

# Fibre Optic Cabling

## Connectix MLT 144-Fibre (12x12) External PE Singlemode G.657.A1

Connectix Multitube Single Jacket Fibre Optic Cables are suitable for duct applications. This cable is a stranded loose tube cable with optical fibres placed inside robust buffer tubes stranded around a fibre reinforced plastic (FRP) central strength member. In addition to optical fibres, the buffer tubes contain water blocking gel and the cable core is surrounded with water-swellaable tape to prevent water ingress in the interstices of cable core.



### Features & Benefits

- Multitube design with ripcords for easy and quick mid span access
- Easily removable rugged thermoplastic jacket
- Waterblocking technology for gel free core helps in quicker end preparation
- Flexible, light weight, easy to handle & install
- Tensile and crush resistant
- UV protected

Physical Characteristics	
Fibre Count	144
Single Mode Optical Fibre	ITU.T - G.657 A1
Maximum Cabled Fibre Attenuation dB/Km	1310nm: 0.35; 1550nm: 0.23,
Link Design PMD	$\leq 0.1$ ps/ $\sqrt{\text{km}}$
Fibre Per Tube	12
Fibre Colour Sequence	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Pink, Aqua
Tube Size (mm)	2
Central Strength Member	FRP (Fibre Reinforced Plastic)
No of Tubes in Layer 1	12
Tube Colour Sequence	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Pink, Aqua
Outer Sheath Material	UV Proof Black HDPE
Nominal Sheath Thickness (mm)	1.6
No of Ripcords Below Outer Sheath	2
Nominal Cable Dimensions (mm)	13.5 $\pm$ 0.5
Nominal Cable Weight (kg/km)	145 $\pm$ 10%

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### Mechanical & Environmental Characteristics

Cable Characteristics	Testing Standards	Cable Performance
Tensile Strength (N)	IEC-60794-1-21-E1	3000
Crush Resistance (N/100mm)	IEC-60794-1-21-E3	2000
Impact Strength (Nm)	IEC-60794-1-21-E4	5
Torsion	IEC-60794-1-21-E7	±180°
Min. Bend Radius (during installation)	IEC-60794-1-21-E11	20D
Min. Bend Radius (After Installation)	IEC-60794-1-21-E11	15D
Water Penetration Test	IEC-60794-1-22-F5	1m waterhead, 3m samples, 24h
Drip Test	IEC-60794-1-21-E14	30cm, 70°C, 24h
Temperature Performance	IEC-60794-1-21-F1	Max. change in attenuation shall be < /=0.15dB/km
Installation		-10°C to + 70°C
Operation		-40°C to + 70°C
Storage		-40°C to + 70°C

**Note:** All tests shall be carried out as per IEC standards. Change in attenuation after and before testing shall be < /= 0.05 dB/km for Single Mode fibre and < /= 0.3 dB/km for Multimode fibre.

### Cable Performance Standards

Cable complies to the following standards IEC 60793, IEC 60794, Telecordia GR-20, ITU-T, RoHS, REACH.

### Packing and Lengths

Drum Type : Wooden Drums

Length Multiple (km) : 4 ± 5%

Order Tolerance : ± 5%

Short Lengths : Max 5%, Customer Approval

### Printing Details

Cable Printing details	CONNECTIX SM 144F G657A1 DUCT LASER SYMBOL TELEPHONE SYMBOL YEAR OF MANUFACTURE LENGTH CODE METER MARKING
The accuracy of marking shall be + 0.5%. Occasional loss of printing & remarking shall be as per Bell core GR 20 and this supercedes the earlier markings.	

### Ordering Information

Product Description	Part Number
Connectix MLT 144-Fibre (12x12) External PE Singlemode G.657.A1	002-043-043-144