tML® - FO Micro Distribution trunk cable both sides 1x MPO/MTP® Female 12G62,5/125µ OM1 LSOH, Type C, Length: xxx

tML® - tde Modular Link

tML® is a patented, modular cabling system consisting of the three key components module, trunk cable and rack mount enclosure. The system components are 100 percent manufactured, pre-assembled and tested in Germany. They enable plug-and-play installation on site – especially in data centres, but also in industrial environments – within the shortest possible time. Heart of the system are the rear MPO/MTP® and Telco connectors, which can be used to connect at least six or twelve ports at a time. Depending on the module configuration, transfer rates of up to 200G are currently possible with SR4. The fibre optic and TP modules can be used together in a module carrier with a very high port density. The tde offers its tML® cabling system as a proven tML® standard system and in the highly innovative variants tML® Xtended, tML® 24 System and now tML® 32 System for extreme scalability and very easy migration to higher transmission rates such as 40G, 100G, 200G and 400G.

The tML® - FO Micro Distribution trunk cable is intended for the connection of two tML®- FO Modules.

tde® trans data elektronik GmbH

Headquarter address:
Lingener Str. 2
D-49626 Bippen/Ohrte
Tel.: +49 5435 9511 0
Fax.: +49 5435 9511 32

Sales office address:
Prinz-Friedrich-Karl-Str. 46
D-44135 Dortmund
Tel.: +49 231 8805 61 13
Fax.: +49 231 8805 61 15

info@tde.de | www.tde.de

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Technical Data

The tML®- FO trunk cable is preterminated with MPO/MTP®connectors on both ends. The Cable is very slim and flexible. The end faces of the connectors are optimized by means of Lasercleaving and machine polish. The MPO/MTP®plug has a defined fiber hieght of 1 - 3.5µ. The max. adjacent fiber height difference is 0.2µm and for all fibers 0.3µm. All system components (modules, trunk cables and patch cords) are co-ordinated for the reaching of the performance particularly. The module is marked with sequential serial number and article number.

Cable	Round cable, loose tube, LSOH, orange
Connectors	MPO/MTP®Female Push Pull (grey)
Pin out	Crossover (TIA/EIA-568-B.1 Methode C)
Tests	Interferometer, Insertion Loss, Return Loss and Visual Final Inspection; all measured values are electronically archived
	QS-Managementsystem ISO 9001, ISO 14001 and TL 9000

xxx - stands for the cable length in meters (every length available)

FO Connectors

The end faces of the connectors are optimized by means of Lasercleaving and machine polish. The MPO/MTP® plug has a defined fiber height of 1 - 3.5µ. The max. adjacent fiber height difference is 0.2µm and for all fibers 0.3µm.

Connector

Type	MPO/MTP® Female Push Pull Locking (Beige)
Ferrule	12 Fiber MM Elite® ferrule, PPS
Boot colour	Black
Temperature range	-40°C to +75°C
Manufacturer	tde/US Conec

Optical Performance

Fiber	Type	Wavelength	Insertion loss typ.	Insertion loss max.	Return loss min.
50/125µ OM2	MPO/MTP®	850 nm	≤ 0.25 dB	0.45 dB	20 dB
62.5/125µ OM1	MPO/MTP®	850 nm	≤ 0.25 dB	0.45 dB	

FO Cables

Standards	EN 50173-5
	IEC 60794-2-20
	ISO/IEC 24764
Flame resistance	IEC 60332-1-2

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	IEC 60332-2-2
	IEC 60754-1
	IEC 60754-2
	IEC 61034

Cable construction

Type	IVH12G62.5-OM1
Loose tube	12 coated fibers within PVC-core tube
Fiber type	MM-OM2, 62.5/125µ, Corning
Strength members	Aramid yarn
Outer jacket	LSZH (Halogen free, low smoke, flame retardant thermoplastic compound)
Jacket color	Orange, RAL 2003
Identification	"t d e – IVH12G62-MPO LSZH" and sequential meter marking + Lot number

Physical properties

Outer diameter cable	3.0 ± 0.1 mm
Diameter PVC-core tube	1.8 ± 0.1 mm
Max. tensile load	300 N
Min. bending radius	30 mm
Temperature range (storage, installation, operation)	-20°C to +70°C

FO Fiber

Type	Corning 62.5/125µ OM1 multimode fiber
Manufacturer	Corning

Optical Specifications

Bandwidth	160/200 at 850 nm / 500 at 1300 nm
Attenuation	At 850 nm max. ≤ 3.0 dB/km At 1300 nm max. ≤ 0.7 dB/km
Numerical Aperture	0.275 ± 0.015

Dimensional Specifications

Core Diameter	62.5 ± 3.0 µm
Cladding Diameter	125.0 ± 2.0 µm
Core-Clad Concentricity	≤ 3.0 µm
Cladding Non-Circularity	< 2.0%
Core Non-Circularity	≤ 5.0%

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Coating Diameter	245 ± 5 µm
Coating-Cladding Concentricity	< 12 µm

Environmental Specifications

Enviromental Test	Test Condition	Induced Attenuation 850 nm and 1300 nm (dB/km)
Temperature Dependence	-60°C to +85°C	≤ 0.20
Temperature Humidity Cycling	-10°C to +85°C and 4% to 98% RH	≤ 0.20
Operating Temperature Range	-60°C to +85°C	

Mechanical Specifications

Proof Test	The entire fiber length is subjected to a tensile stress ≥ 100 kpsi (0.7 GN/m²).
Length	Fiber lengths available up to 17.6 km/spool.

Performance Characterizations

Refractive Index Difference	2%
Effective Group Index of Refraction	850 nm: 1.496 1300 nm: 1.491
Fatigue Resistance Parameter (nd)	20
Coating Strip Force	Dry: 0.6 lbs (2.7N) Wet: 14 days in 23°C water soak: 0.6 lbs (2.7N)
Cromatic Dispersion	Zero Dispersion Wavelength (λ0): 1332 nm ≤λ0 ≤ 1354 nm Zero Dispersion Slope (S0): ≤ 0.097 ps/(nm²*km)

Product variants & accessories

Art.-No.	Description
TML-MP/MP09I12Exxx	tML® - FO Micro Distribution Trunk Cable both sides 1x MPO/MTP® Female 12E9/125µ OS2 LSOH, Type C, Length: xxx
TML-MP/MP50I12G3-xxx	tML® - FO Micro Distribution Trunk Cable both sides 1x MPO/MTP® Female 12G50/125µ OM3 LSOH, Type C, Length: xxx
TML-MP/MP50I12G4-xxx	tML® - FO Micro Distribution Trunk Cable both sides 1x MPO/MTP® Female 12G50/125µ OM4 LSOH, Type C, Length: xxx
TML-MP/MP50I12Gxxx	tML® - FO Micro Distribution Trunk Cable both sides 1x MPO/MTP® Female 12G50/125µ OM2 LSOH, Type C, Length: xxx
TML-MP/MP62I12Gxxx	tML® - FO Micro Distribution trunk cable both sides 1x MPO/MTP® Female 12G62,5/125µ OM1 LSOH, Type C, Length: xxx