



OM3 / OM4 (Aqua)



OM4 / OM5 (Magenta)



OS2 Singlemode (Yellow)

General Description

The PDR MPO Cable Assembly is a high-density, multi-fiber trunk cable solution built around a precision-moulded MT ferrule with guide-pin alignment, enabling rapid deployment of backbone cabling in data centres and high-density fiber environments. PDR supplies 4, 8, 12, and 24-fiber MPO configurations in OS2, OM3, OM4, and OM5 fiber modes, with jacket ribbon, bare ribbon, and round cable types. Male and female connector housings are available in Green, Yellow, Beige, and Aqua, with PC and APC end-face polishing. The assemblies support migration from 10GbE to 40GbE and 100GbE and are 100% factory terminated and tested.

Key Features

- High-density MT ferrule with precision guide pins for reliable multi-fiber alignment in 4, 8, 12, and 24F configurations
- Fiber options: OS2 (singlemode), OM3, OM4, OM5 (multimode) — supports 10GbE, 40GbE, and 100GbE migration
- Cable types: jacketed ribbon, bare ribbon, and round cable in single and double jacket constructions
- End-face polish: PC and APC; connector housings available in Green, Yellow, Beige, and Aqua colours
- Male and female connector options with push-pull latching for tool-free, secure mating
- SM insertion loss: 0.35 dB typical (standard), 0.20 dB typical (low loss); maximum 0.75 dB / 0.35 dB
- MM insertion loss: 0.35 dB typical (standard), 0.20 dB typical (low loss); maximum 0.60 dB / 0.35 dB
- Return loss: ≥ 55 dB (APC), ≥ 50 dB (UPC), ≥ 20 dB (PC); < 0.2 dB change after 200 insertion cycles
- Supports fiber counts up to 144F with customised configurations available on request
- 100% factory terminated and tested; minimum bending radius $10 \times D$ (installed), $20 \times D$ (under load)

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Technical Specifications

Parameter	Specification
Fiber Mode	SM: OS2 MM: OM3, OM4, OM5
Fiber Count	4F 8F 12F 24F 48F 72F 96F 144F Custom
Cable Type	Jacketed Ribbon Bare Ribbon Round
Cable Material	LSZH PVC
Cable Diameter — Single Jacket 12F	3.0 mm
Cable Diameter — Double Jacket 12F/24F	4.5 mm
Tensile Strength — Single 12F (short/long)	200 N / 100 N
Tensile Strength — Double 12F/24F (short/long)	400 N / 150 N
Crush Resistance — Single 12F	500 N/100 mm
Crush Resistance — Double 12F	1,000 N/100 mm
Min. Bending Radius	10×D (installed) 20×D (under load)
Cable Operating Temperature	−20°C to +70°C
MPO Connector Type	Male or Female; PC or APC end face
Available Ferrule Counts	4, 8, 12, 24
MPO IL Typical — SM Std / SM LL	0.35 dB / 0.20 dB
MPO IL Typical — MM Std / MM LL	0.35 dB / 0.20 dB
MPO IL Maximum — SM Std / SM LL	0.75 dB / 0.35 dB
MPO IL Maximum — MM Std / MM LL	0.60 dB / 0.35 dB
Return Loss — APC	≥55 dB
Return Loss — UPC	≥50 dB
Return Loss — PC	≥20 dB
Durability	< 0.2 dB change after 200 insertion cycles
Connector Operating Temperature	−40°C to +75°C

* SM LL = Singlemode Low Loss; MM LL = Multimode Low Loss. IL values per IEC 61300-3-4. Cable parameters per IEC 60794-1-2.

Applications

- Data centre backbone and inter-rack cabling for 10GbE, 40GbE, and 100GbE high-density architectures
- MPO trunk cable distribution in structured cabling systems between main and horizontal distribution areas
- Telecom and datacom network infrastructure requiring rapid, high-density multi-fiber connectivity
- Optical fiber access networks and central office patch fields with large fiber counts
- Migration cabling between legacy 10G equipment and next-generation 40G/100G switching infrastructure
- High-density modular optical distribution frames (ODFs) requiring compact, pre-terminated trunk assemblies

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Ordering Information

Standard Package Contents

Item	Quantity
MPO Cable Assembly (as ordered)	1
Dust Caps (fitted to each MPO connector)	2
Test Certificate (insertion loss & return loss)	1

MPO Order Code Structure

Position	Code	Description
Prefix	MPO	Fixed product prefix
1 — Connector Type (End 1)	F / M	F = MPO-Female, M = MPO-Male
2 — End Face (End 1)	P / A	P = PC, A = APC
3 — Fiber Count	4 / 8 / 12 / 24 ...	Fibers per ferrule (48–144F: confirm lead time)
4 — Connector Type (End 2)	F / M	F = MPO-Female, M = MPO-Male
5 — End Face (End 2)	P / A	P = PC, A = APC
6 — Fiber Mode	OS2 / OM3 / OM4 / OM5	SM: OS2 MM: OM3, OM4, OM5
7 — Cable Diameter	9 / 2 / 3 / 4	9 = 0.9 mm, 2 = 2.0 mm, 3 = 3.0 mm, 4 = 4.5 mm
8 — Cable Length	1 / 2 / 3 ...	Length in metres (1 = 1 m, 2 = 2 m ...)
9 — Cable Type	RJ / RB / RC	RJ = Jacket Ribbon, RB = Bare Ribbon, RC = Round Cable

Order Code Example:

MPO-F-P-4-F-P-OS2-3-1-RC

(MPO assembly, Female + PC at both ends, 4 fiber, OS2 singlemode, 3.0 mm round cable, 1 m length)

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