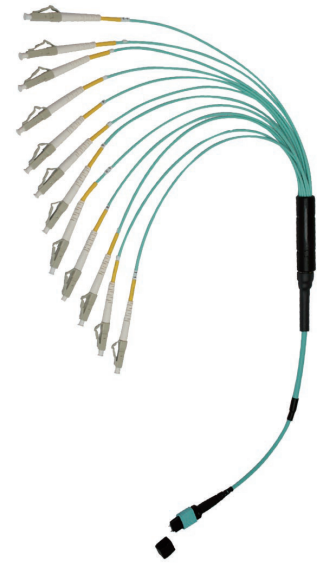
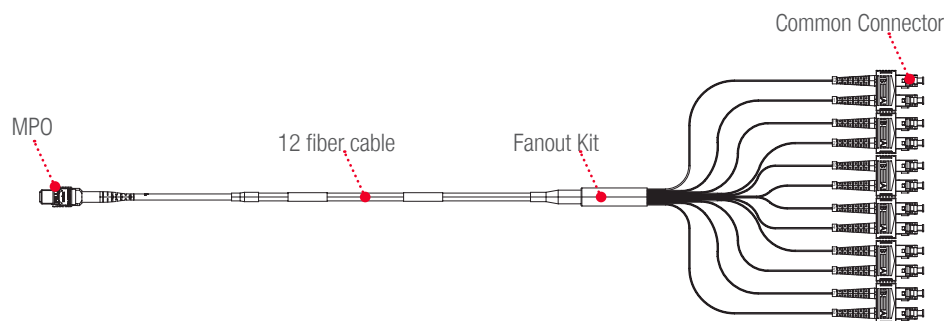


MPO-X Fiber Optic Cable Assembly

Molex Plug and Play Advanced Fiber Optic Systems offer premium factory-controlled optical performance, enabling flexible system configuration and fast, economical installation.

The MPO-X fiber optic cable assembly is ideal for mission critical applications such as Data Centers and Storage Area Networks, applications where fast installation is paramount and environments where moves-adds-changes are frequent or managed in-house.



FEATURES AND ADVANTAGES

Round, flexible outer jacket is easy to bend, route and install

Available in different sheath types

Industry-leading low insertion loss MPO connector optional (0.35dB Maximum Insertion Loss for Laser Optimized OM3/4/5 Cables and OS1/2 Cables, 0.1dB Typical)

Cables available in 8 to 144 fiber constructions

MPO-X Fiber Optic Cables are 100% tested

Pulling eyes installed to protect the assembly during installation

8/12/24 fiber MPO connector optional

Female/male MPO connector optional

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MPO-X Fiber Optic Cable Assembly

SPECIFICATIONS

REFERENCE INFORMATION

Commercial Standards:

International: ISO/IEC 11801

North American: ANSI/TIA/EIA-568-C.3
EN 50173-5, IEC 60794-20, ISO/IEC 24764

Flame resistance:

IEC 60332-1; IEC 60332-3-24;
IEC 60754-2; IEC 61034

Applications

MPO-X systems are designed to support a variety of high-speed network topologies including:

IEEE 802.3 10GBase-SR/SW 10Gbps
IEEE 802.3 10Gbase-LX4 10Gbps
Fiber Channel 400-M5-SN-1 4Gbps
Fiber Channel 1200-M5E-SN1 10Gbps
Fiber Channel FC-PH 1Gbps
IEEE 802.3 1000Base-SX/LX 1Gbps
FDDI 100Mbps
IEEE 802.3 FOIRL 10Mbps
IEEE 802.3 10Base-F 10Mbps
ATM 155 Mbps, 622 Mbps, 1.2 Gbps. 2.4 Gbps

MECHANICAL

Durability: 200 Cycles

Guide Pin Retention: 3 lbs

Default Jacket Colors:

Multimode OM1: Orange

Multimode OM2: Gray

Multimode OM3: Aqua

Multimode OM4: Erika Violet/Aqua

Multimode OM5: Lime Green

Singlemode: Yellow

FOR SUPPLY TO EU MARKET

Flame resistance LSHF-FR(FRNC):

EN 50399 Class Dca;Class Eca

Sheath: Halogen Free, flame resistant thermoplastic sheathing compound acc. to EN 50290-2-27, UV stabilized.

Electrical

Electrical / Optical Characteristics

Connector Performance - MPO

Connector Mating	Insertion Loss	Return Loss
MM Low Loss	0.1 dB Average 0.35 dB Maximum	N/A
MM Standard Loss	0.20 dB Average 0.60 dB Maximum	N/A
SM Low Loss	0.10 dB Average 0.35 dB Maximum	> 60 dB
SM Standard Loss	0.25 dB Average 0.75 dB Maximum	> 60 dB

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MPO-X Fiber Optic Cable Assembly

Electrical

Electrical / Optical Characteristics

Connector Performance - LC,SC,ST,FC

Connector Mating	MULTIMODE			SINGLEMODE		
	IL AVERAGE (dB)	IL MAX (dB)	RETURN LOSS (dB)	IL AVERAGE (dB)	IL MAX (dB)	RETURN LOSS (dB)
LC	0.15	0.30	NA	0.18	0.25	>55/65
LC Enhanced	0.08	0.15	NA	0.12	0.30	>55/65
SC	0.15	0.30	NA	0.18	0.25	>55/65
SC Enhanced	0.08	0.15	NA	0.12	0.30	>55/65
FC	0.15	0.3	NA	0.18	0.25	>55/65
FC Enhanced	0.08	0.15	NA	0.12	0.30	>55/65
ST	0.15	0.3	NA	0.18	0.25	>55/65
ST Enhanced	0.08	0.15	NA	0.12	0.30	>55/65

OPTICAL FIBER SPECIFICATIONS

Multimode: Cable Performance

Designation	Core OD (um)	Cladding OD (um)	Attenuation @850nm (dB/km)	Attenuation @953nm (dB/km)	Attenuation @1300nm (dB/km)	Over filled launch		Laser effective Modal Bandwidth
						Min.Band @850nm (MHz/km)	Min.Band @1300nm (MHz/km)	Min.Band @850nm (MHz/km)
OM1	62.5	125 +/-1	≤3.5 max	NA	≤1.5 max	≥ 200	≥ 500	NA
OM2	50	125 +/-1	≤3.5 max	NA	≤1.5 max	≥ 500	≥ 500	NA
OM3	50	125 +/-1	≤3.5 max	NA	≤1.5 max	≥ 500	≥ 500	≥ 2000
OM4	50	125 +/-1	≤3.5 max	NA	≤1.5 max	≥ 3500	≥ 500	≥ 4700
OM5	50	125 +/-1	≤3 max	≤2.3 max	≤1.5 max	≥ 3500	≥ 500	≥ 4700

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MPO-X Fiber Optic Cable Assembly ➤

OPTICAL FIBER SPECIFICATIONS (CONT.)

Singlemode: (Fiber shall confirm to requirements of ITU-T G.652D). Cable Performance :

Designation	Core OD (μm)	Cladding OD (μm)	Maximum Attenuation Coefficient (dB/km)
OS1/2	9	125 +/-1	≤0.38 max (1300nm) ≤0.22 typ (1550nm)

Simplex 900μm Non-Jacketed Cable

Buffer Diameter: 900μm
Primary Coating: 245μm
Stripping Options:
 Buffer (Standard), Easy Strip 1.5m

Jacketed Simplex Cables, 2mm

Outer Diameter: 2.0mm ±0.1mm
Buffer Diameter: 900μm
Primary Coating: 245μm
Strength Member: Aramid Yarn

Jacketed Duplex Zip Cables, 2mm

Outer Dimensions:
 2.0mm ±0.1mm x 4.1±0.2
Buffer Diameter: 900μm
Primary Coating: 245μm
Strength Member: Aramid Yarn

PARAMETER	UNIT	2-24	2-24 Dual Jacket	48	72	96	144
Crush	N/100mm	500	1000	1000	1000	1000	1000
Strength member	--	Aramid	Aramid	FRP/Aramid	FRP/Aramid	FRP/Aramid	FRP/Aramid
Storage temperature	°C	-20 to 60	-20 to 60	-20 to 60	-20 to 60	-20 to 60	-20 to 60
Installation temperature	°C	-5 to 50	-5 to 50	-5 to 50	-5 to 50	-5 to 50	-5 to 50
Operating temperature	°C	-20 to 60	-20 to 60	-20 to 60	-20 to 60	-20 to 60	-20 to 60
Primary buffer diameter	μm	250	250	250	250	250	285
Fibre count	n	2 to 24	2 to 24	48	48	96	144
Nominal outer diameter	mm	2.95 ± 0.1	4.5 ± 0.1	9.0 ± 0.5	9.0 ± 0.5	13.5 ± 0.5	13.5 ± 0.5
Inner Jacket diameter	-	-	2.95 ± 0.1	-	-	-	-
Nominal weight	kg/km	7	7	79	79	178	178
Maximum tensile load	N	Short term 200	Short term 400	Short term 1000	Short term 1000	Short term 1000	Short term 1000
Maximum tensile load	N	Long term 60	Long term 150	Long term 300	Long term 300	Long term 300	Long term 300
Minimum bend radius	mm	Installed 30 mm	Installed 45 mm	Installed 90 mm	Installed 90 mm	Installed 135 mm	Installed 175 mm
Minimum bend radius	mm	Loaded 60 mm	Loaded 90 mm	Loaded 180mm	Loaded 180mm	Loaded 270mm	Loaded 350 mm

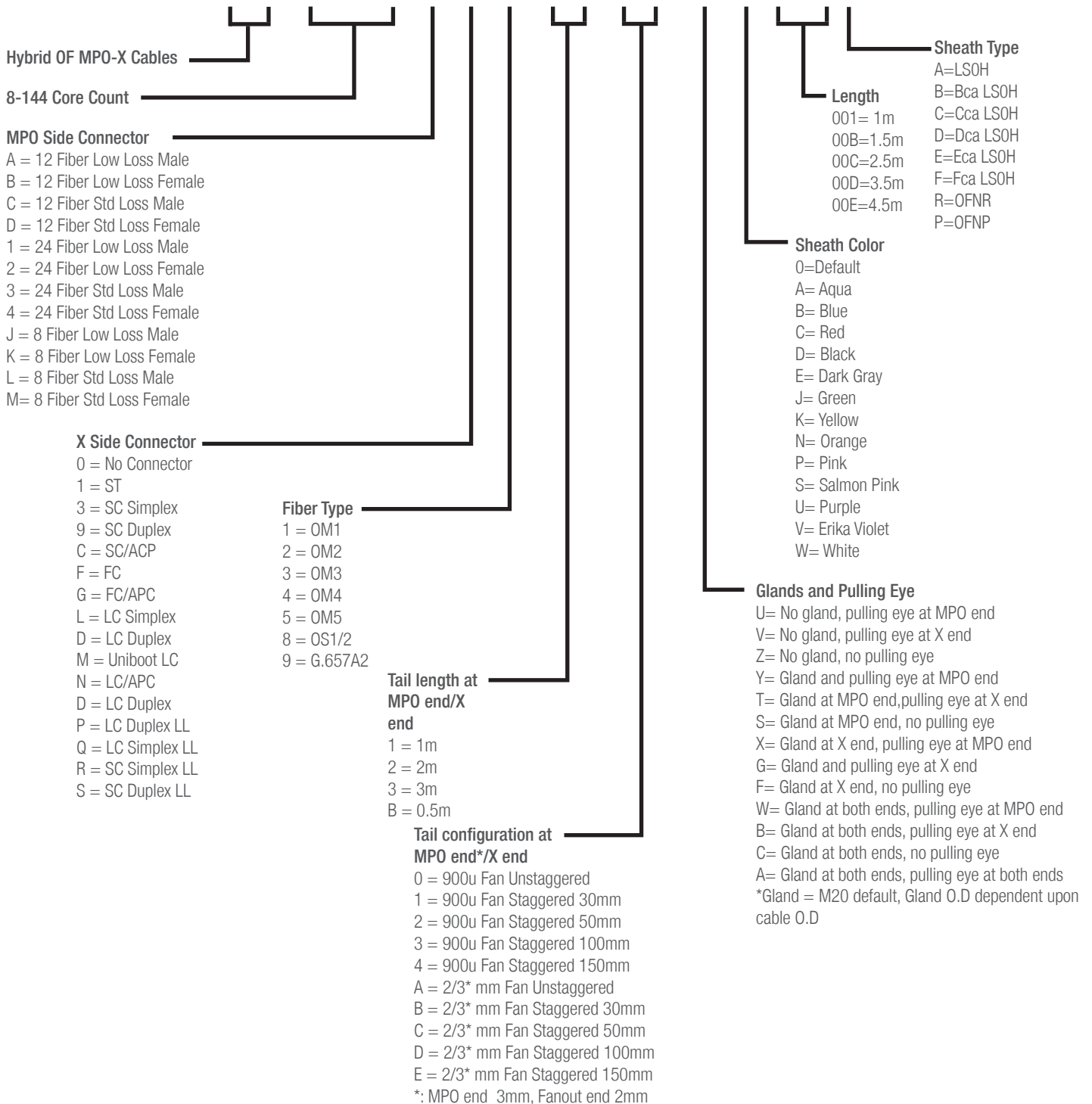
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MPO-X Fiber Optic Cable Assembly ➤

ORDERING INFORMATION

Part No. Matrix - Substitute the correct code number or letter to determine the assembly construction

8 H A A A B C D E E F F G H I I I J



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