CENTRAL LOOSE TUBE RIBBON FIBER CABLE

► Application
This cable can provide excellent transmission performance and protection of fibers in a variety of field environments. It is usually used in long haul communication system, subscriber network system, distribution, feeder network system and local area network system.

► Description
Central loose tube cable contains one tube with 12 fiber ribbons, which is filled with water blocking gel. The fiber ribbon can be easily separated by hand tool. Either aramid yarn or fiber glass is wound around the tube to provide physical protection and tensile strength. The cable can be jacketed with either PE, PVC or LSZH though PE is the preferred option for water protection purpose. For direct burial, steel wire armour or corrugated steel tape armour is applied with an optional inner jacket of either PVC or PE. An optional Aluminium moisture tape can be incorporated under the jacket for water blocking and shielding purpose. An optional ripcord can be put under the jacket to facilitate jacket removal.

► Construction

► Physical Properties

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Nominal Weight (kg/km)</th>
<th>Nominal Weight (lb/kft)</th>
<th>Nominal Outer Diameter (mm)</th>
<th>Nominal Outer Diameter (in)</th>
<th>Maximum Pulling/Tensile Load</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Installation (N/lb)</td>
</tr>
<tr>
<td>12-96</td>
<td>166.0</td>
<td>111.41</td>
<td>16.2</td>
<td>0.637</td>
<td>2670/600</td>
</tr>
<tr>
<td>108-144</td>
<td>208.0</td>
<td>139.60</td>
<td>18.5</td>
<td>0.727</td>
<td>2670/600</td>
</tr>
<tr>
<td>156-216</td>
<td>244.0</td>
<td>163.76</td>
<td>20.5</td>
<td>0.806</td>
<td>2670/600</td>
</tr>
</tbody>
</table>
CENTRAL LOOSE TUBE RIBBON FIBER CABLE

Construction

Optical Fiber
Jelly Filled Central Loose Tube
Optional Water Blocking Tape
Aramid Yarn / Fiber Glass Yarn
Optional Ripcord
Optional PE Inner Jacket
Steel Tape Armour
PE Outer Jacket
Optional Nylon Jacket/ Polyamide Armour

Physical Properties

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Nominal Weight (kg/km)</th>
<th>Nominal Weight (lb/kft)</th>
<th>Nominal Outer Diameter (mm)</th>
<th>Maximum Pulling/Tensile Load</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Installation (N/lb)</td>
</tr>
<tr>
<td>12-96</td>
<td>233.0</td>
<td>156.38</td>
<td>14.8</td>
<td>2670/600</td>
</tr>
<tr>
<td>108-144</td>
<td>276.0</td>
<td>185.23</td>
<td>16.1</td>
<td>2670/600</td>
</tr>
<tr>
<td>156-216</td>
<td>316.0</td>
<td>212.08</td>
<td>17.1</td>
<td>2670/600</td>
</tr>
</tbody>
</table>

Mechanical Properties

Minimum Bending Radius:
- Under installation: 20×OD
- During operation: 10×OD for unarmoured cables, 20×OD for armoured cables.

Operating Temperature Range: -40°C (-40°F) to +70°C (+158°F)
Storage Temperature Range: -50°C (-58°F) to +70°C (+158°F)

Maximum Compressive Load: 3000N
Repeated Impact: 4.4 N.m (J)
Twist (Torsion): 180×10 times, 125×OD
Cyclic Flexing: 25 cycles for armoured cables, 100 cycles for unarmoured cables.
Crush Resistance: 263N/cm (150lb/in)
Fiber Compliance

Temperature Cycling: IEC60794-1-2-F2
Tensile Strength: IEC60794-1-2-E1A
Crush: IEC60794-1-2-E3
Impact: IEC60794-1-2-E4
Repeated Bending: IEC60794-1-2-E6
Torsion: IEC60794-1-2-E7
Kink: IEC60794-1-2-E10
Cable Bend: IEC60794-1-2-E11
Cool Bend: IEC60794-1-2-E11

Safety Compliance

General Purpose Grade: Flammability Test: OFN(UL1581)
Riser Grade: Flammability Test: OFNR/FT4 (UL1666)
Plenum Grade: Flammability Test: OFNP/FT6(UL 910)
FRPVC Grade: Flammability Test: IEC60332-1
LSZH Grade: Halogen Content Test: IEC 60754-1
Acidity Test: IEC 60754; Smoke Emission Test: IEC61034-1/2
LSFROH Grade: Halogen Content Test: IEC 60754-1
Acidity Test: IEC 60754; Smoke Emission Test: IEC61034-1/2
Flammability Test: IEC60332-1 & IEC 60332-3C/A
FR Grade: Fire Resistance Test: IEC 60331 / BS 6387 CWZ

Compliance

Telcordia GR-20: RUS 7 CFR 1755.900 (REA PE-90)
ICEA S 87-640

Features

- Large fiber counts with small cable diameter
- Highly adaptable to mass splicing
- Suitable for installation in pipeline
- High quality jelly filled loose tube provides the ribbon fiber satisfactory mechanical and environmental protection.
- Ripcord allows easy jacket removal
- UV or moisture resistant for outdoor application
- Dry water blocking core design for ease of handling