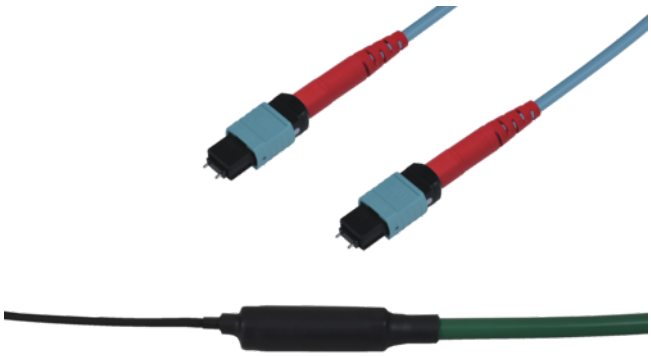
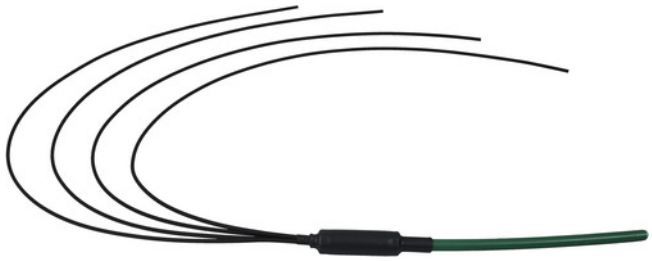
tML® 24 - FO Trunk Cable 3x 24F MPO w. Pins/3x 24F MPO w. Pins 72G50/125µ OM3 LSHF Type A, Length: xx in m





2x

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 trunk cable is intended for the connection of two tML®24 - FO Modules.

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tML® 24 - FO Trunk Cable 3x 24F MPO w. Pins/3x 24F MPO w. Pins 72G50/125µ OM3 LSHF Type A, Length: xx in m

Technical Data

The tML®- FO trunk cable is preterminated with MPO/MTP® connectors on both ends. 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 fan-out unit is optimized for tML® - Cable Mounting Bracket for Fan-out Units. The module is marked with sequential serial number and article number.

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® Male Push Pull Locking with Elite Pins (aqua)
Ferrule	24 Fiber MM Elite® ferrule, PPS
Boot colour	Red
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 OM3	MPO/MTP®	850 nm	≤ 0.20 dB	0.35 dB	25 dB

FO Fan-Out

Fan-out length	50 mm
Ø Fan-out	approx 16 - 19 mm
Ø Single unit	3.0 mm
Single unit length	78 ± 5 cm (not stepped)

FO Cables

Mechanical characteristics

Temperature range	Storage -25 to +70°C, IEC 60794-1-22 F1
	Pulling in -10 to +50°C
	Operation -25 to +60°C
Tensile performance	IEC 60794-1-21 E1
Crush resistance	IEC 60794-1-21 E3
Impact	IEC 60794-1-21 E4

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tML® 24 - FO Trunk Cable 3x 24F MPO w. Pins/3x 24F MPO w. Pins 72G50/125µ OM3 LSHF Type A, Length: xx in m

Repeated bending	IEC 60794-1-21 E6
Torsion	IEC 60794-1-21 E7
Bend	IEC 60794-1-21 E11
Water penetration	IEC 60794-1-22 F5

General characteristics

Sheath colour	green, similar to RAL 6016
Zero halogen, no corrosive gases	IEC 60754-1/-2, EN 60754-1/-2, VDE 0482-754-1/-2
Flame propagation	IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
Flame spread	IEC 60332-3-24, EN 50266-2-4, VDE 0482-266-2-4
Smoke density	IEC 61034-1/-2, EN 61034-1/-2, VDE 0482-1034-1/-2
Reaction to fire (Euroclasses)	EN 13501-6: E_{ca}

Cabletype	Universal U-DQ(ZN)BH for indoor and outdoor use
	non metallic, dry interstices, rodent protection, flame retardant, in accordance with IEC 60332.1 and IEC 60332.3 C
Fibertype	Corning G50/125 OM3
No. of fibers	72
Loose tube	6
Sheath ø	12.2 mm
Weight	164 kg/km
Bending radius	185 mm
Tensile load	6000 N
Crush resistance	3000 N continuous
	5000 N short term
Fire load	681 kWh/km
	2452 MJ/km

Length tolerances (prefabricated with plugs)

Tolerances for lengths up to 40m	± 100 cm
Tolerances for lengths up to 100m	± 100 cm
Tolerances for lengths from 100m	± 2%

FO Fiber

Optical properties

Attenuation typical (cabled)	850 nm: 2.5 / 1300 nm: 0.5 dB/km
Attenuation maximum (cabled)	850 nm: 2.7 / 1300 nm: 0.7 dB/km
OFL bandwidth as per TIA/EIA 455-204 and IEC 60793-1-41	850 nm: 3500 / 1300 nm: 500 MHz x km

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tML® 24 - FO Trunk Cable 3x 24F MPO w. Pins/3x 24F MPO w. Pins 72G50/125µ OM3 LSHF Type A, Length: xx in m

High-Performance EMB bandwidth as per TIA/EIA 455-220A and IEC 60793-1-49	850 nm: 4700 / 1300 nm: 4700 MHz x km
Refractive Index	850 nm: 1.480 / 1300 nm: 1.479

Technical properties

Bending radius		No. of windings (turns)	Max. induced attenuation
37.5 mm		100	850 nm: ≤ 0.05 / 1300 nm: ≤ 0.15 dB/km
15 mm		2	850 nm: ≤ 0.1 / 1300 nm: ≤ 0.3 dB/km
7.5 mm		2	850 nm: ≤ 0.2 / 1300 nm: ≤ 0.5 dB/km

Geometrical and mechanical characteristics

Numerical Aperture	0.200 +/- 0.015
Core Ø	50.0 +/- 2.5 µm
Maximum Core Non-Circularity	5 %
Cladding Ø	125.0 +/- 1.0 µm
Maximum Cladding Non-Circularity	1.0 %
Maximum Cladding/Core Concentricity Error	1.5 µm
Maximum Coating Concentricity Error	12 µm
Coating Ø	242 +/- 5 µm
Test load	100 kpsi

Product variants & accessories

Art.-No.	Description
TML-M2P/M2P50B24G3Axx	tML® 24 - FO Trunk Cable 1x 24F MPO w. Pins/1x 24F MPO w. Pins 24G50/125µ OM3 LSHF Type A, Length: xx in m
TML-M2P/M2P50B48G3Axx	tML® 24 - FO Trunk Cable 2x 24F MPO w. Pins/2x 24F MPO w. Pins 48G50/125µ OM3 LSHF Type A, Length: xx in m
TML-M2P/M2P50B72G3Axx	tML® 24 - FO Trunk Cable 3x 24F MPO w. Pins/3x 24F MPO w. Pins 72G50/125µ OM3 LSHF Type A, Length: xx in m
TML-M2P/M2P50B96G3Axx	tML® 24 - FO Trunk Cable 4x 24F MPO w. Pins/4x 24F MPO w. Pins 96G50/125µ OM3 LSHF Type A, Length: xx in m

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