

IPFX(MPO&MTP) Outdoor Cable Assemblies Specification



Application

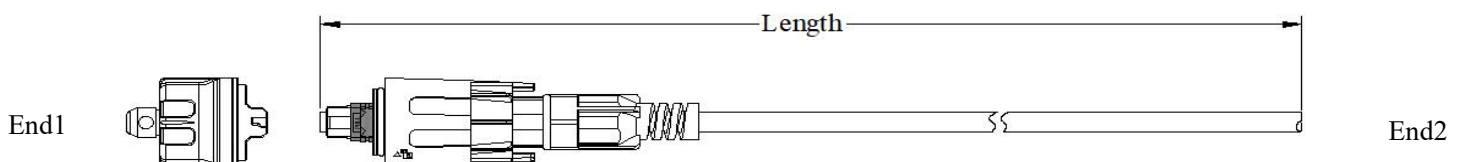
- 1.Multi-purpose Outdoor.
- 2.For connection between distribution box and RRH.
- 3.Deployment in Remote Radio Head cell tower applications.

Features

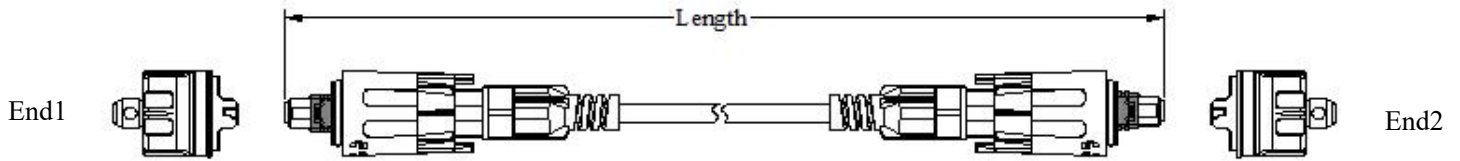
- 1.Factory terminated (tested cables) or Field installable version available .
- 2.Low insertion loss and added loss.
- 3.Height of attenuation.
- 4.IP67 water, dust proof and corrosion resistant
- 5.Plug has tolerance free design, free floating on Z-axis.
- 6.The material in the jumpel cable are all-weather and UV-resistant.
- 7.Mechanical performance: IEC 61754-7 standard.
- 8.RoHS and REACH materials compliant.
- 9.100% Compatible with FullAXS Connectors and has site tehcnical features.

Dimensional Diagrams

1. IPFX(MPO&MTP) Outdoor Cable Assemblies



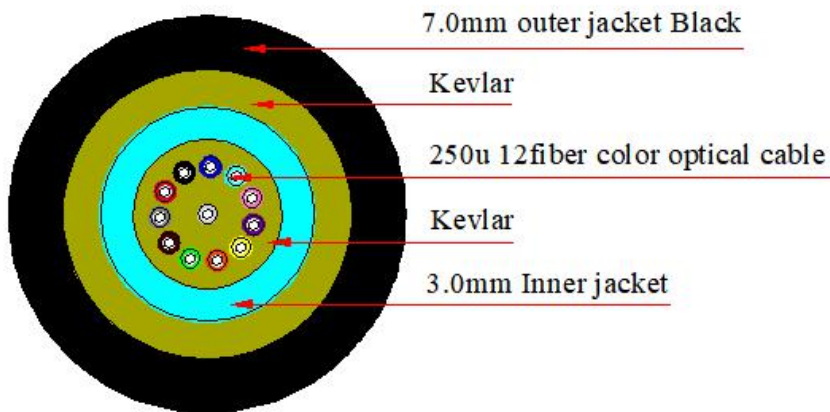
2. IPFX(MPO&MTP) Outdoor Cable Assemblies



Patch cord versions

| Jumper tolerance requirement | |
|------------------------------|--------------------------|
| Overall length (L) (M) | length of tolerance (CM) |
| $0 < L \leq 20$ | +10/-0 |
| $20 < L \leq 40$ | +15/-0 |
| $L > 40$ | +0.5%L/-0 |

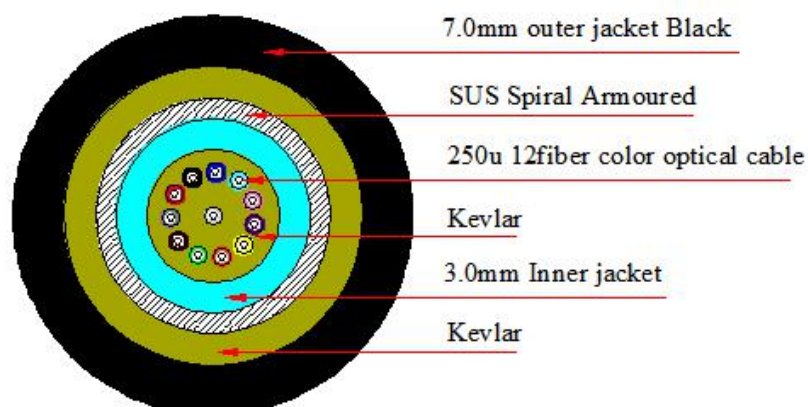
Cable Structure



Cable Parameters

| Cable Count | Out sheath Diameter (MM) | Weight (KG) | Minimum allowable Tensile Strength (N) | | minimum allowable Crush Load (N/100mm) | | Minimum Bending Radius (MM) | | Storage temperature (°C) |
|-------------|--------------------------|-------------|--|-----------|--|-----------|-----------------------------|-----------|--------------------------|
| | | | short term | long term | short term | long term | short term | long term | |
| 8/12/24 | 7.0±0.3 | 35 | 600 | 250 | 800 | 300 | 20D | 10D | -20 ~ +70 |

Cable Structure



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|-------------|--------------------------|-------------|--|-----------|--|-----------|-----------------------------|-----------|--------------------------|
| | | | short term | long term | short term | long term | short term | long term | |
| 8/12/24 | 7.0±0.3 | 45 | 1000 | 600 | 3000 | 1000 | 20D | 10D | -20 ~ +70 |

MPO&MTP ptical Characteristics

| Item | Parameter | | | | Reference |
|----------------|------------------------------|------------------------------|------------------------------|------------------------------|----------------|
| | Single mode | | Multimode | | |
| | Standard | Elite | Standard | Elite | |
| Insertion loss | Typical≤0.30dB Max≤0.75dB | Typical≤0.15dB Max≤0.35dB | Typical≤0.50dB Max≤0.25dB | Typical≤0.10dB Max≤0.35dB | IEC 61300-3-34 |
| Return loss | ≥ 50dB (PC) ≥ 60dB (APC) | ≥ 55dB (PC) ≥ 65dB (APC) | ≥30dB(PC) | ≥30dB(PC) | IEC 61300-3-6 |

LC/SC/FC/ST Optical Characteristics

| Item | Parameter | | Reference |
|----------------|-----------------------------------|-----------------------------------|----------------|
| | Single mode | Multimode | |
| Insertion loss | Typical value≤0.15dB;Maximum≤0.30 | Typical value≤0.15dB;Maximum≤0.30 | IEC 61300-3-34 |
| Return loss | ≥ 60dB (APC); ≥ 50dB (UPC) | ≥30dB (UPC) | IEC 61300-3-6 |

LC/SC/FC/ST End-Face Geometry

| Item | UPC (Ref: IEC 61755-3-1) | APC (Ref: IEC 61755-3-2) |
|--------------------------|--------------------------|--------------------------|
| Radius of curvature (mm) | 10 to 25 | 5 to 12 |
| Fiber height (nm) | -100 to 100 | -100 to 100 |
| Apex offset (μm) | 0 to 50 | 0 to 50 |
| APC angle (°) | / | 8° ±0.2° |
| Key error (°) | / | 0.2° max |

MPO&MTP End-Face Geometry

| Ferrule parameter | | IEC-61300--3-30 | |
|-------------------|----------|-----------------|---------|
| | | Minimum | Maximum |
| ROC | ROC-X: | 2000mm | ∞ |
| | ROC-Y: | 50mm | ∞ |
| Angle | Angle-X: | -0.2° | 0.2° |
| | Angle-Y: | PC | 0.2° |
| | | APC | 7.85° |
| Fiber Hight: | | 1000nm | 3500nm |
| Max.DH.All: | | -300nm | 300nm |
| DH.Adj: | | -300nm | 300nm |
| DH.Ave Fiber: | | -300nm | 300nm |
| Core Dip: | MM | -200nm | 300nm |
| | SM | N/A | N/A |
| Ferrule height | | 7.9mm | 8.05mm |

End-Face Quality (SM)

| Zone | Range (μm) | Scratches | Defects | Reference |
|--------------------|------------|-----------|---------|---------------------|
| A: Core | 0 to 25 | None | None | IEC 61300-3-35:2015 |
| B: Cladding | 25 to 115 | None | None | |
| C: Adhesive | 115 to 135 | None | None | |
| D: Contact | 135 to 250 | None | None | |
| E: Rest of ferrule | | None | None | |

End-Face Quality (MM)

| Zone | Range (μm) | Scratches | Defects | Reference |
|--------------------|------------|-----------|---------|---------------------|
| A: Core | 0 to 65 | None | None | IEC 61300-3-35:2015 |
| B: Cladding | 65 to 115 | None | None | |
| C: Adhesive | 115 to 135 | None | None | |
| D: Contact | 135 to 250 | None | None | |
| E: Rest of ferrule | | None | None | |

Mechanical Characteristics

| Test | Conditions | Reference |
|--------------------------------|--|----------------|
| Endurance | 500 matings | IEC 61300-2-2 |
| Vibration | Frequency: 10 to 55Hz, Amplitude: 0.75mm | IEC 61300-2-1 |
| Cable retention | 400N (main cable); 50N (connector part) | IEC 61300-2-4 |
| Strength of coupling mechanism | 80N for 2 to 3mm cable | IEC 61300-2-6 |
| Cable torsion | 15N for 2 to 3mm cable | IEC 61300-2-5 |
| Fall | 10 drops, 1m drop height | IEC 61300-2-12 |
| Static lateral load | 1N for 1h (main cable); 0.2N for 5min (ranch part) | IEC 61300-2-42 |
| Cold | -25°C, 96h duration | IEC 61300-2-17 |
| Dry heat | +70°C, 96h duration | IEC 61300-2-18 |
| Change of temperature | -25°C to +70°C, 12 cycles | IEC 61300-2-22 |
| Humidity | +40°C at 93%, 96h duration | IEC 61300-2-19 |