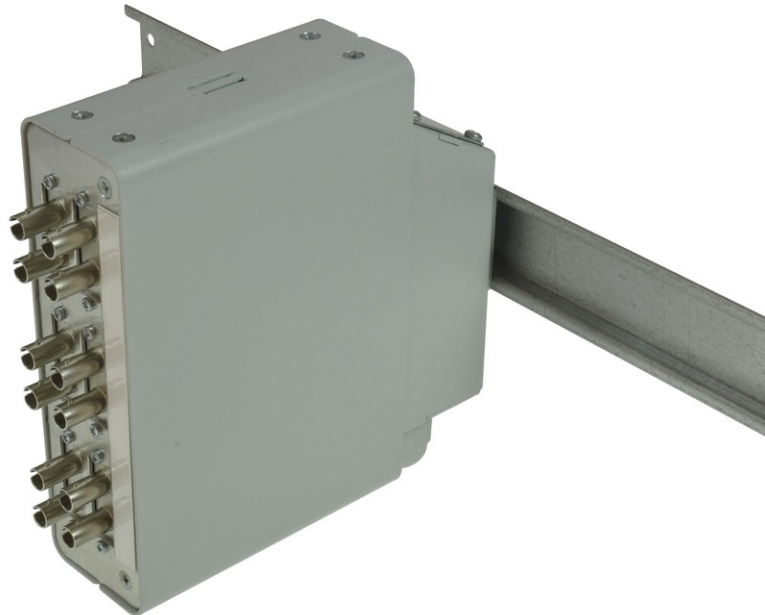


tBL<sup>®</sup> - DIN rail splice housing SM 3x ST Duplex OS2, splice ready prepared



## tBL<sup>®</sup> - tde Basic Link (FO Enclosures)

The FO enclosures of the tBL<sup>®</sup> - 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<sup>®</sup>** 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

|                         |   |
|-------------------------|---|
| Pre-mounted             | 3 ST duplex adapters SM<br>6 ST Fiber pigtails 9/125µ OS2 2.0 meters 12 x Colors, splice ready prepared<br>6 Crimp Splice protectors<br>1 Splice cassette<br>1 Splice holder<br>1 Cable entry vertical<br>1 Mounting clip (for mounting on rail housing)<br>1 Gland M20 for cable entry |
| Alternative pre-mounted | TBL-H06-xxSTD9yz (see below)  |
| xx                      | (01 - 06) 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 6x SC Duplex, 6x LC Quad (6x LCD), 6x ST Duplex adapters |

## FO Adapters

|                 |                         |
|-----------------|-------------------------|
| Typ             | ST Duplex               |
| Application     | Singlemode/Multimode    |
| Design          | with flange             |
| Connector style | ST Duplex               |
| Material        | Metal                   |
| Sleeve          | Zirconia Straight Split |
| Shutter         | --                      |
| Manufacturer    | tde                     |

## FO Pigtails Standard

### FO Connectors

|                |                         |
|----------------|-------------------------|
| Connector Type | ST                      |
| Housing        | Metal                   |
| Ferrule        | Zirconia Straight Split |
| Ferrule Hole   | 125.5 µ                 |

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|                       |                   |
|-----------------------|-------------------|
| Ferrule Concentricity | ≤ 0.6 μ           |
| Mating Cycles         | 500               |
| Operating Temperature | -40°C up to +75°C |
| Strain Relief to      | 150 N             |
| Manufacturer          | tde               |

### Optical performance

| Fiber  | Type | Wavelength | Insertion loss typ. | Insertion loss max. | Return loss min. |
|--------|------|------------|---------------------|---------------------|------------------|
| 9/125μ | ST   | 1550 nm    | ≤ 0.20 dB           | 0.45 dB             | 45 dB            |

### FO Cables

|              |  |
|--------------|--|
| Tight Buffer | Low smoke (IEC 61034 and EN 50268) and free of halogens (LSOH)   |
|              | Non corrosive after IEC 60754-2 and EN 50267                     |
|              | Flame resistant after IEC 60332-3C and EN 50266-2-4              |
|              | Completely 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 Ultra SMF-28 <sup>®</sup> 09/125μ OS2 singlemode fiber   |
| Maximum Attenuation        | At 1310 nm max. 0.32 dB/km<br>At 1383 nm max. 0.32 dB/km<br>At 1490 nm max. 0.21 dB/km<br>At 1550 nm max. 0.18 dB/km<br>At 1625 nm max. 0.20 dB/km |
| Attenuation vs. Wavelength | Range: 1285 - 1330 nm; Ref. λ: 1310 nm; Max. Difference: 0.03 dB/km<br>Range: 1525 - 1575 nm; Ref. λ: 1550 nm; Max. Difference: 0.02 dB/km         |

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|   |   |
|---|---|
| Macrobend Loss                              | Mandrel Radius: 10mm; Number of Turns: 1; Wavelength: 1550nm; Induced Attenuation: ≤ 0.50 dB<br>Mandrel Radius: 10mm; Number of Turns: 1; Wavelength: 1625nm; Induced Attenuation: ≤ 1.5 dB<br>Mandrel Radius: 15mm; Number of Turns: 10; Wavelength: 1550nm; Induced Attenuation: ≤ 0.05 dB<br>Mandrel Radius: 15mm; Number of Turns: 10; Wavelength: 1625nm; Induced Attenuation: ≤ 0.30 dB<br>Mandrel Radius: 25mm; Number of Turns: 100; Wavelength: 1310nm, 1550nm, 1625nm; Induced Attenuation: ≤ 0.01 dB |
| Point Discontinuity                         | Wavelength: 1310 nm; Point Discontinuity: ≤ 0.05 dB<br>Wavelength: 1550 nm; Point Discontinuity: ≤ 0.05 dB  |
| Cable Cutoff Wavelength ( $\lambda_{ccf}$ ) | $\lambda_{ccf} \leq 1260$ nm  |
| Mode-Field Diameter                         | At 1310 nm = $9.2 \pm 0.4$ $\mu$ m<br>At 1550 nm = $10.4 \pm 0.5$ $\mu$ m   |
| Dispersion                                  | At 1550 nm = ≤ 18.0 [ps/(nm*km)]<br>At 1625 nm = ≤ 22.0 [ps/(nm*km)]  |
|   | Zero Dispersion Wavelength ( $\lambda_0$ ): 1304 nm ≤ $\lambda_0$ ≤ 1324 nm<br>Zero Dispersion Slope ( $S_0$ ): ≤ 0.092 ps/(nm <sup>2</sup> *km)  |
| Polarization Mode Dispersion (PMD)          | PMD Link Design Value = ≤ 0.04 ps/√km<br>Maximum Individual Fiber = ≤ 0.1 ps/√km  |

### Dimensional Specifications

|                                |                             |
|--------------------------------|-----------------------------|
| Fiber Curl                     | ≥ 4.0 m radius of curvature |
| Cladding Diameter              | 125.0 ± 0.7 $\mu$ m         |
| Core-Clad Concentricity        | ≤ 0.5 $\mu$ m               |
| Cladding Non-Circularity       | ≤ 0.7%                      |
| Coating Diameter               | 242 ± 5 $\mu$ m             |
| Coating-Cladding Concentricity | < 12 $\mu$ m                |

### Environmental Specifications

| Environmental Test           | Test Condition              | Induced Attenuation 1310 nm, 1550 nm & 1625 nm |
|------------------------------|-----------------------------|--|
| Temperature Dependence       | -60°C to +85°C              | ≤ 0.05   |
| Temperature Humidity Cycling | -10°C to +85°C up to 98% RH | ≤ 0.05   |
| Water Immersion              | 23°C ± 2°C                  | ≤ 0.05   |
| Heat Aging                   | 85°C ± 2°C                  | ≤ 0.05   |
| Operating Temperature Range  | -60°C to +85°C              |  |

### Mechanical Specifications

|            |   |
|------------|---|
| Proof Test | The entire fiber length is subjected to a tensile stress ≥ 100 kpsi (0.69 GPa). |
| Length     | Fiber lengths available up to 63.0 km/spool.                                    |

### Performance Characterizations

|                                     |                                    |
|-------------------------------------|------------------------------------|
| Core Diameter                       | 8.2 $\mu$ m                        |
| Numerical Aperture                  | 0.14                               |
| Effective Group Index of Refraction | 1310 nm: 1.4676<br>1550 nm: 1.4682 |

## tBL<sup>®</sup> - DIN rail splice housing SM 3x ST Duplex OS2, splice ready prepared

|  |  |
|--|--|
| Fatigue Resistance Parameter (nd)                          | 20   |
| Coating Strip Force  | Dry: 0.6 lbs (3N)<br>Wet: 14 days room temperature: 0.6 lbs (3N) |
| Rayleigh Backscatter Coefficient<br>(for 1 ns Pulse Width) | 1310 nm: -77 dB<br>1550 nm: -82 dB                               |

### FO Splice Accessories

|               |   |
|---------------|---|
| Type          | splice cassette for DIN rail splice housing |
| Material      | sheet steel                                 |
| Colour        | powdered in RAL 9005 (black)                |
| Configuration | up 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          |

|            |             |
|------------|-------------|
| Type       | Cable tie   |
| Dimensions | 75 x 2.5 mm |

|             |                                      |
|-------------|--------------------------------------|
| Type        | FO Blind stopper                     |
| Application | For covering of unused adapter slots |

### FO Splice Accessories

|       |                 |
|-------|-----------------|
| Type  | Cable gland M20 |
| Color | light grey      |

|       |                             |
|-------|-----------------------------|
| Type  | Locknut for cable gland M20 |
| Color | light grey                  |

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## FO DIN rail splice module

|        |          |
|--------|----------|
| Colour | Alu-zinc |
|--------|----------|

## FO DIN rail splice module

|        |      |
|--------|------|
| Colour | zinc |
|--------|------|

## FO DIN rail splice module

|         |                     |
|---------|---------------------|
| Colour  | Alu-zinc            |
| Opening | for 1x M20 (PG13.5) |

## Product variants & accessories

| Art.-No.           | Description   |
|--------------------|---|
| TBL-H06-03STD50-3S | tBL® - DIN rail splice housing MM 3x ST Duplex OM3, splice ready prepared |
| TBL-H06-03STD50-4S | tBL® - DIN rail splice housing MM 3x ST Duplex OM4, splice ready prepared |
| TBL-H06-03STD50S   | tBL® - DIN rail splice housing MM 3x ST Duplex OM2, splice ready prepared |
| TBL-H06-03STD62S   | tBL® - DIN rail splice housing MM 3x ST Duplex OM1, splice ready prepared |
| TBL-H06-03STD9S    | tBL® - DIN rail splice housing SM 3x ST Duplex OS2, splice ready prepared |