

POLYTHENE INSULATED JELLY FILLED CABLES

PIJF cables are used as feeder and distribution cables for connection between exchanges and subscribers. The range offered is from single pair to 4800 pairs. These cables can be laid in ducts or directly buried. Conforming to standard specifications like DOT spec. no. G/CUG -01/03 AUG 2003, BS 3573, IEC708-1, CW 1128A, IRS-TC/41. Type approved by Dept. of Telecom, Govt of India.

Configuration

Twisted Pairs/Star quads.

Construction

Conductor

Solid annealed bare copper wire of 0.4, 0.5, 0.63 or 0.9mm. Other sizes can be supplied on request.

Insulation

Solid MDPE/HDPE fully color coded. Foam skin insulation provided on request.

Cable Assembly

In units of 10/20 pairs upto 100 pairs cable. For cables having more than 100 pairs, 5 units of 10 pairs and 20 pairs are laid up to constitute super-units of 50 & 100 pairs respectively.

Filling Compound

Suitable water resistant compound.

Core Wrap

One or more helical/longitudinal paper or plastic tape.

Moisture Barrier & Screen

Both side plastic coated aluminum tape laid longitudinally, smooth, nominal thickness of aluminum-0.20mm. Minimum overlap 6mm, bonded to the inner surface of the polythene sheath.

Drain Wire

If required, solid tinned copper 0.5mm.

Mechanical Protection

If required 2 Steel tapes of 0.5mm or 0.8mm thickness helically laid with maximum gap of 35%.

Sheath & Jacket

Black LDPE.



Mutual Capacitance (Average)

52 ± 3 nF/Km. when measured at 800 to 1000 Hz.

Conductor Diameter & Resistance Unbalance

| Nominal Dia (mm) | Resistance/Km of Cable cond. at 20°C (ohm/Km) | Tolerance of Resistance (ohm/Km) | Maximum % of Resistance Unbalance | |
|------------------|---|----------------------------------|-----------------------------------|------------|
| | | | Average | Individual |
| 0.4 | 135 | ± 8 | 1.5 | 3.0 |
| 0.5 | 86 | ± 6 | 1.0 | 2.5 |
| 0.63 | 58 | ± 4 | 1.0 | 2.0 |
| 0.9 | 28 | ± 2 | 1.0 | 2.0 |

Attenuation

| Conductor dia | Average attenuation at 20°C at 150 Khz. |
|---------------|---|
| 0.40 mm | 12.00 dB/Km |
| 0.50 mm | 8.25 dB/Km |
| 0.63 mm | 6.30 dB/Km |
| 0.90 mm | 4.40 dB/Km |

Capacitance Unbalance

| Between Pair to Ground at 800 to 1000 Hz | |
|--|------------------|
| Average | 750 pF/Km (max) |
| Individual | 3000 pF/Km (max) |
| Between Pair to Pair | |
| Average | 50 pF/Km (max) |
| Ind. Combination | 200 pF/Km (max) |

Cross-talk at 150 Khz

| | |
|---------------|------------------|
| FE - XT }Ind. | Min. 55 dB/Km |
| FE - XT }RMS | Min. 67.8 dB/Km. |
| NE - XT }Ind. | Min. 55 dB/Km. |

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Color Code for conductor insulation

| Pair No. | 1st Wire (Tip) | 2nd wire (Ring) |
|------------|----------------|-----------------|
| 1. | White | Blue |
| 2. | White | Orange |
| 3. | White | Green |
| 4. | White | Brown |
| 5 | White | Grey |
| 6 | Red | Blue |
| 7 | Red | Orange |
| 8 | Red | Green |
| 9 | Red | Brown |
| 10 | Red | Grey |
| 11 | Black | Blue |
| 12 | Black | Orange |
| 13 | Black | Green |
| 14 | Black | Brown |
| 15 | Black | Grey |
| 16 | Yellow | Blue |
| 17 | Yellow | Orange |
| 18 | Yellow | Green |
| 19 | Yellow | Brown |
| 20 | Yellow | Grey |
| 21 | Violet | Blue |
| 22 | Violet | Orange |
| 23 | Violet | Green |
| 24 | Violet | Brown |
| 25 | Violet | Grey |
| Spare Pair | Natural | Blue |

Unit Identification

| Unit Number | Color of Binder |
|-------------|-----------------|
| 1 | Blue |
| 2 | Orange |
| 3 | Green |
| 4 | Brown |
| 5 | Grey |

Super Unit Identification

| Position of Super Unit in the layer | Color of Binder |
|-------------------------------------|-----------------|
| First (Marker) | Red |
| Intermediate | White |
| Last (Reference) | Black |