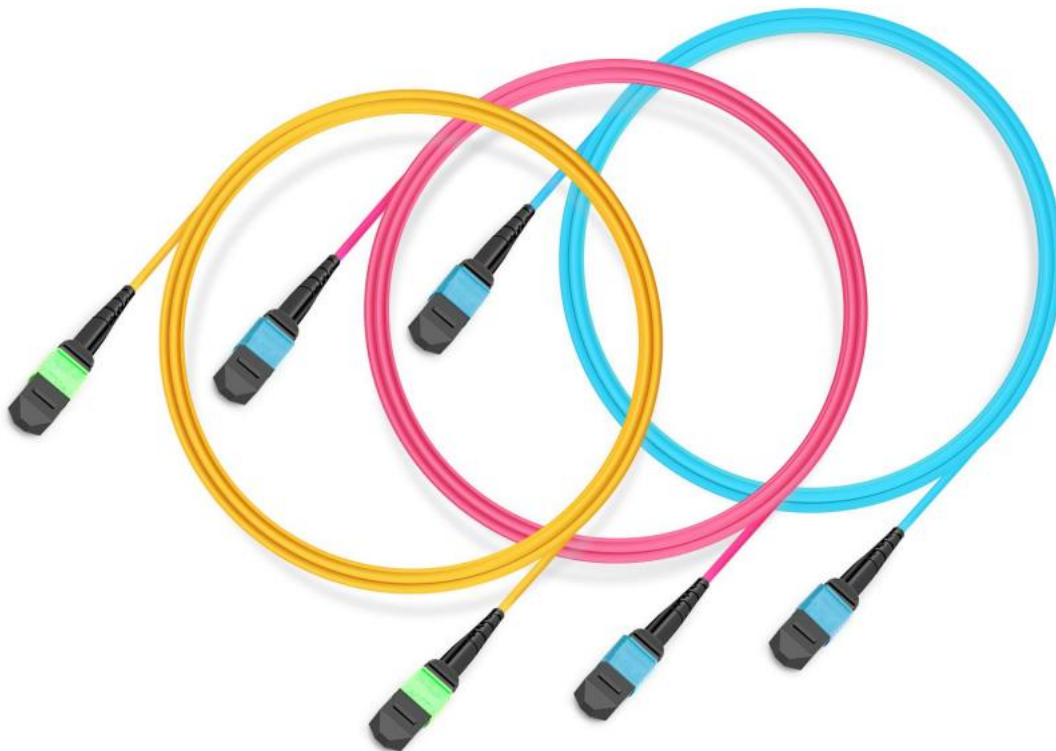


MTP/MPO Trunk Cables Datasheet



MTP/MPO Trunk Cables Applications

The MTP/MPO fiber cable connector is an MT series connector. The MT series ferrule uses two guide holes with a diameter of 0.7mm to connect with the guide pin (also called PIN pin) for precise connection. MTP/MPO connectors and fiber optic cables can be processed to produce various forms of MTP/MPO patch cords. MTP/MPO cables are available in 2-12 fibers designs, up to 72 fibers. Currently, 12 fibers MTP/MPO connectors are the most used. The MTP/MPO fiber optic patch cord has the characteristics of compact design, which makes the MPO patch cord have a large number of cores and a small size. MTP/MPO cables are widely used in high-density backbone wiring environments, FTTX and 40G/100G/200G/400G and other optical modules or connection applications inside and outside the equipment.

Features

- US Conec MTP® connector, Senko MPO Plus® premium connector
- SMF-28® Ultra optical fiber, Corning Clear curve® OM3/OM4 fiber, YOFC Max-band® OM5 fiber
- OS2, OM3, OM4, OM5 available
- 0.35dB elite low loss connector
- Factory terminated and tested
- Allow easy migration from 10GbE or 40GbE or 100GbE or 200GbE or 400GbE
- Pulling eyes are provided as an option to protect the fiber ends during installation

Standards Compliance

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

12 Fibers Connector Polarity

Near / Far End		12 Fiber sequence (viewing the array connector plug end-face with key up)											
Type A	Near	1	2	3	4	5	6	7	8	9	10	11	12
	Far	1	2	3	4	5	6	7	8	9	10	11	12
Type B	Near	1	2	3	4	5	6	7	8	9	10	11	12
	Far	12	11	10	9	8	7	6	5	4	3	2	1
Type C	Near	1	2	3	4	5	6	7	8	9	10	11	12
	Far	2	1	4	3	6	5	8	7	10	9	12	11

24 Fibers Connector Polarity

End, Row		24 Fiber sequence (viewing the array connector plug end-face with key up)											
Type A	Near end, Top row	1	2	3	4	5	6	7	8	9	10	11	12
	Near end, Bottom row	13	14	15	16	17	18	19	20	21	22	23	24
	Far end, Top row	13	14	15	16	17	18	19	20	21	22	23	24
	Far end, Bottom row	1	2	3	4	5	6	7	8	9	10	11	12
Type B	Near end, Top row	1	2	3	4	5	6	7	8	9	10	11	12
	Near end, Bottom row	13	14	15	16	17	18	19	20	21	22	23	24
	Far end, Top row	24	23	22	21	20	19	18	17	16	15	14	13
	Far end, Bottom row	12	11	10	9	8	7	6	5	4	3	2	1
Type C	Near end, Top row	1	2	3	4	5	6	7	8	9	10	11	12
	Near end, Bottom row	13	14	15	16	17	18	19	20	21	22	23	24
	Far end, Top row	14	13	16	15	18	17	20	19	22	21	24	23
	Far end, Bottom row	2	1	4	3	6	5	8	7	10	9	12	11

Optical Properties

Type	Single-mode (APC polish)		Single-mode (UPC polish)		Multi-mode (UPC polish)	
Fiber count	4,8,12, 24 , etc.		4,8,12, 24, etc.		4,8,12, 24, etc.	
Fiber type	G652D,G657A1, etc.		G652D,G657A1, etc.		62.5/125,OM2,OM3,OM4, etc.	
Maximum Insertion Loss	Elite / Low Loss	Standard	Elite / Low Loss	Standard	Elite / Low Loss	Standard
	≤0.35 dB	≤0.70 dB	≤0.35 dB	≤0.70 dB	≤0.35 dB	≤0.5 dB
	0.25 dB Typical	0.5 dB Typical	0.25 dB Typical	0.5 dB Typical	0.2 dB Typical	0.35 dB Typical
Return Loss	≥60 dB		≥45 dB		≥30 dB	
Durability	≥200 times		≥200 times		≥200 times	
Test Wavelength	1310nm / 1550nm		1310nm / 1550nm		850nm / 1300nm	

3D Geometry Performance

Type		Grade A		Grade B		
Item		Min	Max	Min	Max	
Radius of Curvature(mm)	X	-10000 < or >2000		-10000 < or >2000		
	Y	-500 < or >50		-500 < or >50		
Angle(°)	X	-0.15	0.15	-0.2	0.2	
	Y	APC	7.85	8.15	7.8	8.2
		PC	-0.15	0.15	-0.2	0.2
Minus Coplanarity(nm)		0	300	0	300	
Fiber Height(nm)		1200	3000	1000	3500	
Max All Diff(nm)		0	300	0	500	
Max Adj Diff(nm)		0	150	0	300	
Core Dip(nm)						
Only MM		-100	100	-100	100	

Environmental Performance

No.	Item	Testing Conditions	Requirements	
			Before test	After test
1	Thermal Age Test	85°C 168hrs	IL ≤ 0.80dB, RL ≥ 50dB(APC)/25dB(UPC)	IL ≤ 0.80dB, ΔIL ≤ 0.3dB RL ≥ 50dB(APC)/25dB(UPC)
2	Thermal Cycle Test	-40°C~75°C 21cycles 168hrs	IL ≤ 0.80dB, RL ≥ 50dB(APC)/25dB(UPC)	IL ≤ 0.80dB, ΔIL ≤ 0.3dB RL ≥ 50dB(APC)/25dB(UPC)
3	Humidity Age Test	75°C / 95%RH 168hrs	IL ≤ 0.80dB, RL ≥ 50dB(APC)/25dB(UPC)	IL ≤ 0.80dB, ΔIL ≤ 0.3dB RL ≥ 50dB(APC)/25dB(UPC)
4	Humidity / Condensation Cycling Test	-10°C~65°C, 90-100%RH 21cycles 168hrs	IL ≤ 0.80dB, RL ≥ 50dB(APC)/25dB(UPC)	IL ≤ 0.80dB, ΔIL ≤ 0.3dB RL ≥ 50dB(APC)/25dB(UPC)

Mechanical Behavior

No.	Item	Testing Conditions	Requirements	
			Before test	After test
1	Vibration Test	1.5mm p-p 10-55Hz 2hrs for each axis	IL \leq 0.80dB, RL \geq 50dB(APC)/25dB(UPC)	IL \leq 0.80dB, Δ IL \leq 0.3dB RL \geq 50dB(APC)/25dB(UPC)
2	Flex Test	0.9kgf for Type I, 0.9kgf for small form 0°, 90°, 0°, -90°, 0°, and repeat for 100 cycles	IL \leq 0.80dB, RL \geq 50dB(APC)/25dB(UPC)	IL \leq 0.80dB, Δ IL \leq 0.3dB RL \geq 50dB(APC)/25dB(UPC)
3	Twist Test	Load 1.33kgf 1 revolution, 9 times	IL \leq 0.80dB, RL \geq 50dB(APC)/25dB(UPC)	IL \leq 0.80dB, Δ IL \leq 0.3dB RL \geq 50dB(APC)/25dB(UPC)
4	Proof test – Side Pull	Load 3.37kgf for 5 sec Load 4.5kgf for 5 sec	IL \leq 0.80dB, RL \geq 50dB(APC)/25dB(UPC)	IL \leq 0.80dB, Δ IL \leq 0.3dB RL \geq 50dB(APC)/25dB(UPC)
5	Proof test – Straight Pull	Load 4.5kgf for 5 sec Load 6.8kgf for 5 sec	IL \leq 0.80dB, RL \geq 50dB(APC)/25dB(UPC)	IL \leq 0.80dB, Δ IL \leq 0.3dB RL \geq 50dB(APC)/25dB(UPC)
6	Transmission with Applied Load Test	Apply load: 4.95lbf @ 0° Apply load: 0.49lbf @ 90°	IL \leq 0.80dB, RL \geq 50dB(APC)/25dB(UPC)	IL \leq 0.80dB, Δ IL \leq 0.3dB RL \geq 50dB(APC)/25dB(UPC)
7	Impact Test	1.5m 10 cycles	IL \leq 0.80dB, RL \geq 50dB(APC)/25dB(UPC)	IL \leq 0.80dB, Δ IL \leq 0.3dB RL \geq 50dB(APC)/25dB(UPC)

Color Requirements

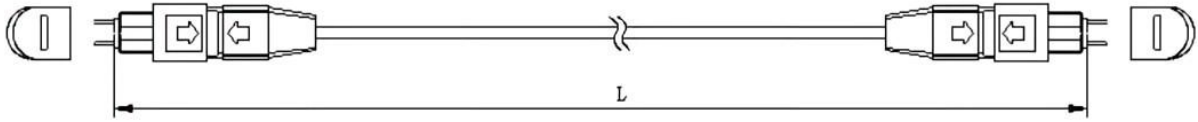
Color Codes	MTP	MPO
Cable Jackets	OS2: Yellow OM3: Aqua OM4: Magenta OM5: Lime Green	OS2: Yellow OM3: Aqua OM4: Magenta OM5: Lime Green
Connectors	OS2: Green OM3/OM4: Aqua OM5: Lime Green	OS2: Green OM3/OM4: Aqua OM5: Lime Green
Boots	8 Fibers: Grey 12 Fibers: Black 24 Fibers: Red	8/12/24 Fibers: Black

Environmental Characteristics

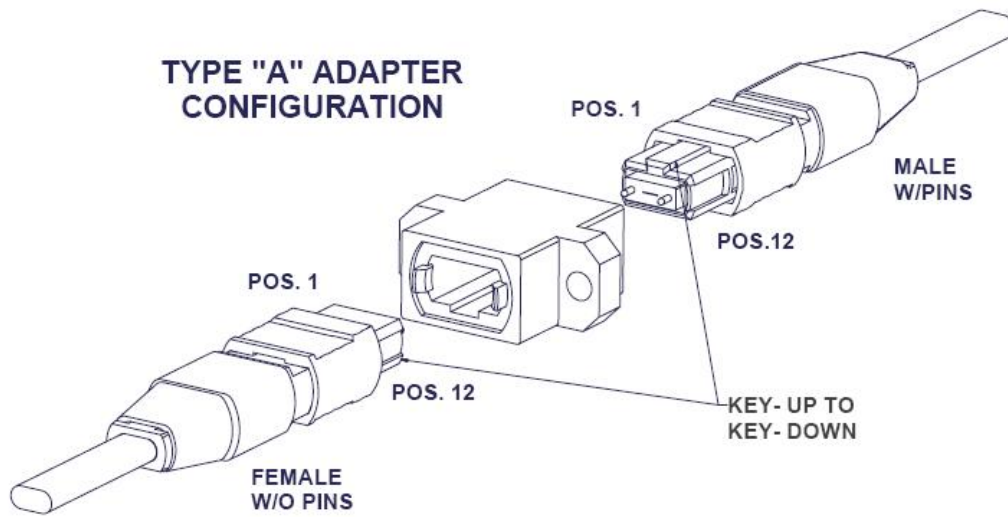
Environmental Characteristics	Description
Operating Temperature	-10°C to 70°C (14 to 158°F)
Storage Temperature	-40°C to 85°C (-40 to 185°F)

Technical Drawing

MTP/MPO Trunk Cable



plug connection



Ordering Information

Product number	Description
S2MTPA12FB	MTP®-12 (Female) to MTP®-12 (Female) OS2 Single Mode Elite Trunk Cable, 12 Fibers, Type B, Plenum (OFNP), Yellow
S2MTPA12FA	MTP®-12 (Female) to MTP®-12 (Female) OS2 Single Mode Elite Trunk Cable, 12 Fibers, Type A, Plenum (OFNP), Yellow
M4MTPU12FB	MTP®-12 (Female) to MTP®-12 (Female) OM4 Multimode Elite Trunk Cable, 12 Fibers, Type B, Plenum (OFNP), Magenta
M4MTPU12FA	MTP®-12 (Female) to MTP®-12 (Female) OM4 Multimode Elite Trunk Cable, 12 Fibers, Type A, Plenum (OFNP), Magenta
S2MPOA12FB	MPO®-12 (Female) to MPO®-12 (Female) OS2 Single Mode Elite Trunk Cable, 12 Fibers, Type B, Plenum (OFNP), Yellow
S2MPOA12FA	MPO®-12 (Female) to MPO®-12 (Female) OS2 Single Mode Elite Trunk Cable, 12 Fibers, Type A, Plenum (OFNP), Yellow
M4MPOU12FB	MPO®-12 (Female) to MPO®-12 (Female) OM4 Multimode Elite Trunk Cable, 12 Fibers, Type B, Plenum (OFNP), Magenta
M4MPOU12FA	MPO®-12 (Female) to MPO®-12 (Female) OM4 Multimode Elite Trunk Cable, 12 Fibers, Type A, Plenum (OFNP), Magenta
M4MTPUxxx12	Customized 8-144 Fibers MTP®-12 OM4 Multimode Elite Trunk Cable
M4MTPUxxx24	Customized 24-144 Fibers MTP®-24 OM4 Multimode Elite Trunk Cable, Magenta

Packaging, Shipping and Storage

Packing and shipping

1. The product should be well packaged, the plugs and adapters/sockets of each pair of connectors should be covered with protective caps, coiled, and the coil diameter should not be less than 25 times the diameter of the tail fiber optic cable.
2. When the product needs to be transported over a long distance, it needs to be packed in a wooden box or a cardboard box, and it should be marked on the box that it cannot be thrown, touched, and pressed vigorously, and there should be a rain-proof sign to avoid damage to the product.
3. When the goods arrive, they must be consistent with the factory, and there must be no parts falling off.

Storage

The product cannot be placed in the open air or in a severely corrosive environment for a long time, and should be stored in an environment that meets the working temperature range.

Further Information:

Web www.naddod.com

Email For order requirements: sales@naddod.com

For cooperation: agency@naddod.com

For customer service: support@naddod.com

For other informations: info@naddod.com

For technical support: tech@naddod.com

Disclaimer

1. We are committed to continuous product improvement and feature upgrades, and the contents contained in this manual are subject to change without notice.

2. Nothing herein should be construed as constituting an additional warranty.

3. NADDOD assumes no responsibility for the use or reliability of equipment or software not provided by NADDOD.

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