

MPO/MTP Connectors & Adapters

The MPO connector with its rectangular multifiber ferrule offers the highest density in connectivity. Novobit assembles both Senko MPO (Plus and Premium) and USConec MTP (Standard and Elite) connectors. MTP is an improved version of MPO with better strain relief and temperature stability. All products meet international standards IEC 61754-5 / TIA 604-5 as well as being RoHS/REACH compliant. Performance standards IEC-61753, IEC 61754-7, IEC 61755-3-4, IEC 61300-3-31 (12 fiber version only)

Environmental Requirements

Depending on the application connector kits can meet category E for Extreme environment and may be used between -40 and +85°C. Standard assemblies with Novobit cables are all suitable for category C (controlled environment -10 to +60°C) unless otherwise ordered. This is more than good enough for typical data center applications. Please contact us for higher requirements.

IEC 61755-3-4 describes optical performance requirements for grade B, C and D. This is based upon tolerances in fiber position, with tolerances of 1.5, 2.0 and 3.0 micron towards reference as a maximum result. The outcome depends on the quality of the connector kit used and should be similar to that of standard simplex connector.

Ferrule type	Random 97% (IL)	Random 50% (IL)	Return Loss (RL)
Senko MPO Plus Standard	≤0.50 dB (SM/MM)	≤0.25 dB (SM/MM)	≥60 dB (SM) ≥25 dB (MM)
Senko MPO Plus Premium	≤0.25 dB (SM/MM)	≤0.1 dB (SM/MM)	≥60 dB (SM) ≥25 dB (MM)
USConec MT Standard	≤0.50 dB (SM) ≤0.45dB (MM)	≤0.25 dB (SM) ≤0.2 dB (MM)	≥60 dB (SM) ≥25 dB (MM)
USConec MT Elite	≤0.25 dB (SM/MM)	≤0.12 dB (SM/MM)	≥60 dB (SM) ≥25 dB (MM)

IEC 61755-3-31 describes the 12-fiber version. Both Senko MPO Plus Premium and USConec MTP Elite fulfill grade B.

Male/female versions

Active to active is always female to female. When used in ODF, the male should be on the ODF side and the patchcord should be female. When 2 connectors mate it should be male/female.



Applications:

Grade B

- ODF in 10/40/100GbE networks

Grade C

- Point to point in 10/40/100 GbE networks
- Coupling with diode of active equipment

Male/female versions:

Active to active is always female to female. When used in ODF use always male on ODF side. The patchcord side should be female. When two connectors mate it should be male/female.

IEC 61753-3-1 performance standard tests:

- IEC 61300-3-42 Adapter performance
- IEC 61300-3-34 Attenuation (random mate)
- IEC 61300-3-6 Return Loss
- IEC 61300-2-1 Vibration
- IEC 61300-2-2 Mating durability
- IEC 61300-2-4 Fiber/cable retention (Cat. U)
- IEC 61300-2-6 Strength of coupling mechanism
- IEC 61300-2-12 Impact (Method A)
- IEC 61300-2-5 Torsion
- IEC 61300-2-44 Flexing of the strain relief
- IEC 61300-2-42 Static side load
- IEC 61300-2-7 Bending moment
- IEC 61300-3-10 Allowable gauge retention force
- IEC 61300-2-17 Cold
- IEC 61300-2-18 Dry heat – High temp endurance
- IEC 61300-2-22 Change of temperature
- IEC 61300-2-27 Dust
- IEC 61300-2-26 Salt mist

Novobit AG

Novobit reserves the right to change any specifications listed above.

Questions and ordering:

info@novobit.ch
www.novobit.ch

Connector specifications:

Housing	Plastic, fiber dependent color Green (SM), Yellow (SM low loss), Turquoise, Magenta, Lime
Technology	PPS
Tuning	None
Cable Diameter	≤5.5mm
Flammability	UL 94 V-0
Durability	≥1000 Matings

Adapter specifications:

	Grade B (SM)	Grade C (SM)	Grade B (MM)	Grade M (MM)
ILΔ Repeatability 1000	≤0,1dB	≤0,2dB	≤0,1dB	≤0,2dB
Service life	≥500			
Housing	Plastic, Green, Yellow (low loss)		Plastic, fiber dependent color Turquoise (T), Magenta (M), Lime (L)	

