



**Achieve up to 80% front panel space savings with multiple break-out cable assembly options**

Molex is a leader in providing innovative break-out cable assemblies to meet the high density requirements of the telecommunication and datacommunication industry. The extensive line of break-out boxes, break-out tubes and MTP\* break-out assemblies provides customers the flexibility to select the best transition method to meet their specific application while optimizing real-estate space savings.

**Version 1: Break-out boxes and tubes**

Break-out boxes and tubes are the traditional method that allows a spliceless transition between ribbon fiber and discrete fibers. The break-out box ensures optical integrity without the use of bulky splice sleeves.

**Version 2: MTP break-out connector**

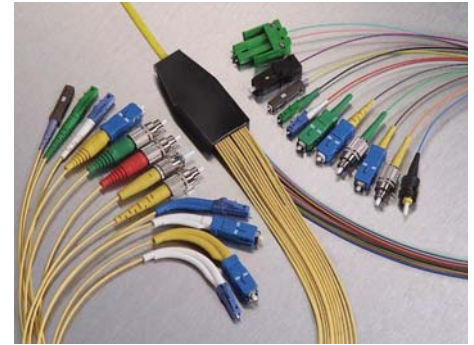
The MTP break-out connector eliminates the use of break-out boxes or tubes, resulting in valuable card space savings. The break-out from ribbon fiber to discrete fiber occurs in the crimp area of the standard MTP connector, providing additional flexibility when routing discrete fibers on the line card.

**Features and Benefits**

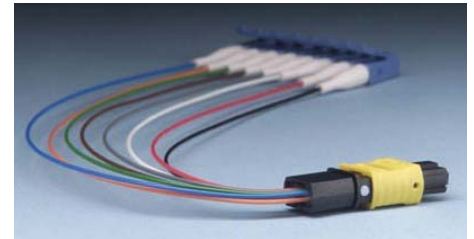
- Break-out boxes sized to fiber count ensures minimal size to reduce real estate required for mounting
- Flat or round break-out transition systems allow multiple mounting options
- 900µm Hytrel<sup>†</sup> discrete fiber leads are ideal for board-level use where minimal size and ease-of-routing are critical
- 1. 60mm to 3.00mm up-jacketed leads available with Kevlar<sup>‡</sup> are ideal for system interconnect where ruggedized leads are required

Both versions of break-out assemblies provides up to 80% space savings on the front-panel and can reduce the system costs by up to 25%. For example, up to 12 Small Form-factor (SFF) transceivers mounted on a line card can transition to a single MTP connector mounted on the front panel, versus transitioning to 24 LC connectors or 12 duplex LC connectors.

Molex's extensive line of spliceless single fiber and ribbon fiber cable assemblies provides numerous design options. Break-outs to single-fiber leads terminated with industry standard LC, MU, FC, SC and ST connectors are available to connect with the current installed base of transmitters, receivers and patch panels. Break-outs to ribbon fiber leads terminated to MTP, HBMT™ and BMTP™ connectors provide high-density panel mount and backplane solutions.



**24-Fiber break-out box to various single-fiber connectors**



**MTP-to-LC break-out assembly**

**SPECIFICATIONS**

**Reference Information**

Packaging: Custom per assembly  
 Specifications: MTP connector break-out assemblies and 900µm MT based break-out box and tube assemblies meet GR-2866 CORE specifications

**Optical**

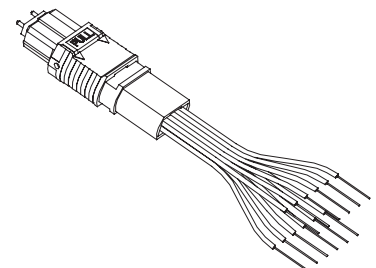
Insertion Loss (IL):  
 Dependent upon connector choice  
 Reference the respective single-fiber or ribbon-fiber connector data sheet

**Mechanical**

Operating Temperature: -5 to +70°C

**Physical**

Dependent on break-out construction

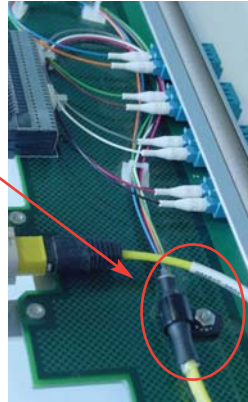


**MTP break-out connector with 900µm tubing**

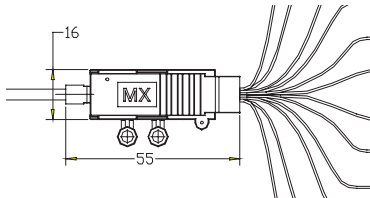
\*MTP is a registered trademark of US Conec Ltd.  
 † ‡ Hytrel and Kevlar are registered trademarks of DuPont

- Telecommunication Equipment
  - Hubs
  - Servers
- Datacommunication Equipment
  - Line cards

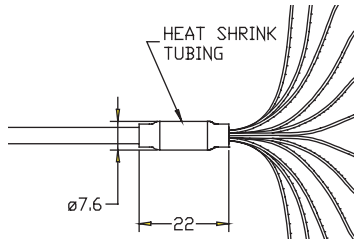
8-Fiber MTP assembly broken out to 8 LC connectors through a tube



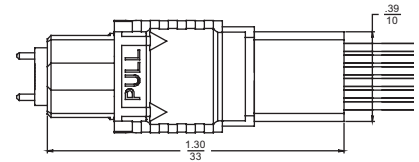
## BREAK-OUT VERSIONS



Bare-Ribbon Break-Out Box



Bare-Ribbon Break-Out Tube



MTP Break-Out Connector

## ORDERING INFORMATION

Order No.	Break-Out Component	No. of Fibers	Ribbon Type	Transition Design	Discrete Fiber Furcation Tube	Dimensions W x L x H (mm) OF Diameter (Ø) x L(mm)			
86085-0000	MTP Connector	4 to 12	-	MPO	900µm	10.00 x 33.00 x 5.70			
86000-0061	Standard Box		Bare	Flat Stackable		16.00 x 55.00 x 5.00			
86000-0060				Flat without Stacking Tabs		16.00 x 55.00 x 5.00			
86000-0062	Jacketed Box		Jacketed	Flat		18.00 x 52.00 x 7.00			
86000-0064	Tube		Bare or Jacketed	Jacketed	Round Tube	1.60 or 2.00mm	Ø 7.60 x 22.00		
86000-0065						3.00mm	Ø9.00 to Ø14.70 x 70.00		
86000-0065						13 to 24	Jacketed	1.60mm	Ø12.00 x 70.00
86000-0065								2.00mm	Ø15.00 x 70.00
86000-0063		24-Fiber Box				24	-	Flat	900µm or 1.60mm

**Notes:**  
 -The information above is for provided for reference only.  
 -Molex does not sell break-out box components as individual components; they are only sold as part of a terminated jumper or pigtail.

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