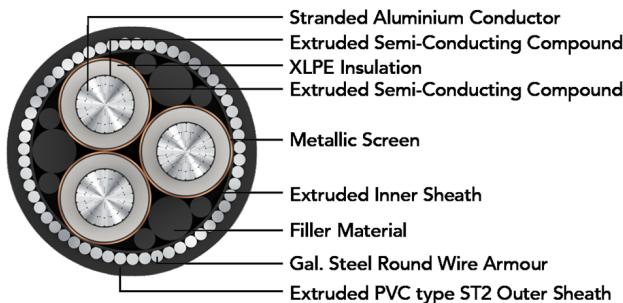


POLY CAB MV MC AL IS 7098-2, 1.9/3.3 KV(E) Medium Voltage Multi Core Aluminium Armoured Cable, 1.9/3.3 KV (E) AC

POLY CAB
IDEAS. CONNECTED.



Images not to scale. Follow table for dimensions

APPLICATION

POLY CAB MV 1.9/3.3 KV(E) XLPE insulated with aluminium conductor single core cable is suitable to use for power distribution for external and direct burial applications in power network system.

CHARACTERISTICS

Voltage Rating

Nominal Voltage: 1.9/3.3 KV (E)

Operation Temperature

Max. operating temperature: 90°C

Max. Short Circuit Temperature: 250°C

Bending Radius

Fixed Installation: 15D

D is overall diameter of cable

CONSTRUCTION

- Conductor: Circular Compacted Aluminium conductor as per IS 8130, class 2
- Conductor Screen: Extruded Semi-conductive compound
- Insulation: XLPE
- Non-Metallic Insulation Screen: Extruded Semi-conductive compound
- Metallic Insulation Screen: Copper tape screen
- Inner Sheath: Extruded Polyvinyl Chloride
- Armour: Galvanised steel Round/Flat Wire Armoured
- Outer Sheath: Extruded Polyvinyl Chloride

Colour: Black

Test Voltage

10kV AC 50 Hz

OUTSTANDING FEATURES

- Flame retardant
- High life
- UV resistant

STANDARD FOLLOWS

IS 8130:2013

IS 5831:1984

IS 3975:1979

IS 7098-2:2011

COMPLIANCE

- | | |
|--------------------------|---------------|
| • Conductor resistance | IS 8130 |
| • Insulation resistance | IS 7098-2 |
| • Flammability test | IEC 60332-1-2 |
| • Partial Discharge test | IS 7098-2 |

OUR ACCREDITATIONS



APPROVAL



NOTES

- Inner sheath available with FR/ FRLS
- Outer/ Inner available with FR/FRLS

POLY CAB MV MC AL IS 7098-2, 1.9/3.3 KV(E)
Medium Voltage Multi Core Aluminium Armoured Cable,
1.9/3.3 KV (E) AC

POLY CAB
 IDEAS. CONNECTED.

DIMENSIONS AND WEIGHTS:

| Product Code | No. of Cores | Core Cross sectional Area | Nominal Diameter | | | Weight (Approx.) |
|---------------------------|--------------|---------------------------|------------------|-------------|---------|------------------|
| | | | Under armour | Over armour | Overall | |
| A2XWY | No. | mm ² | mm | mm | mm | Kg/Km |
| MVIS10AXSWY2003C025SA001S | 3C | 25 | 27.0 | 31.0 | 34.2 | 1979 |
| MVIS10AXSWY2003C035SA001S | 3C | 35 | 29.5 | 33.5 | 36.6 | 2243 |
| MVIS10AXSWY2003C050SA001S | 3C | 50 | 32.8 | 36.8 | 40.3 | 2644 |
| MVIS10AXSWY2003C070SA001S | 3C | 70 | 36.5 | 40.5 | 44.2 | 3132 |
| MVIS10AXSWY2003C095SA001S | 3C | 95 | 40.3 | 45.3 | 49.4 | 4068 |
| MVIS10AXSWY2003C120SA001S | 3C | 120 | 43.7 | 48.7 | 52.8 | 4570 |
| MVIS10AXSWY2003C150SA001S | 3C | 150 | 47.6 | 52.6 | 57.0 | 5254 |
| MVIS10AXSWY2003C185SA001S | 3C | 185 | 51.2 | 56.2 | 61.0 | 5937 |
| MVIS10AXSWY2003C240SA001S | 3C | 240 | 56.8 | 63.1 | 68.1 | 7725 |
| MVIS10AXSWY2003C300SA001S | 3C | 300 | 62.2 | 68.5 | 73.8 | 8895 |
| MVIS10AXSWY2003C400SA001S | 3C | 400 | 69.1 | 75.4 | 81.4 | 10599 |
| MVIS10AXSWY2003C500SA001S | 3C | 500 | 77.1 | 85.1 | 91.1 | 13825 |
| MVIS10AXSWY2003C630SA001S | 3C | 630 | 85.2 | 93.2 | 99.2 | 16020 |

| Product Code | No. of Cores | Core Cross sectional Area | Nominal Diameter | | | Weight (Approx.) |
|---------------------------|--------------|---------------------------|------------------|-------------|---------|------------------|
| | | | Under armour | Over armour | Overall | |
| A2XFY | No. | mm ² | mm | mm | mm | Kg/Km |
| MVIS10AXSFY2003C025SA001S | 3C | 25 | 27.0 | 28.6 | 31.8 | 1351 |
| MVIS10AXSFY2003C035SA001S | 3C | 35 | 29.5 | 31.1 | 34.2 | 1555 |
| MVIS10AXSFY2003C050SA001S | 3C | 50 | 32.8 | 34.4 | 37.6 | 1840 |
| MVIS10AXSFY2003C070SA001S | 3C | 70 | 36.5 | 38.1 | 41.5 | 2233 |
| MVIS10AXSFY2003C095SA001S | 3C | 95 | 40.3 | 41.9 | 45.7 | 2686 |
| MVIS10AXSFY2003C120SA001S | 3C | 120 | 43.7 | 45.3 | 49.4 | 3127 |
| MVIS10AXSFY2003C150SA001S | 3C | 150 | 47.6 | 49.2 | 53.3 | 3632 |
| MVIS10AXSFY2003C185SA001S | 3C | 185 | 51.2 | 52.8 | 57.2 | 4174 |
| MVIS10AXSFY2003C240SA001S | 3C | 240 | 56.8 | 58.4 | 63.1 | 5045 |
| MVIS10AXSFY2003C300SA001S | 3C | 300 | 62.2 | 63.8 | 68.8 | 5977 |

Document No.: 00121. Rev No.: 00 30-12-2023 / We reserve the rights to make technical changes.

POLY CAB MV MC AL IS 7098-2, 1.9/3.3 KV(E)
Medium Voltage Multi Core Aluminium Armoured Cable,
1.9/3.3 KV (E) AC

POLY CAB
 IDEAS. CONNECTED.

| Product Code | No. of Cores | Core Cross sectional Area | Nominal Diameter | | | Weight (Approx.) |
|---------------------------|--------------|---------------------------|------------------|-------------|---------|------------------|
| | | | Under armour | Over armour | Overall | |
| A2XFY | No. | mm ² | mm | mm | mm | Kg/Km |
| MVIS10AXSFY2003C400SA001S | 3C | 400 | 69.1 | 70.7 | 76.4 | 7354 |
| MVIS10AXSFY2003C500SA001S | 3C | 500 | 77.1 | 78.7 | 84.7 | 8953 |
| MVIS10AXSFY2003C630SA001S | 3C | 630 | 85.2 | 86.8 | 92.8 | 10667 |

The above data is approximate & subject to manufacturing tolerance.

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 | |
|--------------|---------------------------|----------------------------|----------------------------|---------------------|--------------------|-------|-------------------|-------|
| | | | | | μF/km | mH/km | A2XFY | A2XWY |
| No. | mm ² | Ω/km | Ω/km | | | | | |
| 3 | 25 | 1.2 | 1.539 | 0.24 | 0.32 | 0.33 | 0.101 | 0.103 |
| 3 | 35 | 0.868 | 1.113 | 0.27 | 0.31 | 0.31 | 0.099 | 0.099 |
| 3 | 50 | 0.641 | 0.822 | 0.32 | 0.29 | 0.29 | 0.091 | 0.091 |
| 3 | 70 | 0.443 | 0.568 | 0.36 | 0.28 | 0.28 | 0.088 | 0.088 |
| 3 | 95 | 0.32 | 0.410 | 0.41 | 0.27 | 0.27 | 0.084 | 0.084 |
| 3 | 120 | 0.253 | 0.325 | 0.46 | 0.26 | 0.26 | 0.081 | 0.081 |
| 3 | 150 | 0.206 | 0.264 | 0.51 | 0.25 | 0.25 | 0.079 | 0.079 |
| 3 | 185 | 0.164 | 0.211 | 0.55 | 0.25 | 0.25 | 0.078 | 0.078 |
| 3 | 240 | 0.125 | 0.161 | 0.62 | 0.24 | 0.24 | 0.075 | 0.075 |
| 3 | 300 | 0.1 | 0.129 | 0.69 | 0.24 | 0.24 | 0.074 | 0.074 |
| 3 | 400 | 0.0778 | 0.101 | 0.78 | 0.23 | 0.23 | 0.072 | 0.072 |
| 3 | 500 | 0.0605 | 0.079 | 0.81 | 0.23 | 0.23 | 0.072 | 0.072 |
| 3 | 630 | 0.0469 | 0.061 | 0.84 | 0.23 | 0.23 | 0.071 | 0.071 |

**POLY CAB MV MC AL IS 7098-2, 1.9/3.3 KV(E)
Medium Voltage Multi Core Aluminium Armoured Cable,
1.9/3.3 KV (E) AC**

POLY CAB
IDEAS. CONNECTED.

CURRENT CARRYING CAPACITY:

| Nominal area of conductor Sqmm | Buried direct in ground | In a buried duct | In air |
|-----------------------------------|-------------------------|------------------|--------|
| | A | A | A |
| 25 | 94 | 81 | 102 |
| 35 | 112 | 96 | 123 |
| 50 | 131 | 113 | 146 |
| 70 | 160 | 138 | 182 |
| 95 | 191 | 165 | 221 |
| 120 | 216 | 187 | 254 |
| 150 | 241 | 208 | 286 |
| 185 | 273 | 236 | 330 |
| 240 | 315 | 277 | 385 |
| 300 | 354 | 312 | 440 |
| 400 | 403 | 355 | 512 |
| 500 | 457 | 403 | 590 |

Air Ambient temperature: 40°C

Ground ambient temperature: 30°C

Conductor operating temperature: 90°C

The above table is in accordance with IS 3961(part 7):2016

De-Rating Factor

Rating factor for variation in ambient air temperature for cable in free air

| | | | | | | | | |
|-------------------------|------|------|------|------|------|------|------|------|
| Ambient air Temperature | 25°C | 30°C | 35°C | 40°C | 45°C | 50°C | 55°C | 60°C |
| De-Rating Factor | 1.14 | 1.10 | 1.05 | 1.00 | 0.95 | 0.89 | 0.84 | 0.77 |

Maximum conductor temperature 90°C

Rating factor for variation in ground temperature for direct buried cables.

| | | | | | | | | |
|--------------------|------|------|------|------|------|------|------|------|
| Ground Temperature | 15°C | 20°C | 25°C | 30°C | 35°C | 40°C | 45°C | 50°C |
| De-Rating Factor | 1.12 | 1.08 | 1.04 | 1.00 | 0.96 | 0.91 | 0.87 | 0.82 |

Maximum conductor temperature 90°C

Rating factor for variation in ground temperature for cable in duct.

| | | | | | | | | |
|--------------------|------|------|------|------|------|------|------|------|
| Ground Temperature | 15°C | 20°C | 25°C | 30°C | 35°C | 40°C | 45°C | 50°C |
| De-Rating Factor | 1.12 | 1.08 | 1.04 | 1.00 | 0.96 | 0.91 | 0.87 | 0.82 |

Maximum conductor temperature 90°C