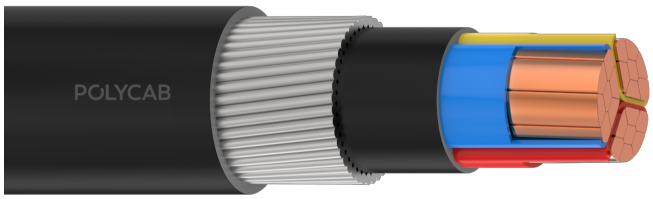
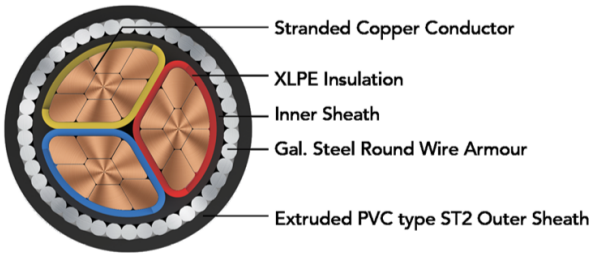
# POLYCAB 2XWY MC-3 IS 7098-P1
# POWER CABLE 650/1100 V AC




Images not to scale. Follow table for dimensions

## APPLICATION

POLYCAB 2XWY MC-3, Stranded compacted copper conductor, XLPE insulated, PVC inner sheathed, Galvanised Steel round wire armour and PVC sheathed confirming to IS 7098-1 is suitable for AC single phase or three phase (earthed or unearthed) systems with rated voltage up to and including 1100 V. This cable is also suitable for DC systems with rated voltage up to and including 1500 V to earth.

## CHARACTERISTICS

**Voltage Rating**
650/1100 V

**Operation Temperature**
Max.: 90°C
Short circuit temperature 250°C

## CONSTRUCTION

• Stranded plain compacted sector shaped copper conductor as per IS 8130, class 1&2
• Insulated with Cross Linked Polyethylene (XLPE) to IS 7098-1
• Extruded inner sheath with PVC Type ST2/FRLS/FR/LSZH
• Armoured with Galvanised Steel round wire to IS 3975
• Sheathed with Extruded PVC Type ST2/FRLS/FR/LSZH

**Core Identification**
Red, Yellow, Blue

**Bending Radius**
Fixed installation 12 x Overall diameter

## OUTSTANDING FEATURES

- High life
- High Insulation resistance
- Flame retardant
- Low Halogen
- Low smoke
- UV resistan

## STANDARD FOLLOWS

IS 8130:2013
IS 5831:1984
IS 3975:1979
IS 7098-1:1988

## COMPLIANCE

Conductor resistance - IS 8130:2013
Insulation resistance - IS 7098-1:1988
Flammability test - IEC 60332-1:2015

## OUR ACCREDITATIONS

## APPROVAL

# POLYCAB 2XWY MC-3 IS 7098-P1
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POLYCAB
IDEAS. CONNECTED.

## Weight & Dimension Data

| Product code | Nominal cross-sectional area | Class of Conductor | Nominal Thickness of Insulation | Nominal dimension of Armour round wire | Minimum thickness of outer sheath | Overall Diameter | Weight (Approx.) |
|---|---|---|---|---|---|---|---|
| | n x mm² | | mm | mm | mm | mm | kg/km |
| LVIS09CXSWY2003C004SA002S | 3 x4 | Class 1 | 0.7 | 1.4 | 1.24 | 15 | 530 |
| LVIS09CXSWY2003C004SA001S | 3 x4 | Class 2 | 0.7 | 1.4 | 1.24 | 16 | 460 |
| LVIS09CXSWY2003C006SA002S | 3 x6 | Class 1 | 0.7 | 1.4 | 1.24 | 16 | 640 |
| LVIS09CXSWY2003C006SA001S | 3 x6 | Class 2 | 0.7 | 1.4 | 1.24 | 17 | 551 |
| LVIS09CXSWY2003C010SA001S | 3 x10 | Class 2 | 0.7 | 1.4 | 1.24 | 19 | 722 |
| LVIS09CXSWY2003C016SA001S | 3 x16 | Class 2 | 0.7 | 1.6 | 1.4 | 18.8 | 921 |
| LVIS09CXSWY2003C025SA001S | 3 x25 | Class 2 | 0.9 | 1.6 | 1.4 | 21.7 | 1282 |
| LVIS09CXSWY2003C035SA001S | 3 x35 | Class 2 | 0.9 | 1.6 | 1.4 | 23.6 | 1596 |
| LVIS09CXSWY2003C050SA001S | 3 x50 | Class 2 | 1 | 1.6 | 1.56 | 26.8 | 2042 |
| LVIS09CXSWY2003C070SA001S | 3 x70 | Class 2 | 1.1 | 2 | 1.56 | 30.9 | 2888 |
| LVIS09CXSWY2003C095SA001S | 3 x95 | Class 2 | 1.1 | 2 | 1.56 | 33.7 | 3686 |
| LVIS09CXSWY2003C120SA001S | 3 x120 | Class 2 | 1.2 | 2 | 1.72 | 37 | 4455 |
| LVIS09CXSWY2003C150SA001S | 3 x150 | Class 2 | 1.4 | 2 | 1.88 | 41.1 | 5396 |
| LVIS09CXSWY2003C185SA001S | 3 x185 | Class 2 | 1.6 | 2.5 | 2.04 | 46 | 6868 |
| LVIS09CXSWY2003C240SA001S | 3 x240 | Class 2 | 1.7 | 2.5 | 2.2 | 50.9 | 8654 |
| LVIS09CXSWY2003C300SA001S | 3 x300 | Class 2 | 1.8 | 2.5 | 2.36 | 55.5 | 10526 |
| LVIS09CXSWY2003C400SA001S | 3 x400 | Class 2 | 2 | 3.15 | 2.68 | 64 | 13718 |

The above data is approximate & subject to manufacturing tolerance.

## Electrical characteristics

| Nominal area of conductor | Buried direct in the ground | In single way Ducts | In air | Max. DC conductor resistance at 20°C |
|---|---|---|---|---|
| mm² | Amp. | Amp. | Amp. | Ω/km |
| 4 | 45 | 38 | 41 | 4.61 |
| 6 | 56 | 47 | 52 | 3.08 |
| 10 | 74 | 62 | 70 | 1.83 |
| 16 | 95 | 79 | 89 | 1.15 |
| 25 | 122 | 102 | 119 | 0.727 |

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| Nominal area of conductor | Buried direct in the ground | In single way Ducts | In air | Max. DC conductor resistance at 20°C |
|---|---|---|---|---|
| mm² | Amp. | Amp. | Amp. | Ω/km |
| 35 | 146 | 122 | 147 | 0.524 |
| 50 | 173 | 144 | 179 | 0.387 |
| 70 | 212 | 177 | 226 | 0.268 |
| 95 | 254 | 212 | 279 | 0.193 |
| 120 | 287 | 240 | 320 | 0.153 |
| 150 | 321 | 269 | 365 | 0.124 |
| mm² | Amp. | Amp. | Amp. | Ω/km |
| 185 | 362 | 304 | 422 | 0.0991 |
| 240 | 418 | 352 | 500 | 0.0754 |
| 300 | 469 | 396 | 574 | 0.0601 |
| 400 | 528 | 447 | 662 | 0.047 |

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 6):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