

MTP/MPO Breakout Cable

MTP/MPO Series



- **MPO Plus premium connector, MTP® connector**
- **Single mode, Multimode fiber**
- **OS2, OM3, OM4 available**
- **0.35 dB elite low loss connector or 0.5 dB standard loss connector**
- **Supports 40G, 100G, 200G, 400G and 800G network applications**

Ascent MTP/MPO breakout multi-fiber cable assemblies facilitate rapid deployment of high density backbone cabling in data centers and other high fiber environments, reducing network installation or reconfiguration time and cost.

These MTP/MPO breakout multi-fiber cable are used to interconnect cassettes, panels or ruggedized MTP/MPO fan-outs, spanning MDA, HDA and EDA zones. Typically these cables consist of OM3/OM4 multimode cables terminated with MTP/MPO connectors on both ends. The MTP/MPO connectors can be male (with guide pin on the contact interface) or female (without guide pin on the contact interface).

MTP/MPO breakout cables are typically available in 8, 12, 24, 48, or 72 fibers. These fibers are connected between two connectors in three different methods that are called method A, method B, and method C. While in method A fibers are straight through, in method B fibers are reversed connected. In method C, the fibers are pairs flipped. They use a simple push/pull latching mechanism for easy insertion and removal. This allows shorter installation time and lowers overall cost.

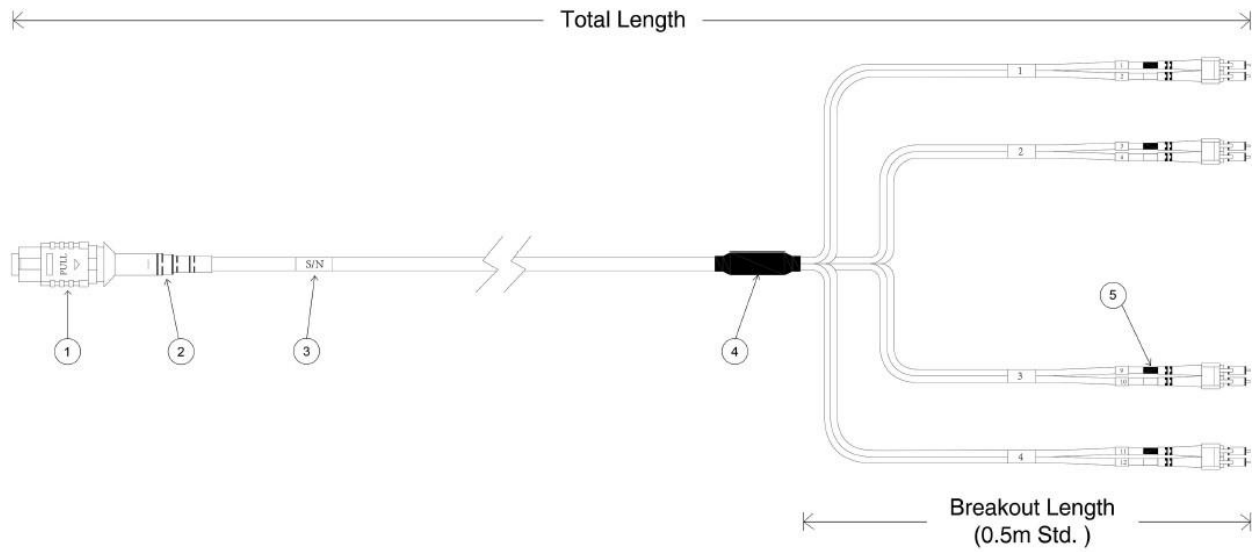
Key Features

- MTP® connector, MPO Plus premium connector
- Multimode fiber, SMF Ultra optical fiber
- OS2, OM3, OM4 available
- 0.35 dB elite low loss connector, 0.5 dB standard loss connector
- Factory terminated and tested
- Supports 40G, 100G, 200G, 400G and 800G network applications
- Pulling eyes are provided as an option to protect the fiber ends during installation
- Cable Jacket material: LSZH, OFNR, OFNP available

Standards Compliance

- RoHS, CE (EN50575 CPR) and ISO9001 compliant
- EIA/TIA, Telcordia GR-326-CORE standards
- IEC61754-7
- TIA 605-4 (FOCIS 5)
- YD/T1272.5

Technical Drawing



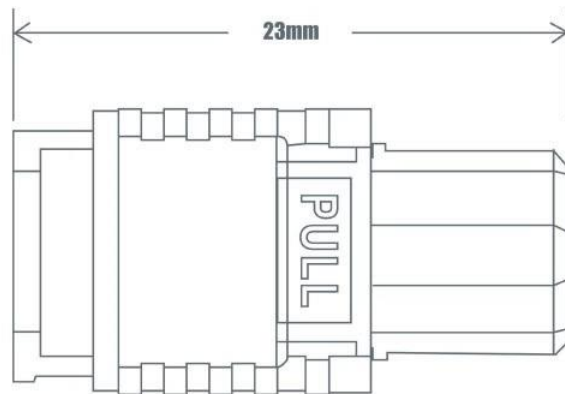
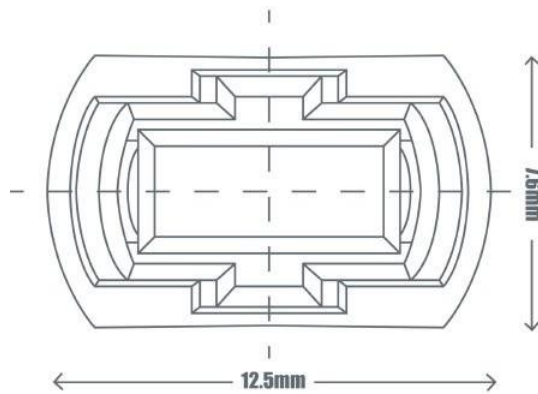
1. MTP/MPO Connector

2. Connector Boot

3. Serial Number Label

4. Fan Out Kit

5. LC Connector



Specifications

Construction

Fiber Count	8-144 Fibers
Fiber Mode	Single-mode: OS2 9/125 μm Multi-mode: OM4 50/125 μm , OM3 50/125 μm
Connector A	MTP Female, Male; MPO Female, Male
Connector Brand	US Conec MTP®, Senko MPO or equivalent brand
Connector B	LC, SC, FC, ST
Polarity	Type A, Type B, Type C
Cable Jacket Ratings	Plenum (OFNP) Low Smoke Zero Halogen (LSZH) Riser (PVC)

Color Codes	MTP	MPO	LC
Cable Jackets	OS2: Yellow OM4: Magenta OM3: Aqua	OS2: Yellow OM4: Magenta OM3: Aqua	OS2: Yellow OM4: Magenta OM3: Aqua
Connectors	OS2: Green OM4/OM3: Aqua	OS2: Green OM4/OM3: Aqua	Single-Mode UPC Blue, APC Green Multi-Mode: Beige
Boots	8 Fibers: Grey 12 Fibers: Black 24 Fibers: Red	8/12/24 Fibers: Black	Single-Mode UPC Blue, APC Green Multi-Mode: Beige

Physical Properties

Cable Diameter*	3.0 mm
Minimum Bend Radius	Single-mode: 10.0 mm Multi-mode: 7.5 mm
Operating Temperature	-10 °C to +70 °C
Storage Temperature	-40 °C to +85 °C

* Please note that the cable diameter of standard single MTP/MPO cable is 3.0 mm, and for cables with different bundles, the diameter is different, as shown below:

Bundle Count	MTP/MPO-12	MTP/MPO-24	Trunk Diameter
2 Bundles*	24 Fibers	48 Fibers	6.0 mm
3 Bundles	36 Fibers	72 Fibers	8.0 mm
4 Bundles	48 Fibers	96 Fibers	8.0 mm
6 Bundles	72 Fibers	144 Fibers	8.0 mm
8 Bundles	96 Fibers	/	10.0 mm
12 Bundles	144 Fibers	/	10.0 mm

* “Bundle” means a combination of several fibers. For example, for MTP/MPO-12 cables, 2 bundles means 24 fibers (2x12); for MTP/MPO-24 cables, 2 bundles means 48 fibers (2x24).

Construction	Description
Wavelength	Single-mode: 1310/1550 nm Multi-mode: 850/1300 nm
Transmission Distance	OM4: 150 m at 40/100G, 400 m at 10G OM3: 100 m at 40/100G, 300 m at 10G
Connector	MTP/MPO
Attenuation	Single-mode 1310 nm: ≤ 0.32 dB/km Single-mode 1550 nm: ≤ 0.18 dB/km Multi-mode 850 nm: ≤ 2.3 dB/km Multi-mode 1300 nm: ≤ 0.6 dB/km
Insertion Loss	Single-mode: ≤ 0.35 dB Multi-mode: ≤ 0.35 dB
Return Loss	Single-mode APC: ≥ 60 dB Single-mode UPC: ≥ 50 dB Multi-mode UPC: ≥ 20 dB
Connector	LC/SC/FC/ST
Insertion Loss	Single-mode APC: ≤ 0.3 dB Single-mode UPC: ≤ 0.2 dB Multi-mode UPC: ≤ 0.2 dB
Return Loss	Single-mode APC: ≥ 65 dB Single-mode UPC: ≥ 50 dB Multi-mode: ≥ 30 dB

Ordering Information

MPO/MTP Breakout Cable Ordering Matrix										
X-	XX-	X	XX-	X-	X	X-	X-	XXX-	X-	XXX
Brand		Branch Count		Fibre Count in Cable		Polarity				Breakout Cable Length
MPO12		2		8		A Straight				D05 0.5 meter
MPO24		4		12		B Reversed/crossed				005 5 meters
MTP08		8		24		C Pair Flipped				050 50 meters
MTP16		12		48						500 500 meters
MTP24										
	Connector A		Connector B		Fibre Type		Cable Jacket		Total Cable Length	Breakout Cable Diameter
	UF Female UPC		UF Female UPC		OS2		LSZH		D05 0.5 meter	2 2 millimetres jacketed
	FA Female APC		FA Female APC		OM3		OFNP		005 5 meters	3 3 millimetres jacketed
	MU Male UPC		MU Male UPC		OM4		PVC		050 50 meters	B 900 micrometres jacketed
	MA Male APC		MA Male APC						500 500 meters	
			LA LC/APC							
			LU LC/UPC							
			PL LC/PC							
			SU SC/UPC							
			SA SC/APC							

References Part Numbers*

MPO12-FA-2FA-OM4-8LSZH-B-050-3-D05

MPO12 Female APC to 2*MPO12 Female APC, OM4 50/125 Multimode, 8 Fibers, LSZH, Type B, Total Cable Length: 50m, Breakout Cable Diameter 3mm, Breakout Cable Length: 0.5m

**Contact your local sales representatives for more configuration*

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