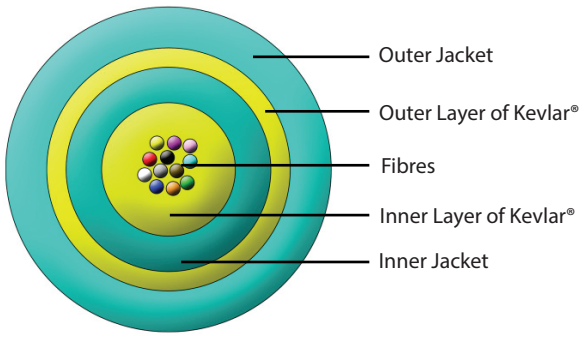
# MTP® Tuff Trunk Assemblies

MTP® Tuff Trunk Cable Assemblies are of a Robust Double Jacket construction, designed for longer length trunk patching.
Incredibly, the provision of a second jacket benefits the cable by an additional 500N of crush resistance to an overall total of 1000N.
The cables retain their compactness with only 4.7mm O.D for 12f and 5.4mm for the 24f version. . These cables are packed with Kevlar® which provides the necessary endurance for routing and patching purposes, providing links between Comms Rooms or Data Centres.




Only genuine MTP® connectors are fitted to our cables with Elite MT ferrule for those applications requiring the highest performance. These connectors provide exceptional benefits over the conventional MPO connectors, including patented floating ferrule design, patented elliptical, high precision guide pins and removable housing allowing rapid gender change and reversing polarity. Tuff Trunk assemblies are manufactured in our state-of-the-art facility utilising equipment recommended by and personnel trained by US Conec.

The MTP® Tuff Trunk assemblies facilitate rapid deployment of high density backbone cabling in data centres and other high fibre count environments, reducing network installation or reconfiguration time and cost. They are used to interconnect cassettes, panels or ruggedised MTP® Harness links.

## Features & Benefits

- Exceptionally High Density Connectors – Up to 24f in a traditional SC Simplex adapter footprint
- Higher Density Population reduces the overall cost of 1U Spacing
- Rapid deployment modular system saving overall installation and maintenance time
- Multimode OM3, enhanced OM4 and OS2 fibre grades with a LSZH jacket
- Removable housing for field change of polarity and gender (seperate tool required)
- MTP® patented elliptical guide pins are key to accurate mating alignment and determine the gender or the connector; male or female
- The oval spring provides greater fibre clearance and seats into the connector body eliminating possible trapping/breakages of bare fibre
- High Spring Force (HSF) MTP® connectors ensuring uniform alignment across 24x lanes and optimising the physical contact
- Choosing MTP® Elite provides performance for the most stringent of optical loss budget environments
- 100% interferometric testing for all MTP® Connectors to verify end-face geometry conformity and subsequent low losses
- Fully compatible with all MPO connectivity and QSFP+ mated interface solutions with the same fibre count

## Specification

| ELEMENT | CHARACTERISTIC |
|---|---|
| Fibre (ISO/IEC 60793) | OS2 = Yellow OM3 + OM4 = Aqua |
| Cable (LSZH) | 12F - 3.2mm Inner Jacket, 4.7mm OD<br>24F - 3.8mm Inner Jacket, 5.4mm OD |
| Housing (US Conec) | Multimode Elite = Aqua,<br>Single-mode Elite = Mustard |
| Crush Resistance | 1000N |
| Operation Temperature | -40 ~ +80°C |

## Industry Standards Compliance

- Colour coding compliant to TIA/EIA-568-C.3 & ISO/IEC11801
- Connector specification to IEC-61754-7 & EIA/TIA-604-5
- LSZH jacket materials to IEC 60332 Parts 1 & 3
- Compliant to Directive 2002/95/EC (RoHS) and REACH SvHC
- The geometrical characteristics compliant to IEC-60793
- End Face Cleanliness compliant to IEC 61300-3-35

## Application

- Data Centre Infrastructure
- Storage Area Network – Fibre Channel
- Parallel Optics
- 40Gbps, 100Gbps and emerging 400Gbps Protocols

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Lite Linke MTP® Elite Solutions

# Optical Fibre Specifications

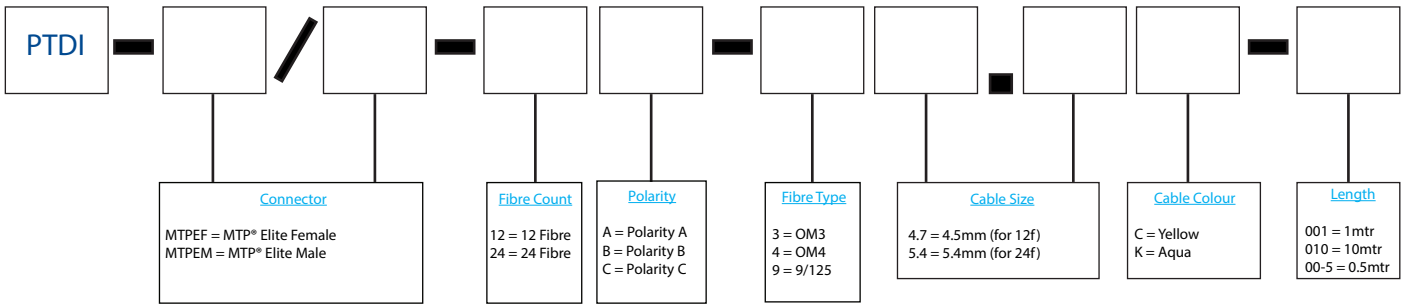
## Multimode Fibres

| **Multimode Fibres**<br><br>**IEC 60793-2**<br>**ISO/IEC 11801**<br>**EN 50173 -1&2** | Overall Bandwidth (MHz x km) | | Max. Link Length for 1 GBit/s (m) | | Max. Link Length for 10 GBit/s (m) | | Fibre Attenuation (dB/km) | |
|---|---|---|---|---|---|---|---|---|
| | 850nm | 1300nm | 850nm (1000Base-SX) | 1300nm (1000Base-LX) | 850nm (10GBase-SR) (10GBase-SW) | 1300nm (10GBase-LX4) | 850nm | 1300nm |
| **50/125 um** | | | | | | | | |
| OM3 | ≥1500 | ≥500 | 1000 | 600 | 300 | 300 | ≤2.7 | ≤0.7 |
| OM4 Laser Optimised | ≥3500 | ≥500 | 1000 | 600 | 550 | 300 | ≤2.7 | ≤0.7 |

## Single-mode Fibres

| **Single-mode Fibres**<br><br>**IEC 60793-2**<br>**ISO/IEC 11801**<br>**EN 50173 -1&2** | Chromatic Dispersion | | Cut-off-Wave Length (cabled) (nm) | Point Discontinuity (dB) | Fibre Attenuation (dB/km) | | | Fibre Geometrical Properties (um) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1310nm | 1550nm | | | 1310nm | 1380-1386nm | 1550nm | Mode-field | Cladding | Coating |
| **9/125 um** | | | | | | | | | | |
| OS2(ITU-T G.652.D) | ≥3.5 | ≥18.0 | ≥1260 | ≤0.1 | ≤0.34 | ≤0.31 | ≤0.22 | 9.2 ±0.4 | 125 ±1 | 245 ±5 |
| OS2 (G.657.A2) | ≥3.7 | ≥18.5 | ≥1260 | ≤0.1 | ≤0.38 | ≤0.35 | ≤0.25 | 8.8 ±0.4 | 125 ±1 | 245 ±5 |

## Part Numbering Format

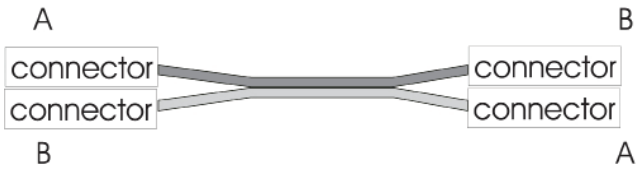


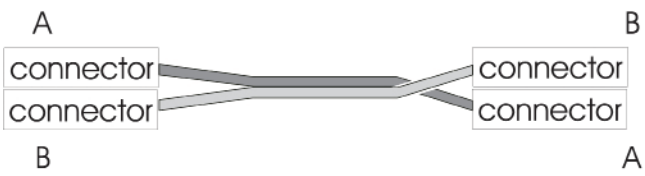

E.G. Tuff Trunk - 2mtr MTP® Elite Male - MTP® Elite Female Double Jacketed 12f OM4 Aqua Method A = PTDI-MTPEM/MTPEF-12A-44.7K-002

## Connectivity Methods

All the connectivity methods shown here have the same purpose: to ensure that the transmit port of one device is connected to the receive port on another device. Each method requires a specific combination for components to maintain the system polarity. These are outlined in the below table.

| Method | Connector Type | Adapter Type | Patch Cord Type |
|---|---|---|---|
| A | MTP® | Key Up - A - Key Down | One A-to-B and One A-to-A |
| B | MTP® | Key Up - B - Key Up | A-to-B |
| C | MTP® | Key Up - A - Key Down | A-to-B |




## MTP® Connector Performance

| Connector Mating | IL Typical | IL Max | Return Loss |
|---|---|---|---|
| MTP® Multimode Elite | 0.10dB | 0.35dB | >30dB |
| MTP® Single-mode Elite | 0.10dB | 0.35dB | >60dB |

## Certificates

USCONEC Certified & Trained

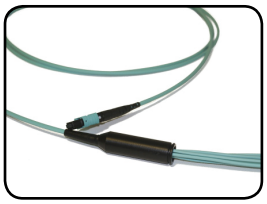
ISOQAR REGISTERED UKAS MANAGEMENT SYSTEMS 0026
Certificate Number 3927
ISO 9001:2008

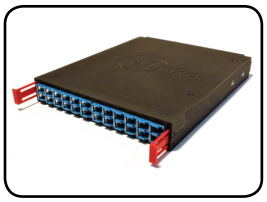
FIA The Fibreoptic Industry Association CORPORATE MEMBER

MTP® is a Registered Trademark of US Conec

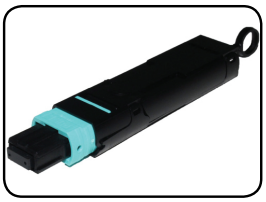
Kevlar® is a Registered Trademark of Dupont ™

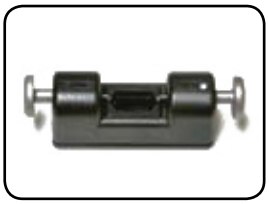
## Available Accessories


MTP® Harness Assemblies

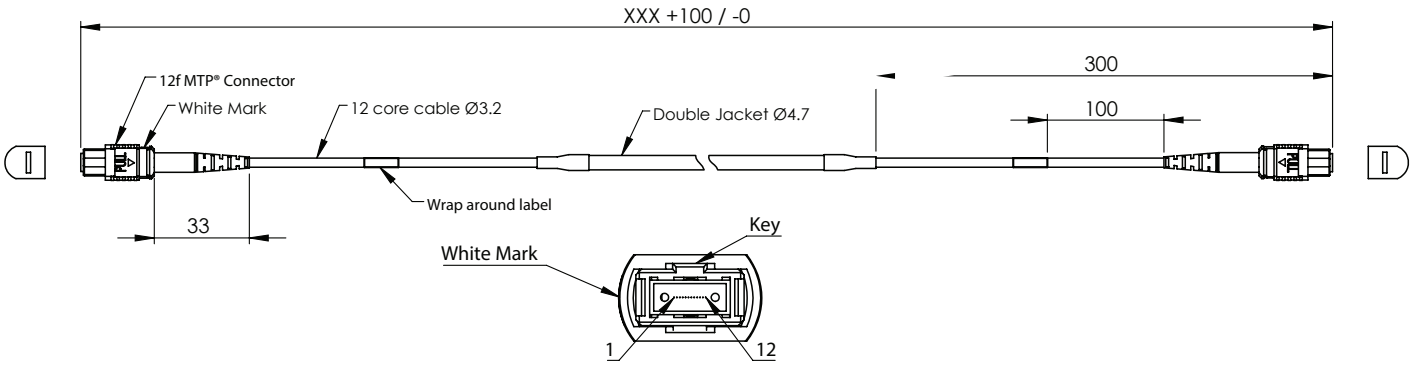

MTP® Containment Solutions


MTP® Cleaning Solutions


MTP® Testing Assemblies


MTP® Housing Removal Tool

## MTP® Tuff Trunk 12f Methods

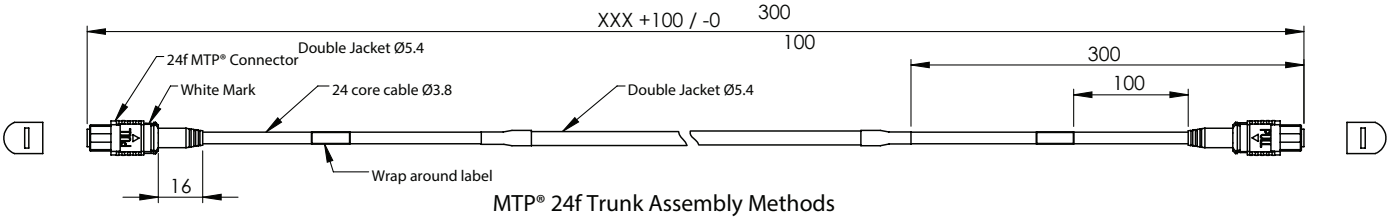



| Method A | | |
|---|---|---|
| Colour | Fibre # | Colour |
| Blue | 1 | Blue |
| Orange | 2 | Orange |
| Green | 3 | Green |
| Brown | 4 | Brown |
| Slate | 5 | Slate |
| White | 6 | White |
| Red | 7 | Red |
| Black | 8 | Black |
| Yellow | 9 | Yellow |
| Violet | 10 | Violet |
| Pink | 11 | Pink |
| Aqua | 12 | Aqua |

| Method B | | |
|---|---|---|
| Colour | Fibre # | Colour |
| Blue | 1 | Aqua |
| Orange | 2 | Pink |
| Green | 3 | Violet |
| Brown | 4 | Yellow |
| Slate | 5 | Black |
| White | 6 | Red |
| Red | 7 | White |
| Black | 8 | Slate |
| Yellow | 9 | Brown |
| Violet | 10 | Green |
| Pink | 11 | Orange |
| Aqua | 12 | Blue |

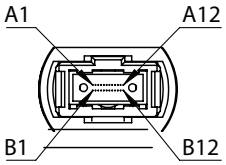
| Method C | | |
|---|---|---|
| Colour | Fibre # | Colour |
| Blue | 1 | Orange |
| Orange | 2 | Blue |
| Green | 3 | Brown |
| Brown | 4 | Green |
| Slate | 5 | White |
| White | 6 | Slate |
| Red | 7 | Black |
| Black | 8 | Red |
| Yellow | 9 | Violet |
| Violet | 10 | Yellow |
| Pink | 11 | Aqua |
| Aqua | 12 | Pink |

## MTP® Tuff Trunk 24f Methods




### MTP® 24f Trunk Assembly Methods

| Method A (Crossed) | | |
|---|---|---|
| Row A | Colour | Row B |
| A1 | Blue | B1 |
| A2 | Orange | B2 |
| A3 | Green | B3 |
| A4 | Brown | B4 |
| A5 | Slate | B5 |
| A6 | White | B6 |
| A7 | Red | B7 |
| A8 | Black | B8 |
| A9 | Yellow | B9 |
| A10 | Violet | B10 |
| A11 | Pink | B11 |
| A12 | Aqua | B12 |
| B1 | - Blue - | A1 |
| B2 | - Orange - | A2 |
| B3 | - Green - | A3 |
| B4 | - Brown - | A4 |
| B5 | - Slate - | A5 |
| B6 | - White - | A6 |
| B7 | - Red - | A7 |
| B8 | - Black - | A8 |
| B9 | - Yellow - | A9 |
| B10 | - Violet - | A10 |
| B11 | - Pink - | A11 |
| B12 | - Aqua - | A12 |




| Method B (Straight) | | |
|---|---|---|
| Row A | Colour | Row B |
| A1 | Blue | A1 |
| A2 | Orange | A2 |
| A3 | Green | A3 |
| A4 | Brown | A4 |
| A5 | Slate | A5 |
| A6 | White | A6 |
| A7 | Red | A7 |
| A8 | Black | A8 |
| A9 | Yellow | A9 |
| A10 | Violet | A10 |
| A11 | Pink | A11 |
| A12 | Aqua | A12 |
| B1 | - Blue - | B1 |
| B2 | - Orange - | B2 |
| B3 | - Green - | B3 |
| B4 | - Brown - | B4 |
| B5 | - Slate - | B5 |
| B6 | - White - | B6 |
| B7 | - Red - | B7 |
| B8 | - Black - | B8 |
| B9 | - Yellow - | B9 |
| B10 | - Violet - | B10 |
| B11 | - Pink - | B11 |
| B12 | - Aqua - | B12 |