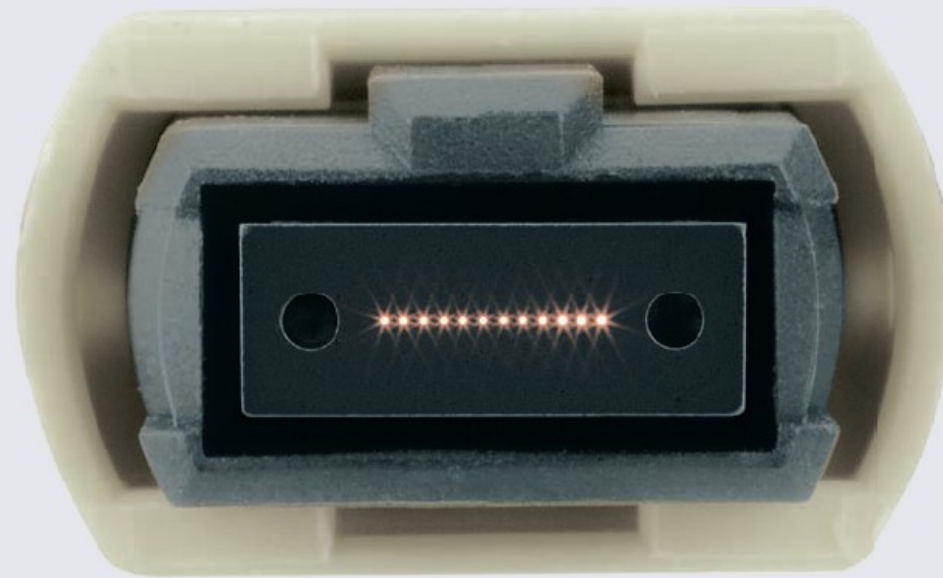


## **MPO cabling system**



**Less installation time  
due to plug & play functionality**

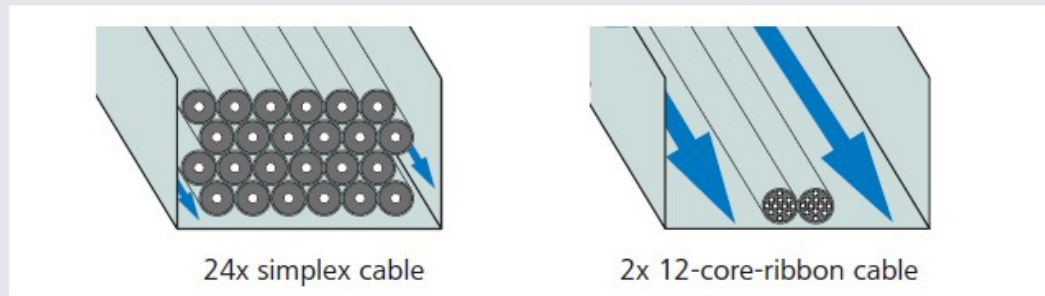
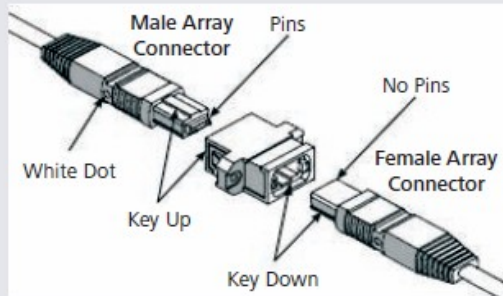
The MPO cabling system, due to its modularity, offers installers and operators reduced time and effort for installations, modification and maintenance of a structured communication cabling for today's and future demands of data centers. The MPO connector, besides the LC FO interface, is the first choice for ITS (Information Telecommunication System) in tomorrow's bandwidth hungry, high speed applications for commercial buildings and data centers. It can be used either for parallel optics applications such as infiband with data rates up to 120Gb/s and for upcoming 40Gb/s and 100Gb/s Ethernet protocols via multimode OM3, OM4 and OS2 fiber. The MPO houses several fibers in one single high precision ferrule that can be either PC or APC polished with a typical insertion loss of 0.25dB, return loss of >60dB for singlemode and insertion loss of 0.2dB, return loss >30dB for multimode.



1 2 3 4 5 6 7 8 9 10 11 12

(connector endface and pin position)

## MPO/MTP® Advantages at a Glance



### Pre-connectorized assemblies

Pre-connectorized MPO/MTP® assemblies for reduced installation time with plug & play functionality.

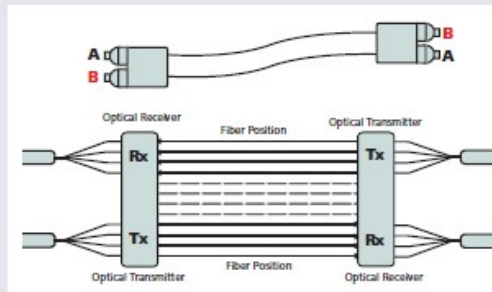


### Fast Installation

Easy Moves, Adds and Changes due to scalability and modularity of the product design for reduced down-times and faster installation.

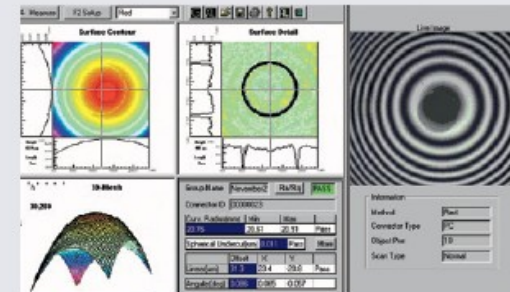
### Optimized air circulation

Ribbon cable MPO/MTP® Patch cords, FanOuts and Harness' with a reduced cable diameter consuming less space in cable ducts, conduits and path ways for optimized air circulation in raised-floors.



### Polarity A

In order to offer users the migration path from 10 Gbit/s to 40 Gbit/s the Telegärtner MPO/MTP® product family refers to polarity A.

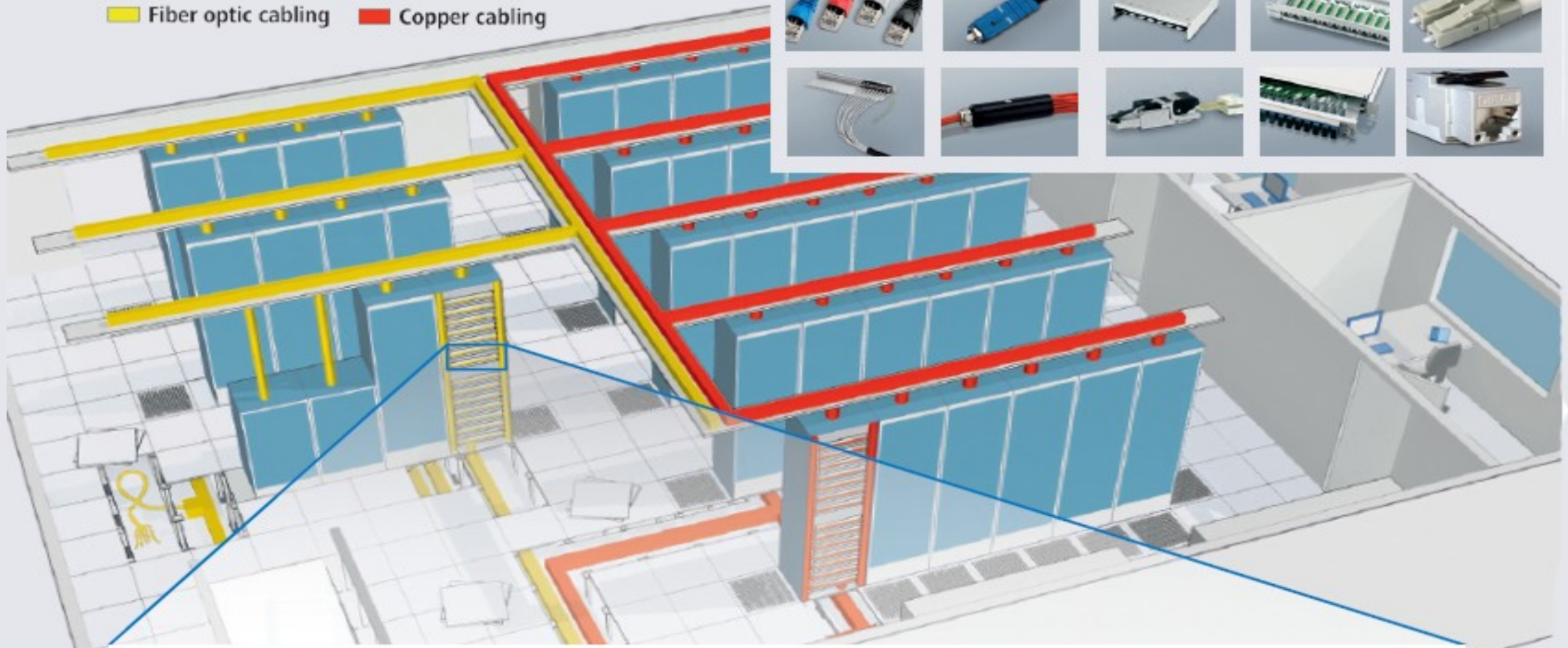


### High Performance and Quality

Factory-assembled with measurement report for high, enduring reliability and performance.

## Data Center Solutions:

■ Fiber optic cabling ■ Copper cabling



## The MPO/MTP® Cabling System Product Range includes:

### MPO FanOut Module



6x SC Duplex Multimode beige  
1x MPO male with FanOut 12x 50 μm  
OM2



6x LC Quad Multimode aqua  
2x MPO male with FanOut 12x 50 μm  
OM3



6x LC Duplex Singlemode blue  
1x MPO/APC male with FanOut  
12x E9 μm OS2

### MPO Patch Cord



MPO beige female patch cord ribbon  
cable orange 50 μm OM2



MPO aqua female patch cord ribbon  
cable aqua 50 μm OM3



MPO green female patch cord ribbon  
cable yellow 9 μm OS2

### MPO Harness



12x 2.1 mm OM2  
MPO male + LC Multimode beige



12x 2.1 mm OM3  
MPO male + SC Multimode aqua



12x 2.1 mm OS2  
MPO male + LC Singlemode blue

## MPO/MTP® (female) to MPO/MTP® (female) Patch Cords

MPO Patch Cord				
	OS2		OM2/OM3/OM4	
	IL in dB at 1310 nm	RL in dB at 1310 nm	IL in dB at 850 nm	RL in dB at 850 nm
patch cord MPO/PC			<0.5 (typ. 0.2)	>30
patch cord MPO/APC	<0.7 (typ. 0.25)	>60		

polarization	acc. Type A
dimensions ribboncable [mm]	4.6 x 2.4
bending radius ribboncable [mm]	15x outer diameter
connectors	female
repeatability (matings) MPO	>500
operating temperature [°C]	-40...75

MPO components, types of polarization				
pin connector 1	pin connector 2			
	type A	type B	type C	type D
1	1	12	2	customized
2	2	11	1	
3	3	10	4	
4	4	9	3	
5	5	8	6	
6	6	7	5	
7	7	6	8	
8	8	5	7	
9	9	4	10	
10	10	3	9	
11	11	2	12	
12	12	1	11	



L00830A0004



L00830A0005



L00830A0007

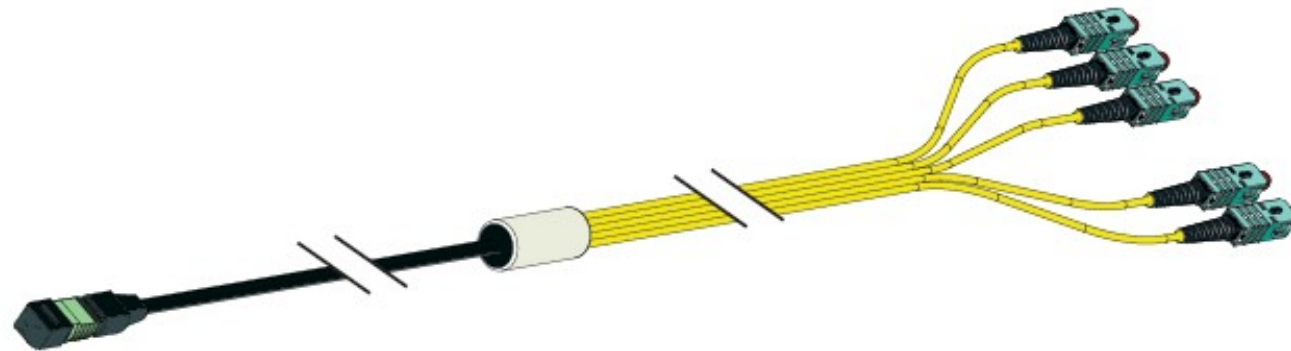
Length	Order no.	Female Patch Cord	Ribboncable	Length	Order no.	Female Patch Cord	Ribboncable
1.0 m	L00830A0004	MPO beige	orange 50 µm OM2	35.0 m	L00836A0026	MPO beige	orange 50 µm OM2
1.0 m	L00830A0005	MPO aqua	aqua 50 µm OM3	35.0 m	L00836A0027	MPO aqua	aqua 50 µm OM3
1.0 m	L00830A0006	MPO aqua	aqua 50 µm OM4	35.0 m	L00836A0028	MPO aqua	aqua 50 µm OM4
1.0 m	L00830A0007	MPO APC green	yellow 9 µm OS2	35.0 m	L00836A0029	MPO APC green	yellow 9 µm OS2
2.0 m	L00831A0004	MPO beige	orange 50 µm OM2	40.0 m	L00836A0030	MPO beige	orange 50 µm OM2
2.0 m	L00831A0005	MPO aqua	aqua 50 µm OM3	40.0 m	L00836A0031	MPO aqua	aqua 50 µm OM3
2.0 m	L00831A0006	MPO aqua	aqua 50 µm OM4	40.0 m	L00836A0032	MPO aqua	aqua 50 µm OM4
2.0 m	L00831A0007	MPO APC green	yellow 9 µm OS2	40.0 m	L00836A0033	MPO APC green	yellow 9 µm OS2
3.0 m	L00832A0004	MPO beige	orange 50 µm OM2	50.0 m	L00836A0034	MPO beige	orange 50 µm OM2
3.0 m	L00832A0005	MPO aqua	aqua 50 µm OM3	50.0 m	L00836A0035	MPO aqua	aqua 50 µm OM3
3.0 m	L00832A0006	MPO aqua	aqua 50 µm OM4	50.0 m	L00836A0036	MPO aqua	aqua 50 µm OM4
3.0 m	L00832A0007	MPO APC green	yellow 9 µm OS2	50.0 m	L00836A0037	MPO APC green	yellow 9 µm OS2
5.0 m	L00833A0004	MPO beige	orange 50 µm OM2	60.0 m	L00836A0038	MPO beige	orange 50 µm OM2
5.0 m	L00833A0005	MPO aqua	aqua 50 µm OM3	60.0 m	L00836A0039	MPO aqua	aqua 50 µm OM3
5.0 m	L00833A0006	MPO aqua	aqua 50 µm OM4	60.0 m	L00836A0040	MPO aqua	aqua 50 µm OM4
5.0 m	L00833A0007	MPO APC green	yellow 9 µm OS2	60.0 m	L00836A0041	MPO APC green	yellow 9 µm OS2
10.0 m	L00835A0004	MPO beige	orange 50 µm OM2	70.0 m	L00836A0042	MPO beige	orange 50 µm OM2
10.0 m	L00835A0005	MPO aqua	aqua 50 µm OM3	70.0 m	L00836A0043	MPO aqua	aqua 50 µm OM3
10.0 m	L00835A0006	MPO aqua	aqua 50 µm OM4	70.0 m	L00836A0044	MPO aqua	aqua 50 µm OM4
10.0 m	L00835A0007	MPO APC green	yellow 9 µm OS2	70.0 m	L00836A0045	MPO APC green	yellow 9 µm OS2
15.0 m	L00836A0010	MPO beige	orange 50 µm OM2	80.0 m	L00836A0046	MPO beige	orange 50 µm OM2
15.0 m	L00836A0011	MPO aqua	aqua 50 µm OM3	80.0 m	L00836A0047	MPO aqua	aqua 50 µm OM3
15.0 m	L00836A0012	MPO aqua	aqua 50 µm OM4	80.0 m	L00836A0048	MPO aqua	aqua 50 µm OM4
15.0 m	L00836A0013	MPO APC green	yellow 9 µm OS2	80.0 m	L00836A0049	MPO APC green	yellow 9 µm OS2
20.0 m	L00836A0014	MPO beige	orange 50 µm OM2	90.0 m	L00836A0050	MPO beige	orange 50 µm OM2
20.0 m	L00836A0015	MPO aqua	aqua 50 µm OM3	90.0 m	L00836A0051	MPO aqua	aqua 50 µm OM3
20.0 m	L00836A0016	MPO aqua	aqua 50 µm OM4	90.0 m	L00836A0052	MPO aqua	aqua 50 µm OM4
20.0 m	L00836A0017	MPO APC green	yellow 9 µm OS2	90.0 m	L00836A0053	MPO APC green	yellow 9 µm OS2
25.0 m	L00836A0018	MPO beige	orange 50 µm OM2	100.0 m	L00836A0054	MPO beige	orange 50 µm OM2
25.0 m	L00836A0019	MPO aqua	aqua 50 µm OM3	100.0 m	L00836A0055	MPO aqua	aqua 50 µm OM3
25.0 m	L00836A0020	MPO aqua	aqua 50 µm OM4	100.0 m	L00836A0056	MPO aqua	aqua 50 µm OM4
25.0 m	L00836A0021	MPO APC green	yellow 9 µm OS2	100.0 m	L00836A0057	MPO APC green	yellow 9 µm OS2
30.0 m	L00836A0022	MPO beige	orange 50 µm OM2				
30.0 m	L00836A0023	MPO aqua	aqua 50 µm OM3				
30.0 m	L00836A0024	MPO aqua	aqua 50 µm OM4				
30.0 m	L00836A0025	MPO APC green	yellow 9 µm OS2				

Other Lengths on request.

## MPO/MTP® (male) Harness (single fiber 2.1 mm) – available with LC or SC as equipment interface

MPO Harness				
	OS2		OM2/OM3/OM4	
	IL in dB at 1310 nm	RL in dB at 1310 nm	IL in dB at 850 nm	RL in dB at 850 nm
MPO/PC			<0.5 (typ. 0.2)	>30
MPO/APC	<0.7 (typ. 0.25)	>60		
SC/PC	<0.5	>40	<0.4	>30
SC/APC	<0.5	>60		
LC/PC	<0.5	>40	<0.4	>30
LC/APC	<0.5	>60		

dimensions ribbon cable [mm]	4.6 x 2.4
bending radius ribbon cable	15x outer diameter
bending radius single fiber	min. 30 mm
outer diameter single fiber	2.1 mm ± 0.1
outer diameter splitter	~ 15 mm
length of splitter	~ 50 mm
repeatability (matings) SC/LC	>1000
repeatability (matings) MPO	>500
operating temperature [°C]	-5... 55



L00830A0027

L00830A0024

L00830A0032

L00830A0031

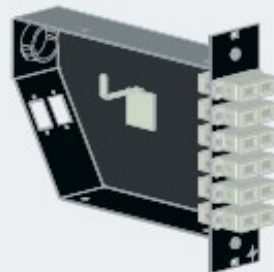
Length	Order no.	1st end	Harness	2st end	Length	Order no.	1st end	Harness	2st end
1.0 m	L00830A0024	MPOm PC	OM2 12x 2.1 mm	LC MM beige	1.0 m	L00830A0030	MPOm APC	OS2 12x 2.1 mm	LC/APC SM green
1.0 m	L00830A0025	MPOm PC	OM2 12x 2.1 mm	SC MM beige	1.0 m	L00830A0031	MPOm APC	OS2 12x 2.1 mm	SC/APC SM green
1.0 m	L00830A0026	MPOm PC	OM3 12x 2.1 mm	LC MM aqua	1.0 m	L00830A0032	MPOm APC	OS2 12x 2.1 mm	LC SM blue
1.0 m	L00830A0027	MPOm PC	OM3 12x 2.1 mm	SC MM aqua	1.0 m	L00830A0033	MPOm APC	OS2 12x 2.1 mm	SC SM blue
1.0 m	L00830A0028	MPOm PC	OM4 12x 2.1 mm	LC MM aqua	2.0 m	L00831A0030	MPOm APC	OS2 12x 2.1 mm	LC/APC SM green
1.0 m	L00830A0029	MPOm PC	OM4 12x 2.1 mm	SC MM aqua	2.0 m	L00831A0031	MPOm APC	OS2 12x 2.1 mm	SC/APC SM green
2.0 m	L00831A0024	MPOm PC	OM2 12x 2.1 mm	LC MM beige	2.0 m	L00831A0032	MPOm APC	OS2 12x 2.1 mm	LC SM blue
2.0 m	L00831A0025	MPOm PC	OM2 12x 2.1 mm	SC MM beige	2.0 m	L00831A0033	MPOm APC	OS2 12x 2.1 mm	SC SM blue
2.0 m	L00831A0026	MPOm PC	OM3 12x 2.1 mm	LC MM aqua	3.0 m	L00832A0030	MPOm APC	OS2 12x 2.1 mm	LC/APC SM green
2.0 m	L00831A0027	MPOm PC	OM3 12x 2.1 mm	SC MM aqua	3.0 m	L00832A0031	MPOm APC	OS2 12x 2.1 mm	SC/APC SM green
2.0 m	L00831A0028	MPOm PC	OM4 12x 2.1 mm	LC MM aqua	3.0 m	L00832A0032	MPOm APC	OS2 12x 2.1 mm	LC SM blue
2.0 m	L00831A0029	MPOm PC	OM4 12x 2.1 mm	SC MM aqua	3.0 m	L00832A0033	MPOm APC	OS2 12x 2.1 mm	SC SM blue
3.0 m	L00832A0024	MPOm PC	OM2 12x 2.1 mm	LC MM beige	5.0 m	L00833A0030	MPOm APC	OS2 12x 2.1 mm	LC/APC SM green
3.0 m	L00832A0025	MPOm PC	OM2 12x 2.1 mm	SC MM beige	5.0 m	L00833A0031	MPOm APC	OS2 12x 2.1 mm	SC/APC SM green
3.0 m	L00832A0026	MPOm PC	OM3 12x 2.1 mm	LC MM aqua	5.0 m	L00833A0032	MPO OS2	OS2 12x 2.1 mm	LC SM blue
3.0 m	L00832A0027	MPOm PC	OM3 12x 2.1 mm	SC MM aqua	5.0 m	L00833A0033	MPO OS2	OS2 12x 2.1 mm	SC SM blue
3.0 m	L00832A0028	MPOm PC	OM4 12x 2.1 mm	LC MM aqua	10.0 m	L00835A0030	MPO OS2	OS2 12x 2.1 mm	LC/APC SM green
3.0 m	L00832A0029	MPOm PC	OM4 12x 2.1 mm	SC MM aqua	10.0 m	L00835A0031	MPO OS2	OS2 12x 2.1 mm	SC/APC SM green
5.0 m	L00833A0024	MPOm PC	OM2 12x 2.1 mm	LC MM beige	10.0 m	L00835A0032	MPO OS2	OS2 12x 2.1 mm	LC SM blue
5.0 m	L00833A0025	MPOm PC	OM2 12x 2.1 mm	SC MM beige	10.0 m	L00835A0033	MPO OS2	OS2 12x 2.1 mm	SC SM blue
5.0 m	L00833A0026	MPOm PC	OM3 12x 2.1 mm	LC MM aqua					
5.0 m	L00833A0027	MPOm PC	OM3 12x 2.1 mm	SC MM aqua					
5.0 m	L00833A0028	MPOm PC	OM4 12x 2.1 mm	LC MM aqua					
5.0 m	L00833A0029	MPOm PC	OM4 12x 2.1 mm	SC MM aqua					
10.0 m	L00835A0024	MPOm PC	OM2 12x 2.1 mm	LC MM beige					
10.0 m	L00835A0025	MPOm PC	OM2 12x 2.1 mm	SC MM beige					
10.0 m	L00835A0026	MPOm PC	OM3 12x 2.1 mm	LC MM aqua					
10.0 m	L00835A0027	MPOm PC	OM3 12x 2.1 mm	SC MM aqua					
10.0 m	L00835A0028	MPOm PC	OM4 12x 2.1 mm	LC MM aqua					
10.0 m	L00835A0029	MPOm PC	OM4 12x 2.1 mm	SC MM aqua					

MM = Multimode; SM = Singlemode  
Other Lengths on request.

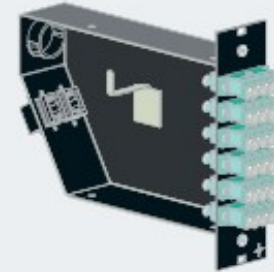
## MPO/MTP® FanOut Module

FOM	OS2		OM2/OM3/OM4	
	IL in dB at 1310 nm	RL in dB at 1310 nm	IL in dB at 850 nm	RL in dB at 850 nm
MPO/PC			<0.5 (typ. 0.2)	>30
MPO/APC	<0.7 (typ. 0.25)	>60		
SC/PC	<0.5	>40	<0.4	>30
SC/APC	<0.5	>60		
LC/PC	<0.5	>40	<0.4	>30
LC/APC	<0.5	>60		

polarization	acc. Type A
bending radius single fibers	min. 30 mm
outer diameter single fibers	0.9 mm
repeatability (matings) SC/LC	>1000
repeatability (matings) MPO	>500
operating temperature [°C]	-5... 55



FanOut Module for TICNET link with Mini-ODS cable splitter



FanOut Module for MPO male with FanOut



H02050F4011



H02050F4221



H02050F4131


Order no.	Description	Remarks
H02050F4010	FanOut Module with 6x SC Duplex MM beige	for TICNET link
H02050F4011	FanOut Module with 6x SC Duplex MM beige	1x MPO male with FanOut 12x 50 µm OM2
H02050F4020	FanOut Module with 6x SC Duplex MM aqua	for TICNET link
H02050F4021	FanOut Module with 6x SC Duplex MM aqua	1x MPO male with FanOut 12x 50 µm OM3
H02050F4030	FanOut Module with 6x SC Duplex SM blue	for TICNET link
H02050F4031	FanOut Module with 6x SC Duplex SM blue	1x MPO APC male with FanOut 12x 9 µm OS2
H02050F4040	FanOut Module with 6x SC Duplex SM green	for TICNET link
H02050F4041	FanOut Module with 6x SC Duplex SM green	1x MPO APC male with FanOut 12x 9 µm OS2 APC
H02050F4110	FanOut Module with 6x LC Duplex MM beige	for TICNET link
H02050F4111	FanOut Module with 6x LC Duplex MM beige	1x MPO male with FanOut 12x 50 µm OM2
H02050F4120	FanOut Module with 6x LC Duplex MM aqua	for TICNET link
H02050F4121	FanOut Module with 6x LC Duplex MM aqua	1x MPO male with FanOut 12x 50 µm OM3
H02050F4130	FanOut Module with 6x LC Duplex SM blue	for TICNET link
H02050F4131	FanOut Module with 6x LC Duplex SM blue	1x MPO APC male with FanOut 12x 9 µm OS2
H02050F4140	FanOut Module with 6x LC Duplex SM green	for TICNET link
H02050F4141	FanOut Module with 6x LC Duplex SM green	1x MPO APC male with FanOut 12x 9 µm OS2 APC
H02050F4210	FanOut Module with 6x LC Quad MM beige	for TICNET link
H02050F4211	FanOut Module with 6x LC Quad MM beige	2x MPO male with FanOut 12x 50 µm OM2
H02050F4220	FanOut Module with 6x LC Quad MM aqua	for TICNET link
H02050F4221	FanOut Module with 6x LC Quad MM aqua	2x MPO male with FanOut 12x 50 µm OM3
H02050F4230	FanOut Module with 6x LC Quad SM blue	for TICNET link
H02050F4231	FanOut Module with 6x LC Quad SM blue	2x MPO APC male with FanOut 12x 9 µm OS2
H02050F4240	FanOut Module with 6x LC Quad SM green	for TICNET link
H02050F4241	FanOut Module with 6x LC Quad SM green	2x MPO APC male with FanOut 12x 9 µm OS2 APC

MM = Multimode; SM = Singlemode

## 19" Module Carriers

	Order no.	Description	Remarks	Colour
 	H02030A4625	19" FO Module Carrier 1HU	for 3x FanOut Module	black RAL9005
	H02032A0030	19" FO Module Carrier 3HU	for 12x FanOut Module	Aluminium
	H02030A0661	19" FO Patch Panel Basis V, 1 HU	with 24 MPO/MTP® adaptors	grey RAL 7035

## Accessories

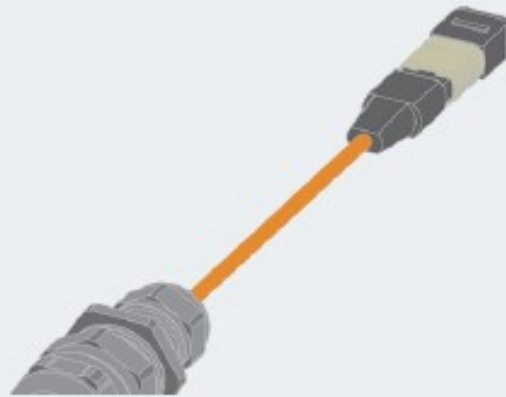
	Order no.	Description
	N04001A0073	Cleaner for ST, SC, FC connectors, male/female, 500 cycles min.
	N04001A0074	Cleaner for LC connectors, male/female, 500 cycles min.
	N04001A0082	Cleaner for MPO/MTP® connectors, male/female, 500 cycles min.
	H01012A0058	Hat rail mounting-clip for MPO/MTP® Harness
	H06000A0065	Hat rail fixing-bracket for MPO/MTP® Cable splitter Mini-ODS

## MPO/MTP® Cable Splitter Mini-ODS

The Telegärtner MPO/MTP® Cabling System is completed with the Mini-ODS cable splitters. The Mini-ODS splitters form the perfect adoption for loose-tube cables with

12-48 fiber to be supplied factory-assembled with the MPO/MTP® connectors attached to round single-cables containing 12 fibers.

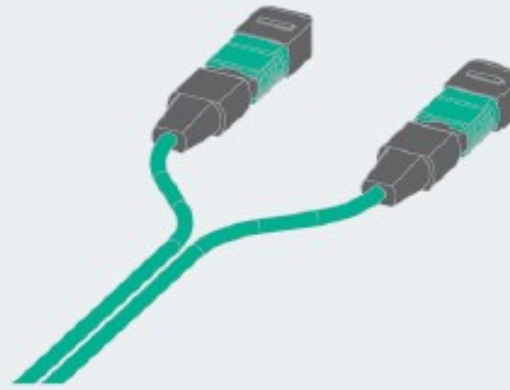
**Cable splitter Mini-ODS for 12 fibers**



### Length

No. of single cable	length of the single cable
1	640 ± 20 mm

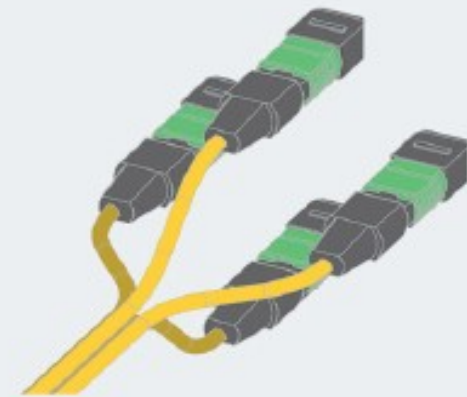
**Cable splitter Mini-ODS for 24 fibers**



### Length

No. of single cable	length of the single cable
1	640 ± 20 mm
2	640 ± 20 mm

**Cable splitter Mini-ODS for 48 fibers**



### Length

No. of single cable	length of the single cable
1	640 ± 20 mm
2	640 ± 20 mm
3	580 ± 20 mm
4	580 ± 20 mm

# alfaphonet

THE FIRST CHOICE IN TELECOMMUNICATIONS AND NETWORKS



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