

MPO-MPO SING MODE CABLE DATASHEET

Brief Introduction

Trunk cable (also called bundle cable or round cable) MPO-MPO jumpers can be 4 to 24 core fibers, G.652D fiber or G.657A1 fiber. The single-mode MPO jumper is suitable for long distance transmission. MPO connector color is green (Standard insertion loss) or yellow (Low insertion loss) and the end face is APC (8 degree). The single-mode fiber cable is yellow jacket and the material is LSZH. The outer diameter is ϕ 3.0mm. For the polarity, there are three types: Type-A, Type-B, and Type-C. For the connection between 40G optical modules, which is usually Type-B (Key up – Key up type). MPO male or female connector is available.

Features

1. High quality ferrule and accurate alignment PIN and PIN hole.
2. Standard Loss ($IL \leq 0.7\text{dB}$) and Low loss ($IL \leq 0.35\text{dB}$) are available.
3. The Connector end-face meets the interference index.
4. Connector compliant with IEC 61754-7(Type MPO connector family).

Applications

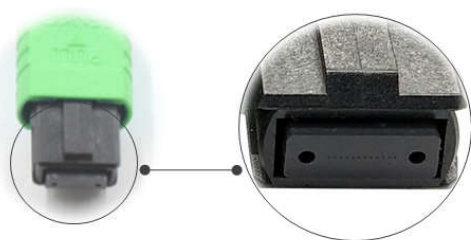
1. High density cabling data center.
2. Cabling in communication base station and distribution case.
3. Jumper connection.
4. 40G and 100G optics system, QSFP module.
5. Optical fiber communication system, CATV, LANs and WANs, FTTx

Specifications

Connector A	MPO Male or Female	Connector B	MPO Male or Female
I.L. (Standard Loss)	$\leq 0.70\text{dB}$ (0.40dB Typ.)	Return Loss	$\geq 55\text{dB}$
I.L. (Low Loss)	$\leq 0.35\text{dB}$ (0.25dB Typ.)	Return Loss	$\geq 55\text{dB}$
Polish Type	APC to APC	Minimum Bend Radius	32mm (G.652D)
Repeatability	$\leq 0.10\text{dB}$	Interchangeability	$\leq 0.20\text{dB}$
Durability	$\leq 0.20\text{dB}$ typical change, 500 mating		
Core number	4, 6, 8, 10, 12, 24cores, customized		
Fiber Mode	G.652D, G.657A1, G.657A2	Test Wavelength	1310/1550nm
Attenuation at 1310nm	$\leq 0.35\text{dB/km}$	Attenuation at 1550nm	$\leq 0.22\text{dB/km}$
Cable Jacket	LSZH	Cable Jacket O.D	3.0mm
Installation Tensile Load	120N	Long-Term Tensile Load	50N
Operating Temperature	-20°C to +70°C	Storage Temperature	-40°C to +85°C

Note: MTP Connector is available.

It is necessary to confirm whether MPO connector is male or female before production.



MPO Connector: Female (Without Guide Pin)

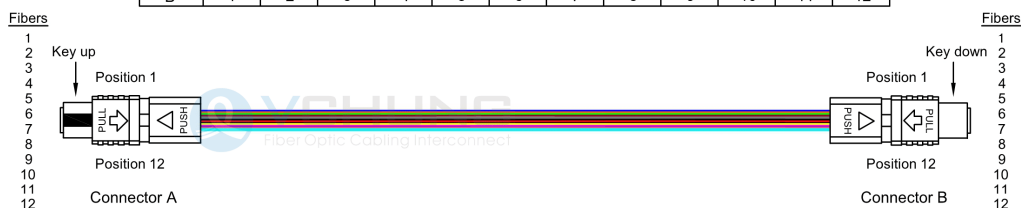


MPO Connector: Male (With Guide Pin)

According to ANSI-TIA-568-C.3-2008 specifications, there are three types about polarity: type-A, type-B and type-C, **12Core connector** show as the figure. This should be confirm before production.

Type-A array patch cord fiber sequence

End	Fiber Sequence (Viewing the end face of the connector with key up)											
A	1	2	3	4	5	6	7	8	9	10	11	12
B	1	2	3	4	5	6	7	8	9	10	11	12



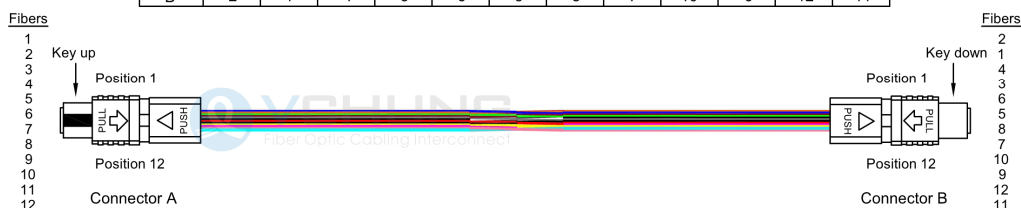
Type-B array patch cord fiber sequence

End	Fiber Sequence (Viewing the end face of the connector with key up)											
A	1	2	3	4	5	6	7	8	9	10	11	12
B	12	11	10	9	8	7	6	5	4	3	2	1



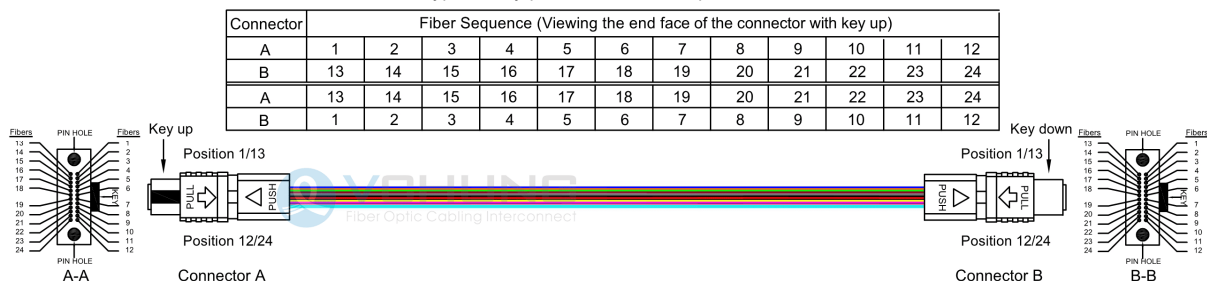
Type-C array patch cord fiber sequence

End	Fiber Sequence (Viewing the end face of the connector with key up)											
A	1	2	3	4	5	6	7	8	9	10	11	12
B	2	1	4	3	6	5	8	7	10	9	12	11

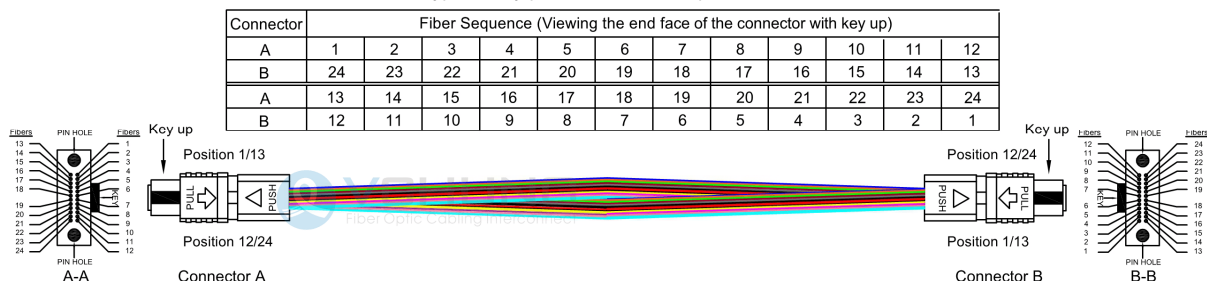


According to ANSI-TIA-568-D specifications, there are three types about polarity: type-A, type-B and type-C, **24Core connector** show as the figure. This should be confirm before production.

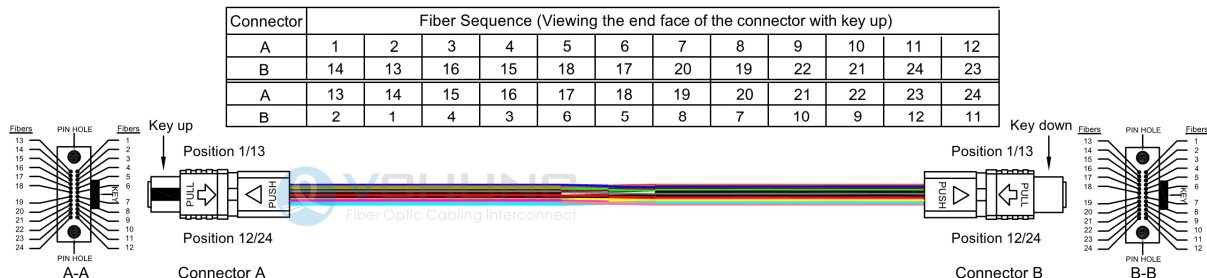
Type-A array patch cord fiber sequence



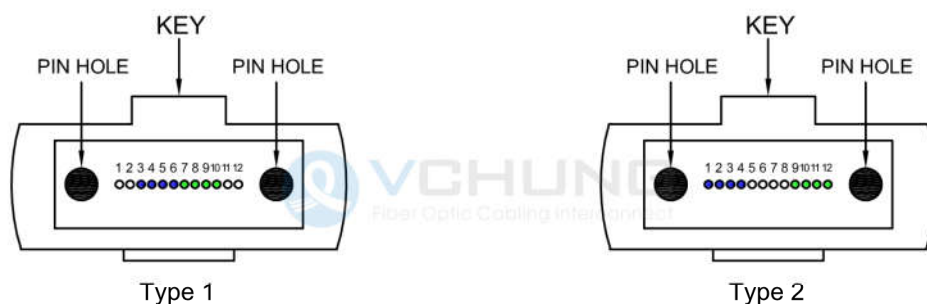
Type-B array patch cord fiber sequence



Type-C array patch cord fiber sequence



The 8 fiber cable is generally produced by 12 channels MT ferrule. So there are four channels of MT ferrule are unused, the location of the fiber and MT ferrule channels must be confirmed. Generally speaking, Type 2 is used for QSFP-40G-SR4 optic modules.

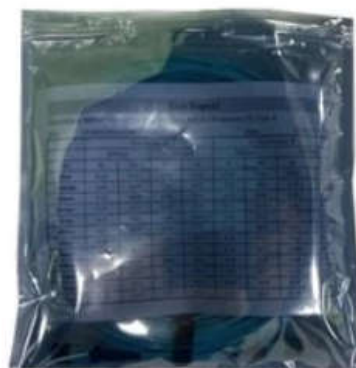


Type 1	Fiber#	1	2	3	4	5	6	7	8	9	10	11	12
	Channel#	Tx1	Tx2	Tx3	Tx4	Unused	Unused	Unused	Unused	Rx4	Rx3	Rx2	Rx1
Type 2	Fiber#	1	2	3	4	5	6	7	8	9	10	11	12
	Channel#	Unused	Unused	Tx1	Tx2	Tx3	Tx4	Rx4	Rx3	Rx2	Rx1	Unused	Unused

Our Packing



Black Velcro Tape twine cable



Anti-static ziplock bag



Put ziplock bag neatly in cartons



Good cartons for transport

Order information

connector1	Male or Female	connector2	Male or Female	Cores	Fiber Type	Core/Cladding	Module	Cable Type	Type A,B,C	I.L. Grade	Cable Material	Color	Length
MPO	Male	MPO	Male	4	OS2	9/125	Single Mode	trunk	Type A	I.L.<0.70dB	PVC	Purple	1m(3ft)
MTP	Female	MTP	Female	6	OM5	50/125	Multimode	ribbon	Type B	I.L.<0.35dB	LSZH	Aqua	2m(7ft)
				8	OM4	62.5/125		breakout	Type C		OFNP(Plenum)	Orange	3m(10ft)
				12	OM3							Blue	4m(13ft)
				24	OM2							Yellow	5m(16ft)
				48	OM1							Lime Green	6m(20ft)
				72	G.657A2								7m(23ft)
				96	G.657A1								8m(26ft)
					G.652D								9m(30ft)
													10m(33ft)
													others