



**SWITCH BOARD UNSCREENED CABLE**

Document ID: TE/QMS/F/02

CABLE CODE: TLBL00CPSWY1010P0.5MA001S

**TITLE: GENERAL TECHNICAL PARTICULARS FOR SOLID ANNEALED COPPER CONDUCTOR, PE INSULATED, PVC INNER SHEATH, SINGLE LAYER G.I. ROUND WIRE, PVC SHEATHED ARMoured COMMUNICATION UNSCREENED CABLE**

| TECHNICAL DESCRIPTION                       | DETAILS  |
|---|--|
| Make  | Polycab India Ltd.   |
| Cable Type                                  | Switch Board Unscreened Cable  |
| Applicable Standards                        | Generally Spec. No. GR/WIR-06/03 MAR 2002  |
| Number of Pairs                             | 10 Pairs   |
| <b>Conductor</b>                            |  |
| a) Material                                 | Solid Annealed bare Copper   |
| b) Size                                     | 0.50mm   |
| <b>Insulation</b>                           |  |
| <b>Solid Polythene</b>                      |  |
| a) Material                                 | HDPE (Type III, Conforming to ASTM D 1248)   |
| b) Min. Thickness of insulation (mm)        | The thickness of insulation shall be adequate to meet the electrical requirement   |
| c) Method of Application                    | Extrusion  |
| d) Color scheme for identification of cores | As per IS – 9938   |
| Colors Combination                          | Table – 2 of GR/WIR-06/03 & Table – 2 of GR/CUG-01/03AUG.2003  |
| Twining                                     | Two insulated conductors uniformly twisted together to form a pair. With suitable right hand lay   |
| Group Twining                               | 2pairs Twisted together to for Laid-up of <b>2Pairs</b> .<br>5 pairs Twisted together to for Laid-up of <b>5 Pairs</b> .<br>10 pairs Twisted together to for Laid-up of <b>10 Pairs</b> .<br>20 pairs Twisted together to for Laid-up of <b>20 Pairs (As per Below Annexure)</b> .<br>50 pairs Twisted together to for Laid-up of <b>50 Pairs (As per Below Annexure)</b> .<br>100 pairs Twisted together to for Laid-up of <b>100 Pairs (As per Below Annexure)</b> . |

Rev.No.:00

Issued Date:02/04/2018

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

www.polycab.com | Toll Free No - 1800 267 0008 | Email: enquiry@polycab.com

|   |  |
|---|--|
| Unit Identification   | Unit is identified by wrapping colored polypropylene binder.   |
| Laid up   | The units shall be laid up as per cable size and construction. Cable core is wrapped by longitudinally application of non-hygroscopic Polyester tape with suitable overlap (applicable for 50 & 100Pr) |
| Rip Cord  | A nonmetallic suitable Rip cord shall be laid-up longitudinally under the sheath. It shall provide an effective means of slitting the sheath longitudinally to facilitate removal.                     |
| <b>Inner Sheath</b>   |  |
| a) Material   | PVC  |
| b) Color  | Grey   |
| c) Type   | ST 1 conforming to (As per IS – 5831)  |
| d) Thickness (Minimum)  | For 2 & 5Pr → 0.65mm, For 10 – 20Pr → 0.75mm, For 50 Pr → 1.10mm, For 100 Pr → 1.40mm  |
| <b>Armouring</b>  |  |
| a) Material   | G.I. WIRE (As per IS 3975)   |
| b) Wire Dia (mm)  | For 2 - 20Pr → 0.90mm, For 50 & 100 Pr → 1.60mm,   |
| <b>Outer Sheath</b>   |  |
| a) Material   | PVC (As per IS – 5831)   |
| b) Type   | ST1  |
| c) Color  | Grey   |
| d) Thickness (Minimum)  | For 2 - 20 Pr → 1.24mm, For 50 & 100 Pr → 1.40mm, For 2Pr → 50±2mm, For 5Pr → 10.0±2mm, For 10Pr → 12.0±2mm, For 20Pr → 14.5±2mm, 50 Pr → 22.5±2mm, 100 Pr → 29.0±3mm                                  |
| e) Nom. Diameter (mm)   |  |
| <b>Electrical Test</b>  |  |
| <b>0.50 mm Conductor</b>  |  |
| a) Conductor Resistance (Max)   | 92.2 Ω/Km  |
| b) Capacitance Unbalance (Pr to Pr) (Max)   | 230 pF/km  |
| c) Insulation Resistance (Min.)   | 50 MΩ/Km   |
| d) Dielectric Strength (DC Voltage)<br>3 kV DC or 2 kV RMS Applied between each conductor and the remaining conductor bunch and earth | Withstand for 1 Minutes. There should not any breakdown of the insulation.   |
| Standard Length in Coil/drum  | 1000mtr ± 10%  |
| Length Marking  | Every one-meter marking  |
| Prominently Printing Marking on the Cable   | YEAR CABLE SIZE POLYCAB +Seq.mtr marking   |
| Type of Drum offered and its dimensions   | Drum and dimension as per manufacturer discretion  |

| PAIR IDENTIFICATION |                     |          |         |                     |          |
|---------------------|---------------------|----------|---------|---------------------|----------|
| Pairing             | Color of Insulation |          | Pairing | Color of Insulation |          |
| Element             | Cond "A"            | Cond "B" | Element | Cond "A"            | Cond "B" |
| 1                   | White               | Blue     | 11      | Yellow              | Blue     |
| 2                   | White               | Orange   | 12      | Yellow              | Orange   |
| 3                   | White               | Green    | 13      | Yellow              | Green    |
| 4                   | White               | Brown    | 14      | Yellow              | Brown    |
| 5                   | White               | Grey     | 15      | Yellow              | Grey     |
| 6                   | Red                 | Blue     | 16      | Black               | Blue     |
| 7                   | Red                 | Orange   | 17      | Black               | Orange   |
| 8                   | Red                 | Green    | 18      | Black               | Green    |
| 9                   | Red                 | Brown    | 19      | Black               | Brown    |
| 10                  | Red                 | Grey     | 20      | Black               | Grey     |

| CABLE MAKE-UP |           |   |
|---------------|-----------|---|
| No of Pairs   | Make-up   | Identification Binder                     |
| 2 Pair        | 2 Pr      | N.A                                       |
| 5 Pair        | 5 Pr      | If any (Blue, Orange, Green, Brown, Grey) |
| 10 Pair       | 10 Pr     | If any (Blue, Orange, Green, Brown, Grey) |
| 20 Pair       | 20Pr      | If any (Blue, Orange, Green, Brown, Grey) |
| 50 Pair       | 5 + 10Pr  | (Blue, Orange, Green,Brown,Grey)          |
| 100 Pair      | 5 x 20 Pr | (Blue, Orange, Green,Brown,Grey)          |