

MTP®/MPO Trunk Cables Datasheet

IDEAL FOR DATA CENTER HIGH DENSITY CABLING SYSTEM

Designed for data center applications requiring quick infrastructure deployment such as main, horizontal, and zone distribution areas.



MTP®/MPO Trunk Cables

MTP®/MPO trunk multifiber 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. They are used to interconnect cassettes, panels or ruggedized MTP®/MPO fanouts, spanning MDA, HDA and EDA zones.

Standards Compliance

- RoHS, CE (EN 50575 CPR) and ISO9001 Compliant
- EIA/TIA, Telecordia GR-326-CORE Standards
- IEC61754-7
- TIA 605-4 (FOCIS 5)
- YD/T1272.5

Features

- US Conec MTP® connector, Senko MPO Plus® premium connector
- SMF-28® Ultra optical fiber, Corning Clearcurve® OM3/OM4 fiber, YOFC Maxband® OM5 fiber
- OS2, OM3, OM4, OM5 available
- 0.35dB elite low loss connector
- Factory terminated and tested
- Allow easy migration from 10GbE to 40GbE or 100GbE
- Pulling eyes are provided as an option to protect the fiber ends during installation

Technical Specification

Construction	Description
Fiber Count	8-144 Fibers
Fiber Mode	Single Mode: OS2 9/125µm Multimode: OM3/OM4/OM5 50/125µm
Fiber Brand	OS2: SMF-28® Ultra optical fiber OM3/OM4: Corning ClearCurve® fiber OM5: YOFC Maxband® fiber
Connector Type	MTP® Female, Male; MPO Female, Male
Connector Brand	US Conec MTP®, Senko MPO Plus®
Polarity	Type A, Type B, Type C
Cable Jacket Ratings	Plenum (OFNP) Low Smoke Zero Halogen (LSZH) Riser (PVC)
Cable Type	Bunch

Color Codes	MTP®	MPO
Cable Jackets	OS2: Yellow OM3: Aqua OM4: Magenta OM5: Lime Green	OS2: Yellow OM3: Aqua OM4: Magenta OM5: Lime Green
Connectors	OS2: Green OM3/OM4: Aqua OM5: Lime Green	OS2: Green OM3/OM4: Aqua OM5: Lime Green
Boots	8 Fibers: Grey 12 Fibers: Black 24 Fibers: Red	8/12/24 Fibers: Black

Technical Specification

Physical Properties	Description
Cable Diameter*	3.0mm
Breakout Length	0.5/0.3m
Minimum Bend Radius	Single Mode: 10.0mm, Multimode: 7.5mm
Operating Temperature	-10°C to 70°C (14 to 158 ℉)
Storage Temperature	-40°C to 85°C (-40 to 185 ℉)

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

Bundle Count	MTP®/MPO-12	MTP®/MPO-24	Trunk Diameter
2 Bundles*	24 Fibers	48 Fibers	7.2mm
3 Bundles	36 Fibers	72 Fibers	9.3mm
4 Bundles	48 Fibers	96 Fibers	9.5mm
6 Bundles	72 Fibers	144 Fibers	11.7mm
8 Bundles	96 Fibers	/	12.01mm
12 Bundles	144 Fibers	/	17.3mm

* The "bundle" means a combination of several fibers. For example, as for MTP®/MPO-12 cables, 2 bundles mean 24 Fibers (2x 12F); for MTP®/MPO-24 cables, 2 bundles mean 48 Fibers (2x 24F).

Technical Specification

Optical Properties	Description
Attenuation (dB/km)	Single Mode: ≤0.32 at 1310nm, ≤0.18 at 1550nm OM3/OM4 Multimode: ≤2.3 at 850nm, ≤0.6 at 1300nm OM5 Multimode: ≤2.3 at 850nm, ≤1.7 at 953nm, ≤0.6 at 1300nm
Insertion Loss (dB)	Single Mode: ≤0.35, Multimode: ≤0.35
Return Loss (dB)	Single Mode: UPC Polish: ≥50, APC Polish: ≥60 Multimode: ≥20
Wavelength (nm)	Single Mode: 1310/1550, Multimode: 850/1300

Transmission Distance

Multimode fiber backbone cabling distances for 10 Gbps, 40 Gbps, and 100 Gbps applications.

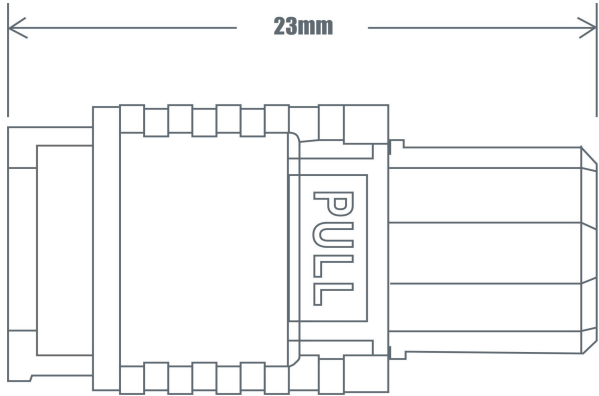
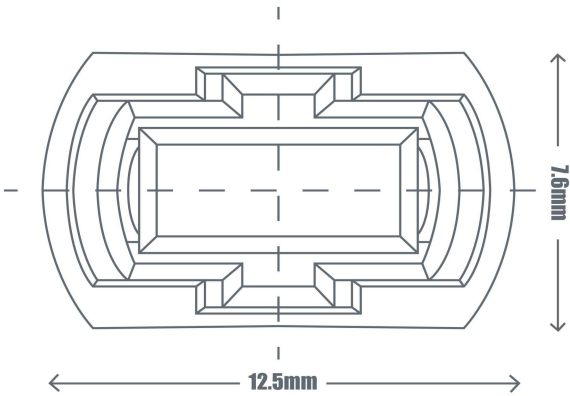
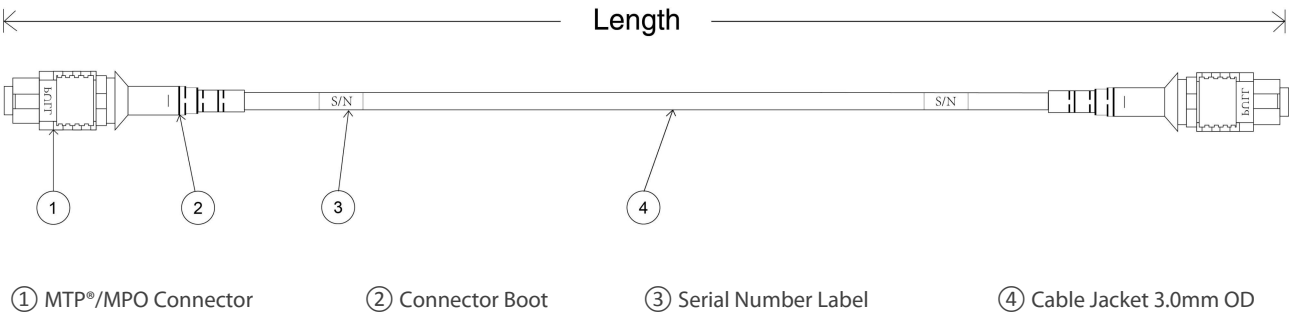
Backbone Application	Standard Specified Max. Distance		
	OM3	OM4	OM5
10GBASE-SR (850nm)	300m (984ft)	400m (1312ft)	400m (1312ft)
40GBASE-SR4	100m (328ft)	150m (492ft)	150m (492ft)
40GBiDi	100m (328ft)	150m (492ft)	200m (689ft)
40GBASE-eSR4	300m (984ft)	400m (1312ft)	400m (1312ft)
40G SWDM4	240m (787ft)	350m (1148ft)	440m (1444ft)
100GBASE-SR10	100m (328ft)	150m (492ft)	150m (492ft)
100GBASE-SR4	70m (230ft)	100m (328ft)	100m (328ft)
100GBASE-eSR4	200m (689ft)	300m (984ft)	300m (984ft)
100G SWDM4	75m (246ft)	100m (328ft)	150m (492ft)

Direct Interconnect

For use in connecting directly into QSFP+, QSFP 28, CFP, CXP, QSFP-DD or OSFP transceivers.

Transceiver	Form Factor	Media	Transmission Distance	Number of Fibers	Connector
QSFP-SR4-40G	QSFP+	MMF	100m (OM3), 150m (OM4)	8	MTP/MPO-12
QSFP-PIR4-40G	QSFP+	SMF	2km (OS2)	8	MTP/MPO-12
QSFP-CSR4-40G	QSFP+	MMF	400m (OM4)	8	MTP/MPO-12
QSFP-PLR4-40G	QSFP+	SMF	10km (OS2)	8	MTP/MPO-12
QSFP28-SR4-100G	QSFP28	MMF	70m (OM3), 100m (OM4)	8	MTP/MPO-12
QSFP28-PIR4-100G	QSFP28	SMF	500m (OS2)	8	MTP/MPO-12
QSFP28-ESR4-100G	QSFP28	MMF	200m (OM3), 300m (OM4)	8	MTP/MPO-12
QSFP28-PSM4-100G	QSFP28	SMF	2km (OS2)	8	MTP/MPO-12
Q28-100/112G-SR4	QSFP28	MMF	100m (OM4)	8	MTP/MPO-12
QSFP28-ISR4-100G	QSFP28	MMF	70m (OM3), 100m (OM4)	8	MTP/MPO-12
CFP-SR10-100G	CFP	MMF	100m (OM3), 150m (OM4)	20	MTP/MPO-24
CXP-SR10-100G	CXP	MMF	100m (OM3), 150m (OM4)	20	MTP/MPO-24
QDD-DR4-400G-Si	QSFP-DD	SMF	500m (OS2)	8	MTP/MPO-12
QSFPDD-PLR4-400G	QSFP-DD	SMF	10km (OS2)	8	MTP/MPO-12
QSFPDD-XDR4-400G	QSFP-DD	SMF	2km (OS2)	8	MTP/MPO-12
OSFP800-XDR8-B2	OSFP	SMF	2km (OS2)	16	Dual MTP/ MPO-12
OSFP800-PLR8-B2	OSFP	SMF	10km (OS2)	8	Dual MTP/ MPO-12

Technical Drawing



Fiber Optic Cleaning

US Conec IBC™ MPO Connectors Cleaner



Characteristics

- For cleaning ferrules pinned or non-pinned.
- Designed for cleaning the ferrule end-faces of MTP®/MPO connectors.
- Narrow design reaches tightly spaced MTP®/MPO adapters.
- Cost effective tool for cleaning fiber end-faces without the use of alcohol.

NEOCLEAN®-R2 Fiber Optic Cassette Cleaner



Characteristics

- Effective on a variety of contaminants including dust and oils.
- Widely used in optical network maintenance, engineering or equipment
- Cassette tapes are available for replacement after 400+ cleaning operations to ensure low cleaning cost.

ID	Description
#106327	US Conec IBC™ Brand Cleaner MPO II, for 8/12/24 Fibers MPO Connectors (525+ Times)
#106397	US Conec IBC™ Brand Cleaner MTP®-16, for 16 Fibers MPO Connectors (525+ Times)
#91449	NEOCLEAN®-R2 Fiber Optic Cassette Cleaner for SC/FC/ST/LC/MPO Connectors (400+ Times)

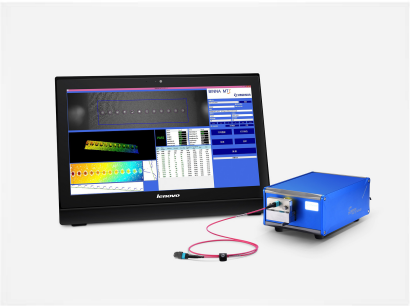
Test Center

Comprehensive performance testing system ensures more secure operation and keeps more stable and reliable data connection. 3D interferometer provides verification of MTP®/MPO polishing process, and making all parameters of the polished MT ferrule complies and exceeds industry standards. Clean optical connectors are paramount in providing a reliable, high-performance fiber optic infrastructure.

Professional Test Equipment



Test Assured Program



3D Interferometer Test



End-Face Inspection

12F MTP-MTP Trunk Cable						
Serial		MTP-MTP Trunk Cable Type B				
Lot No.		10000000000000000000				
PIN		10000000000000000000				
Waveguide		10000000000000000000				
Connector	Channel	SMD (dB)		SMD (dB)		
		IL (dB)	RL (dB)	IL (dB)	RL (dB)	
12F	Blue	0.00	27	0.07	28	
	Orange	0.00	27	0.04	28	
	Green	0.10	28	0.07	27	
	Brown	0.00	26	0.14	28	
	Black	0.10	27	0.11	28	
	White	0.12	28	0.11	28	
	Red	0.07	28	0.07	28	
	Black	0.10	27	0.09	28	
	Yellow	0.09	27	0.10	27	
	Violet	0.06	27	0.11	28	
	Blue	0.09	28	0.04	28	
	Alloy	0.10	28	0.07	28	

Test Report of IL & RL

Hot Products

ID	Description
#68017	1m (3ft) MTP® Female, 12F OM4, Type B, Elite, Plenum (OFNP)
#68041	1m (3ft) MTP® Female, 24F OM4, Type A, Elite, Plenum (OFNP)
#116390	1m (3ft) MTP® Female, 12F OM5, Type B, Elite, Plenum (OFNP)
#68018	1m (3ft) MTP® Female, 12F OS2, Type B, Elite, Plenum (OFNP)
#72421	1m (3ft) MTP® Female, 24F OS2, Type A, Elite, Plenum (OFNP)