



JELLY FILLED UNDER GROUND ARMoured TELECOM CABLE

Document ID: TE/QMS/F/02

CABLE CODE: JFBL00CPSTPL050P0.5MA001S

TITLE: GENERAL TECHNICAL PARTICULARS FOR SOLID POLYTHENE INSULATION COPPER CONDUCTOR, JELLY FILLED, CORE WRAPPED POLYESTER, MOISTURE BARRIER POLYAL SCREENED, BLACK 03C POLYTHENE INNER SHEATH, DOUBLE STEEL TAPE ARMOUR, BLACK 03C POLYTHENE OUTER SHEATHED UNDER GROUND ARMoured TELECOMCABLE AS PER GR/CUG-01/03 AUG 2003

| TECHNICAL DESCRIPTION | DETAILS |
|---|---|
| Make | Polycab India Ltd. |
| Cable Type | JELLY FILLED UNDER GROUND ARMoured TELECOM CABLE |
| Applicable Specifications | TEC /BSNL Spec. NO GR/CUG-01/03AUG.2003 |
| Number of Pairs | 50 Pair |
| Quantity | As per your requirement |
| Conductor | |
| a) Material | Copper |
| b) Grade | ----- |
| c) Nominal Diameter (mm) | 0.50mm |
| d) Shape of Conductor | Circular |
| Insulation | |
| a) Material | HDPE (Type III, Conforming to ASTM D 1248) |
| b) Nominal Thickness of insulation (mm) | The thickness of insulation shall be adequate to meet the electrical requirements |
| c) Method of Application | Extrusion |
| d) Color scheme for identification of cores | As per IS-9938 |
| Twining | Two insulated conductors uniformly twisted together to form a pair so as to minimize cross talk. Each pair having different lay length not exceed 100 mm. |
| Group Twining | 5 Pair Twisted together to for 5 Pair unit, 10 Pair Twisted together to for 10 Pair unit, 20 Pair Twisted together to for 20 Pair unit, In sub-units of 10 pairs for Laid-up of 50 pairs. (5 x 10Pair) In sub-units of 20 pairs for Laid-up of 100 pairs. (5 x 20Pair) In super units of 50 pairs for laid-up of 200 pairs. (4 x 50Pair) |

Rev.No.:00

Issued Date:02/04/2018

Note: -The values given above are subject to tolerances as per the relevant standards.

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|---|---|
| Unit Identification | Unit is identified by wrapping colored polypropylene binder. |
| Filling Compound | Petroleum jelly is used as a filling compound having permittivity less than 2.30. Jelly should be non-toxic odorless, non-hazardous and waterproof. |
| Laid up | Cable core is wrapped by longitudinally application of non-hygroscopic Polyester tape with suitable overlap. |
| Screening (Moisture Barrier) | |
| a) Material | Poly-al |
| b) Nom. Thickness of composite tape | 0.300 mm (0.3±15%) |
| c) Overlap Minimum | Up to 100 Pr → 3mm & above 200 Pr → 6mm |
| Sheath | |
| a) Material | Black LDPE |
| b) Type | 03C/HO3C of Conforming to BS 6234 |
| c) Thickness Minimum | Up to 100 Pr → 1.50 mm & 200 Pr → 1.65mm |
| Bedding Tape | Two Black HDPE Tape shall be applied helically on the inner sheath |
| Armouring | |
| Double Galvanized Steel Tape Armour | |
| a) Thickness (mm) | 0.50mm ± 10% |
| b) Gap (mm) | 15% to 35% of the Nominal width |
| c) Overlap (mm) | Min.15% of the Nominal width |
| Jacket | |
| a) Material | Black LDPE |
| b) Type | 03C/HO3C of Conforming to BS 6234 |
| c) Thickness Minimum | 1.05mm |
| d) Overall Diameter (mm) | For 5Pr→ 13.5±2mm, For 10Pr→ 15.5±2mm, For 20Pr→ 18.0±2mm, For 20Pr→ 18.0± 2mm For 50Pr→ 23.5±2mm, For 100Pr→ 29.5±3mm, For 200Pr→ 38.5±3mm, |
| Electrical Parameter | |
| 0.50mm conductor | |
| a) Conductor Resistance Maximum | 92.0 Ohm/Km |
| b) Mutual Capacitance | 49 – 55 nF/Km |
| c) CUPP Maximum | 200 pF/Km |
| Average | 50 pF/Km |
| d) CUPG Maximum | 3000 pF/Km |
| Average | 750 pF/Km |
| e) Dielectric Strength (DC Voltage) | |
| Conductor to Conductor | The insulation between conductors shall withstand for 3 seconds a DC potential of 2.4 KV |
| Conductor to shield | The insulation between the conductors & Sheild shall withstand for 3 seconds a DC potential of 5 KV |
| f) Insulation Resistance | Min. 5000 MOhm/Km |
| Standard Length (mtrs) Up to 50 Pair | 1000mtr (±10%) |
| 100 Pair | 500mtr (±10%) |
| 200 Pair | 400mtr (±10%) |
| Cable Printing Details (embossing/engraved) | “Handset” ”SIZE “ “POLYCAB INDIA” “Drum No“ + Seq. mtr marking |
| Length Marking | Cable length marked at every 1 meter of length |
| Type of Drum offered and its dimensions | Wooden Drum and dimension as per manufacturer discretion |