

## Fiber Optic, MPO to MPO Conversion Harness

### Features and benefits



- Compact 3.6mm round cable (24 fiber)
- Converts Base-12 and Base-24 backbones
- Bend-insensitive/bend optimized fibers
- OS2, OM3 and OM4 performance types
- Can be used to connect switch ports directly
- Miniature furcation housing
- Provides easy upgrades to Base-8 transceiver ports for 40G, 100G and 200G
- Ultra-low loss performance

Conversion harnesses can either be used to convert from one type of MPO connector to another, or they can be used as aggregation harnesses connecting different types of switch ports. Conversion harnesses are a low-loss alternative to conversion modules because they eliminate one mated MTP pair across the link.

Many of today's legacy infrastructures are built using a Base-12 backbone design, however history demonstrates that this fiber-count is never required on higher data rate switches or servers. Currently, 8 fibers is the preferred fiber-count for 40G (SR4) transceivers and this will remain the preferred choice for 100G, 200G, 400G and beyond. The MPO conversion harness allows users who have built their network with 12 fibers to convert to an 8 fiber or 24 fiber connector which matches the transceivers on their equipment. This conversion process can easily be achieved without wasting any of the fibers in the backbone cable.

Base-24 connectivity has emerged because of its deployment for 100G transceivers (SR10) using 2 x 10 lanes of fibers. However, transceivers with 20 fibers are decreasing in popularity as those transceivers with 8 fibers gradually increase. Conversion harnesses are available for users who still use SR10 transceivers, or for those who prefer to use a 24 fiber backbone because of its space-saving benefits.

### Technical data

Mechanical data	Value
Cable diameter	3.6mm (24 fiber cable) and 3.0mm (8 and 12 fiber cable)
Durability	Min. 500 cycles

Copyright 2014, Opterna Int. All rights reserved. The information contained herein is subject to change without notice.



Channel loss	Value
Fiber category	OS2 - 9/125 bend insensitive (A.1 or A.2) OM3/4 bend-optimized
Test Wavelength (nm)	850nm (Multimode), 1550nm (Singlemode)
MPO 8/12 IL Ultra Low Loss (ULL) per mated pair	Singlemode OS2 $\leq 0.70\text{dB}$ Multimode OM3/OM4 $\leq 0.50\text{dB}$
MPO 8/12 RL MPO/MTP (ULL) per mated pair	Singlemode OS2 APC $\geq 65\text{dB}$ Multimode OM3/OM4 $\geq 35\text{dB}$
MPO 24 IL Ultra Low Loss (ULL) per mated pair	Singlemode OS2 $\leq 0.70\text{dB}$ Multimode OM3/OM4 $\leq 0.50\text{dB}$
MPO 24 RL MPO/MTP (ULL) per mated pair	Singlemode OS2 APC $\geq 65\text{dB}$ Multimode OM3/OM4 $\geq 35\text{dB}$

**Environmental data**

Description	Value
Operating temperature	-10° to +70°
Free of halogen	Yes
2011/65/EC RoHS	Fully compliant

**Ordering information**

**MPO to MPO Conversion Harness OS2 (A2), LSZH**

**Conversion harnesses OS2, Low Smoke Zero Halogen (LSZH)**

CHA0247T0337L10752xxxM	2 x MPO12 (Male) to 3 x MPO8 (Female), LSZH, OS2, straight tail 075cm, xxx meters
CHA0244T0337L10752xxxM	2 x MPO12 (Female) to 3 x MPO8 (Female), LSZH, OS2, straight tail 075cm, xxx meters
CHA0247T0165L10752xxxM	2 x MPO12 (Male) to 1 x MPO24 (Female), LSZH, OS2, tail 075cm, total length xxx meters
CHA0247T0165L10752xxxM	2 x MPO12 (Female) to 1 x MPO24 (Female), LSZH, OS2, tail 075cm, total length xxx meters
CHA0166T0337L10752xxxM	1 x MTP24 (Male) to 3 x MPO8 (Female), LSZH, OS2, tail 075cm, total length xxx meters
CHA0165T0337L10752xxxM	1 x MTP24 (Female) to 3 x MPO8 (Female), LSZH, OS2, tail 075cm, total length xxx meters

Note: xxx = Total cable length in meters including tails. 005M = 0.5 meters, 050M = 5.0 meters, 500M = 50.0 meters

**MPO to MPO Conversion Harness OS2 (A1), PLENUM**

**Conversion harnesses OS2, Low Smoke Zero Halogen (PLENUM)**

CHA0247T0337P1075ZxxxM	2 x MPO12 (Male) to 3 x MPO8 (Female), LSZH, OS2, straight tail 075cm, xxx meters
CHA0244T0337P1075ZxxxM	2 x MPO12 (Female) to 3 x MPO8 (Female), LSZH, OS2, straight tail 075cm, xxx meters
CHA0247T0165P1075ZxxxM	2 x MPO12 (Male) to 1 x MPO24 (Female), LSZH, OS2, tail 075cm, total length xxx meters
CHA0247T0165P1075ZxxxM	2 x MPO12 (Female) to 1 x MPO24 (Female), LSZH, OS2, tail 075cm, total length xxx meters
CHA0166T0337P1075ZxxxM	1 x MTP24 (Male) to 3 x MPO8 (Female), LSZH, OS2, tail 075cm, total length xxx meters
CHA0165T0337P1075ZxxxM	1 x MTP24 (Female) to 3 x MPO8 (Female), LSZH, OS2, tail 075cm, total length xxx meters

Note: xxx = Total cable length in meters including tails. 005M = 0.5 meters, 050M = 5.0 meters, 500M = 50.0 meters

Copyright 2014, Opterna Int. All rights reserved. The information contained herein is subject to change without notice.



### MPO to MPO Conversion Harness OM3, LSZH

Conversion harnesses OM3, Low Smoke Zero Halogen (LSZH)	
CHA0246M0334L10753xxxM	2 x MPO12 (Male) to 3 x MPO8 (Female), LSZH, OM3, straight tail 075cm, xxx meters
CHA0244M0334L10753xxxM	2 x MPO12 (Female) to 3 x MPO8 (Female), LSZH, OM3, straight tail 075cm, xxx meters
CHA0246M0164L10753xxxM	2 x MPO12 (Male) to 1 x MPO24 (Female), LSZH, OM3, tail 075cm, total length xxx meters
CHA0244M0164L10753xxxM	2 x MPO12 (Female) to 1 x MPO24 (Female), LSZH, OM3, tail 075cm, total length xxx meters
CHA0166M0334L10753xxxM	1 x MTP24 (Male) to 3 x MPO8 (Female), LSZH, OM3, tail 075cm, total length xxx meters
CHA0164M0334L10753xxxM	1 x MTP24 (Female) to 3 x MPO8 (Female), LSZH, OM3, tail 075cm, total length xxx meters

Note: xxx = Total cable length in meters including tails. 005M = 0.5 meters, 050M = 5.0 meters, 500M = 50.0 meters

### MPO to MPO Conversion Harness OM3, PLENUM

Conversion harnesses OM3, Low Smoke Zero Halogen (PLENUM)	
CHA0246M0334P10753xxxM	2 x MPO12 (Male) to 3 x MPO8 (Female), PLENUM, OM3, straight tail 075cm, xxx meters
CHA0244M0334P10753xxxM	2 x MPO12 (Female) to 3 x MPO8 (Female), PLENUM, OM3, straight tail 075cm, xxx meters
CHA0246M0164P10753xxxM	2 x MPO12 (Male) to 1 x MPO24 (Female), PLENUM, OM3, tail 075cm, total length xxx meters
CHA0244M0164P10753xxxM	2 x MPO12 (Female) to 1 x MPO24 (Female), PLENUM, OM3, tail 075cm, total length xxx meters
CHA0166M0334P10753xxxM	1 x MTP24 (Male) to 3 x MPO8 (Female), PLENUM, OM3, tail 075cm, total length xxx meters
CHA0164M0334P10753xxxM	1 x MTP24 (Female) to 3 x MPO8 (Female), PLENUM, OM3, tail 075cm, total length xxx meters

Note: xxx = Total cable length in meters including tails. 005M = 0.5 meters, 050M = 5.0 meters, 500M = 50.0 meters

### MPO to MPO Conversion Harness OM4, LSZH

Conversion harnesses OM4, Low Smoke Zero Halogen (LSZH)	
CHA0246M0334L10754xxxM	2 x MPO12 (Male) to 3 x MPO8 (Female), LSZH, OM4, straight tail 075cm, xxx meters
CHA0244M0334L10754xxxM	2 x MPO12 (Female) to 3 x MPO8 (Female), LSZH, OM4, straight tail 075cm, xxx meters
CHA0246M0164L10754xxxM	2 x MPO12 (Male) to 1 x MPO24 (Female), LSZH, OM4, tail 075cm, total length xxx meters
CHA0244M0164L10754xxxM	2 x MPO12 (Female) to 1 x MPO24 (Female), LSZH, OM4, tail 075cm, total length xxx meters
CHA0166M0334L10754xxxM	1 x MTP24 (Male) to 3 x MPO8 (Female), LSZH, OM4, tail 075cm, total length xxx meters
CHA0164M0334L10754xxxM	1 x MTP24 (Female) to 3 x MPO8 (Female), LSZH, OM4, tail 075cm, total length xxx meters

Note: xxx = Total cable length in meters including tails. 005M = 0.5 meters, 050M = 5.0 meters, 500M = 50.0 meters

### MPO to MPO Conversion Harness OM4, PLENUM

Conversion harnesses OM4, Low Smoke Zero Halogen (PLENUM)	
CHA0246M0334P10754xxxM	2 x MPO12 (Male) to 3 x MPO8 (Female), PLENUM, OM4, straight tail 075cm, xxx meters
CHA0244M0334P10754xxxM	2 x MPO12 (Female) to 3 x MPO8 (Female), PLENUM, OM4, straight tail 075cm, xxx meters
CHA0246M0164P10754xxxM	2 x MPO12 (Male) to 1 x MPO24 (Female), PLENUM, OM4, tail 075cm, total length xxx meters
CHA0244M0164P10754xxxM	2 x MPO12 (Female) to 1 x MPO24 (Female), PLENUM, OM4, tail 075cm, total length xxx meters
CHA0166M0334P10754xxxM	1 x MTP24 (Male) to 3 x MPO8 (Female), PLENUM, OM4, tail 075cm, total length xxx meters
CHA0164M0334P10754xxxM	1 x MTP24 (Female) to 3 x MPO8 (Female), PLENUM, OM4, tail 075cm, total length xxx meters

Note: xxx = Total cable length in meters including tails. 005M = 0.5 meters, 050M = 5.0 meters, 500M = 50.0 meters

Copyright 2014, Opterna Int. All rights reserved. The information contained herein is subject to change without notice.