



Images not to scale. Follow table for dimensions

#### APPLICATION

POLY CAB A2XFY MC-3.5, Stranded compacted aluminium conductor ,XLPE insulated, PVC inner sheathed, Galvanised Steel Flat strip 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 compacted sector shaped Aluminium conductor as per IS 8130, class 2
- Insulated with Cross Linked Polyethylene (XLPE) to IS 7098-1
- Extruded inner sheath with PVC Type ST2/FRLS/FR/LSZH
- Armoured with Galvanised Flat Steel Strip to IS 3975
- Sheathed with Extruded PVC Type ST2/FRLS/FR/LSZH

##### Core Identification

Red, Yellow, Blue and Black

##### Bending Radius

Fixed installation 12 x Overall diameter

#### OUTSTANDING FEATURES

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

#### STANDARD FOLLOWS

IS 8130:2013

IS 5831:1984

IS 3975:1979

IS 7098-1:1988

#### COMPLIANCE

Conductor resistance  
Insulation resistance  
Flammability test

- IS 8130:2013
- IS 7098-1:1988
- IEC 60332-1:2015

#### OUR ACCREDITATIONS



#### APPROVAL



#### NOTES

- Other color also available on request.
- Cable available with anti-rat & termite

**Weight & Dimension Data**

| Product code              | Nominal cross-sectional area<br>n x mm <sup>2</sup> | Nominal Thickness of Insulation Main/Neutral<br>mm | Nominal dimension of Armour flat wire<br>mm | Minimum thickness of outer sheath<br>mm | Overall Diameter<br>mm | Weight (Approx.)<br>kg/km |
|---------------------------|---|--|---|---|------------------------|---------------------------|
| LVIS09AXSFYL3.5C025SA001S | 3.5 x25   | 0.9/0.7  | 4x0.8                                       | 1.4                                     | 21.9                   | 733                       |
| LVIS09AXSFYL3.5C035SA001S | 3.5 x35   | 0.9/0.7  | 4x0.8                                       | 1.4                                     | 24.2                   | 886                       |
| LVIS09AXSFYL3.5C050SA001S | 3.5 x50   | 1/0.9  | 4x0.8                                       | 1.4                                     | 27.4                   | 1113                      |
| LVIS09AXSFYL3.5C070SA001S | 3.5 x70   | 1.1/0.9  | 4x0.8                                       | 1.56                                    | 31.5                   | 1451                      |
| LVIS09AXSFYL3.5C095SA001S | 3.5 x95   | 1.1/1  | 4x0.8                                       | 1.56                                    | 34.8                   | 1796                      |
| LVIS09AXSFYL3.5C120SA001S | 3.5 x120  | 1.2/1.1  | 4x0.8                                       | 1.72                                    | 38.5                   | 2199                      |
| LVIS09AXSFYL3.5C150SA001S | 3.5 x150  | 1.4/1.1  | 4x0.8                                       | 1.72                                    | 42                     | 2579                      |
| LVIS09AXSFYL3.5C185SA001S | 3.5 x185  | 1.6/1.1  | 4x0.8                                       | 1.88                                    | 47.2                   | 3156                      |
| LVIS09AXSFYL3.5C240SA001S | 3.5 x240  | 1.7/1.2  | 4x0.8                                       | 2.04                                    | 52.7                   | 3913                      |
| LVIS09AXSFYL3.5C300SA001S | 3.5 x300  | 1.8/1.4  | 4x0.8                                       | 2.2                                     | 57                     | 4693                      |
| LVIS09AXSFYL3.5C400SA001S | 3.5 x400  | 2/1.6  | 4x0.8                                       | 2.52                                    | 65                     | 5890                      |
| LVIS09AXSFYL003C500SA001S | 3.5 x500  | 2.2/1.7  | 4x0.8                                       | 2.68                                    | 73.5                   | 7400                      |

The above data is approximate & subject to manufacturing tolerance.

**Electrical characteristics**

| Nominal area of conductor<br>mm <sup>2</sup> | Buried direct in the ground | In single way Ducts | In air | Max. DC conductor resistance at 20°C<br>Ω/km |
|--|-----------------------------|---------------------|--------|--|
|  | Amp.                        | Amp.                | Amp.   |  |
| 16   | 74                          | 61                  | 69     | 1.91   |
| 25   | 95                          | 79                  | 93     | 1.20   |
| 35   | 114                         | 94                  | 114    | 0.868  |
| 50   | 134                         | 112                 | 138    | 0.641  |
| 70   | 164                         | 137                 | 175    | 0.443  |
| 95   | 197                         | 164                 | 216    | 0.32   |
| 120  | 223                         | 187                 | 249    | 0.253  |
| 150  | 249                         | 209                 | 284    | 0.206  |
| 185  | 282                         | 238                 | 329    | 0.164  |
| 240  | 327                         | 276                 | 392    | 0.125  |
| 300  | 369                         | 312                 | 452    | 0.100  |
| 400  | 420                         | 356                 | 526    | 0.0778                                       |
| 500  | 478                         | 412                 | 612    | 0.0605                                       |

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

**POLY CAB A2XFY MC-3.5 IS 7098- P1  
POWER CABLE 650/1100 V AC**

**POLY CAB**  
IDEAS. CONNECTED.

**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