tBL® - DIN rail splice housing MM 12x E2000 OM4, splice ready prepared



tBL® - tde Basic Link (FO Enclosures)

The FO enclosures of the tBL® - tde Basic Link series are optimized products with a high functionality and an easy handling at the installation. The program includes splice and breakout boxes for 19 inch, wall and DIN rail mounting. These products are characterized by a high port density and an optimal fiber management, so that the permissible bending radii can't be undercut. Moreover, there are no sharp corners or edges, to avoid damage to the pigtails and buffer tubes. The front plates are removable. There are versions for E2000, FC, PC, LC, MPO / MTP, MTRJ, MU, SC, and ST. These products can be obtained with or without equipment. In addition, there are also special versions with IP66 for outdoor and offshore applications.

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

 © tde GmbH, all rights reserved, errors excepted.

tBL® - DIN rail splice housing MM 12x E2000 OM4, splice ready prepared

Technical Data

Pre-mounted	12 E2000 adapters MM 12 E2000 Fiber pigtails 50/125µ OM4 2.0 meters tde attenuation class B, splice ready prepared 12 Crimp Splice protectors 1 Splice cassette 1 Splice holder 1 Cabel entry vertical 1 Mounting clip (for mounting on rail housing) 1 Gland M20 for cable entry
Alternative pre-mounted	TBL-H12-xxE2-50-4Pyz (see below)
xx	(01 - 12) quantity of adapters
y	(S)plice ready prepared
z	With(O)ut Crimp Splice protectors

FO DIN rail splice module

Housing	Alu-sheet, 1 mm
Dimensions	141.4 x 141 x 42.8 mm
Colour	powdered in RAL 9005 (black)

FO DIN rail splice module

Front panel	Alu-sheet
	incl. labeling strip
Configuration	Attachment up to 12x SC simplex or 12x E2000 Simplex adapters

FO Pigtails Premium

FO Connectors

Type	E2000
Ferrule	Ceramic
Ferrule Hole	126 µ
Connector colour	Black
Lever colour	Magenta
Boot colour	Black
Manufacturer	RDM

Optical performance

Fiber	Type	Wavelength	Insertion loss typ.	Insertion loss max.	Return loss min.
50/125µ OM4	E2000	850 nm	≤ 0.10 dB	0.30 dB	35 dB

© tde GmbH, all rights reserved, errors excepted.

tBL® - DIN rail splice housing MM 12x E2000 OM4, splice ready prepared

FO Cables

Tight Buffer	Low smoke (IEC 61034 and EN 50268) and free of halogens (LS0H)
	Non corrosive after IEC 60754-2 and EN 50267
	Flame resistent after IEC 60332-3C and EN 50266-2-4
	Completly dry design
	Free from metal, no grounding problems and potential differences
	Tight Buffer for simple and direct connector mounting

Characteristics

Fiber Count	1 (Tight Buffer)
Core-Ø	0.9 mm
Coreweight	1 kg/km
Min. Bending radius - Installation	30 mm
Min. Bending radius - Operation	30 mm
Removal	1500 mm
Fire load	0.15 MJ/m
Temperature range - Installation	-5 to +50°C
Temperature range - Operation	-20 to +60°C
Temperature range - Transport / Lagerung	-25 to +70°C

FO Fiber

Type	Corning ClearCurve® 50/125µ OM4 multimode fiber
Optimized Data Rate over Distance	40/100 Gb over 170 m* 10 Gb/s over 550 m 1 Gb/s over 1100 m
Standard Compliance	ISO/IEC 11801: type OM4 fiber** IEC 60793-2-10: type A1a.3 fiber** TIA/EIA: 492AAAD ITU: ITU G651.1
*	Distances specified in the 40G/100G per IEEE 802.3ba standard are 150m on OM4 and 100m on OM3; Corning fibers are manufactured to tighter dispersion specifications and thereby support the extended distances shown in the table (assuming cable attenuation ≤3.0 dB/km and same 1.0 dB of connector loss for OM3 that the standard requires for OM4)
**	Assumes IEC draft standard is harmonized with 492AAAD which was approved by TIA

Optical Specifications

Bandwidth	High Performance EMB* (MHz.km): 4700 at 850 nm only Legacy Performance EMB** (MHz.km): 3500 at 850 nm / 500 at 1300 nm
Attenuation	At 850 nm max. ≤ 2.3 dB/km At 1300 nm max. ≤ 0.6 dB/km
Macrobend Loss	Mandrel Radius (mm): 37.2 / 15 / 7.5 Number of Turns: 100 / 2 / 2 Induced Attenuation (dB) at 850 nm: ≤ 0.05 / ≤ 0.1 / 0.2 Induced Attenuation (dB) at 1300 nm: ≤ 0.15 / ≤ 0.3 / ≤ 0.5

© tde GmbH, all rights reserved, errors excepted.

tBL® - DIN rail splice housing MM 12x E2000 OM4, splice ready prepared

Numerical Aperture	0.200 ± 0.015
*	Ensured via miniEMBc, per TIA/EIA 455-220A and IEC 60793-1-49, for high performance laser-based systems (up to 10Gb/s)
**	OFL BW, per TIA/EIA 455-204 and IEC 60793-1-41, for legacy and LED-based systems (typically up to 100 Mb/s)

Dimensional Specifications

Core Diameter	50.0 ± 2.5 µm
Cladding Diameter	125.0 ± 1.0 µm
Core-Clad Concentricity	≤ 1.5 µm
Cladding Non-Circularity	≤ 1.0%
Core Non-Circularity	≤ 5.0%
Coating Diameter	242 ± 5 µm
Coating-Cladding Concentricity	< 12 µm

Environmental

Enviromental Test	Test Condition	Induced Attenuation 850 nm & 1300 nm (dB/km)
Temperature Dependence	-60°C to +85°C	≤ 0.10
Temperature Humidity Cycling	-10°C to +85°C and 4% to 98% RH	≤ 0.10
Water Immersion	23°C ± 2°C	≤ 0.20
Heat Aging	85°C ± 2°C	≤ 0.20
Damp Heat	85°C at 85% 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	1%
Effective Group Index of Refraction	850 nm: 1.480 1300 nm: 1.479
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 (λ_0): 1295 nm ≤λ_0≤ 1315 nm Zero Dispersion Slope (S_0): ≤ 0.101 ps/(nm²*km)

FO Splice Accessories

Type	splice cassette for DIN rail splice housing

© tde GmbH, all rights reserved, errors excepted.

tBL® - DIN rail splice housing MM 12x E2000 OM4, splice ready prepared

Material	sheet steel
Colour	powdered in RAL 9005 (black)
Configuration	uo to 2x 12 splices

FO Splice Accessories

Type	FO Splice holder for 12 x Crimp splice protectors
Dimensions	40 x 26 x 6 mm
Material	Bright ABS, similar RAL 1013

FO Splice Accessories

Type	Crimp splice protector
Dimensions	31 x 3 x 1 mm

Product variants & accessories

Art.-No.	Description
TBL-H12-12E2-50-3PS	tBL® - DIN rail splice housing MM 12x E2000 OM3, splice ready prepared
TBL-H12-12E2-50-4PS	tBL® - DIN rail splice housing MM 12x E2000 OM4, splice ready prepared
TBL-H12-12E2A9APS	tBL® - DIN rail splice housing SM 12x E2000 APC OS2, splice ready prepared

© tde GmbH, all rights reserved, errors excepted.