

# FHU Base-8 MTP®-LC Cassettes

High-density Pre-terminated Modular System



## Application

The FHU 1U 19" 96-fiber breakout cassette is pre-terminated, factory-tested, and designed for rapid deployment in high-density environments. It accommodates 96 fiber connections within 1U and installs directly into standard 19" telecommunications racks, improving space efficiency and reducing installation time. Using 12-fiber MTP®-8 trunks, the cassette maps 40G/100G QSFP ports on the rear to 24 LC quad ports on the front for 10G/25G device connections. Fully compliant with TIA/EIA and IEC standards, it delivers reliable performance and is suitable for cross-connect applications in main, horizontal, and equipment distribution areas.

## Features

- US Conec MTP® adapter and bend insensitive fiber for stable connectivity.
- Seamless integration with all standard EIA 19" rack rails for one-time installation.
- Up to 96 fiber connections in 1U for optimizing space utilization.
- Detachable rear cable manager makes cables maintain proper slacking and Spooling.
- Easy front and rear access for efficient installation and removal of external fibers.
- Pre-terminated modular cassette provides improved reliability and quick deployment.
- A method B link can be built using a combination of universal and universal cassettes.
- Indoor enterprise building cabling systems for 40/100G network deployments.

## Standards Compliance

- TIA-942 data center design guidelines
- ANSI/TIA-568.3-D
- ANSI/TIA-604-5 for connector intermateability
- RoHS 2011/65/EU

## Product Constructions

|                    |                                                                                                                |
|--------------------|----------------------------------------------------------------------------------------------------------------|
| Fiber Count        | 96                                                                                                             |
| Fiber Mode         | Single Mode: OS2 9/125µm<br>Multimode: OM4 50/125µm                                                            |
| Front Connector    | Single Mode: LC Quad<br>Multimode: LC Quad                                                                     |
| Rear Connector     | Single Mode: MTP® Adapter(s) with Male Ferrules (pins)<br>Multimode: MTP® Adapter(s) with Male Ferrules (pins) |
| Body Material      | Aluminium (AL5052)                                                                                             |
| Sleeves Material   | Zirconia Ceramic                                                                                               |
| Housing Type       | Cassette                                                                                                       |
| Dimensions (HxWxD) | 1.73"x19"x10.3" (44x482x261.2mm)                                                                               |

## Environmental Properties

|                       |                             |
|-----------------------|-----------------------------|
| Operating Temperature | -20 to 60°C (-4 to 140°F )  |
| Storage Temperature   | -40 to 70°C (-40 to 158°F ) |

## Performance Properties

|                        |                                                                          |
|------------------------|--------------------------------------------------------------------------|
| Polarity               | Universal                                                                |
| Insertion Loss (Front) | Single Mode: LC UPC ≤0.2dB<br>Multimode: LC UPC ≤0.2dB                   |
| Insertion Loss (Rear)  | Single Mode: MTP® Ultra Low ≤0.35dB<br>Multimode: MTP® Ultra Low ≤0.35dB |
| Return Loss (Front)    | Single Mode: LC ≥50dB<br>Multimode: LC ≥30dB                             |
| Return Loss (Rear)     | Single Mode: MTP® ≥60dB<br>Multimode: MTP® ≥20dB                         |
| Polish Type (Front)    | Single Mode: LC (UPC)<br>Multimode: LC (UPC)                             |
| Polish Type (Rear)     | Single Mode: MTP® (APC)<br>Multimode: MTP® (UPC)                         |
| Durability (Front)     | LC 1000 Mating Cycles                                                    |
| Durability (Rear)      | MTP® 500 Mating Cycles                                                   |

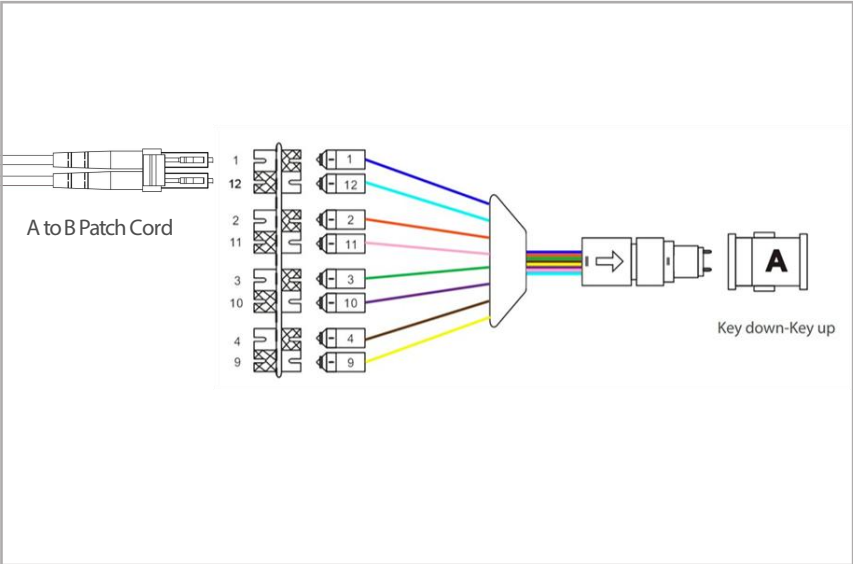
## Polarity Illustration

### I. MTP® -8 Cassette, Universal



| GROUP 1       |    |    |
|---------------|----|----|
| Port Labeling | 11 | 3  |
|               | 2  | 10 |
|               | 12 | 4  |
|               | 1  | 9  |

| GROUP 1        |    |    |
|----------------|----|----|
| Inner Sequence | 11 | 3  |
|                | 2  | 10 |
|                | 12 | 4  |
|                | 1  | 9  |

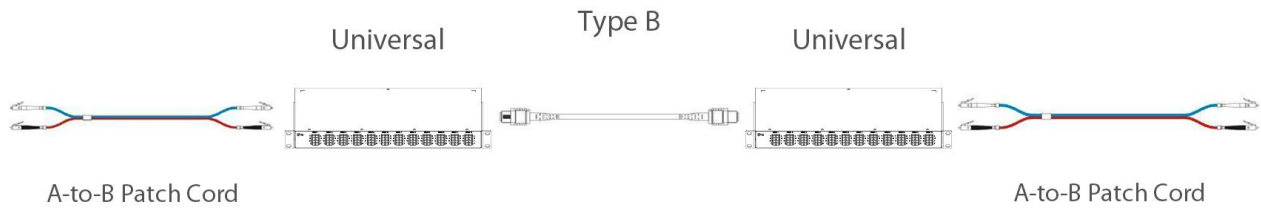


Note: The connection of 1 Group is shown. The 12 Groups are of the same connection sequence.

| Pin Assignment |                             |             |                        |
|----------------|-----------------------------|-------------|------------------------|
| Port ID        | Discrete Connector Position | Fiber Color | MTP Connector Position |
| 1              | A                           | Blue        | 1                      |
|                | B                           | Aqua        | 12                     |
| 2              | A                           | Orange      | 2                      |
|                | B                           | Rose        | 11                     |
| 3              | A                           | Green       | 3                      |
|                | B                           | Violet      | 10                     |
| 4              | A                           | Brown       | 4                      |
|                | B                           | Yellow      | 9                      |

Note: Universal polarity to be used at both ends of a Method B trunk reduces the complexity of a fiber network, ensuring consistent polarity and streamlining network maintenance.

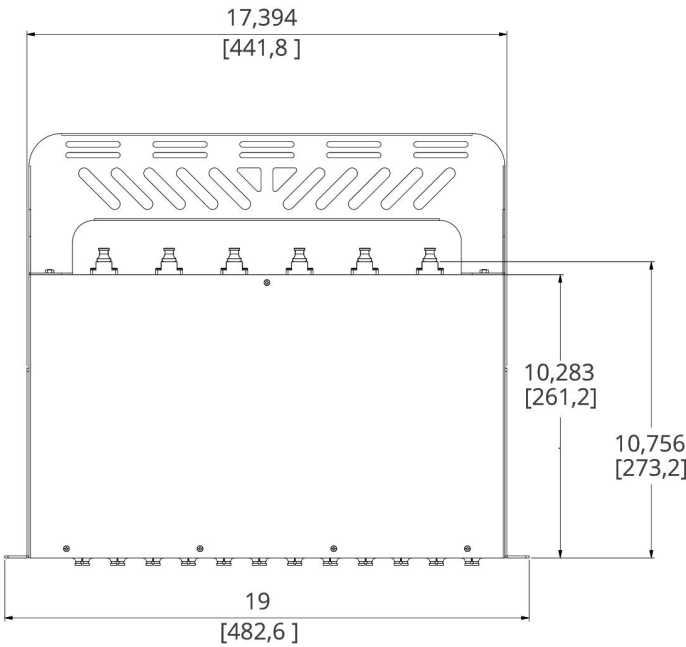
# Method for Achieving Fiber Polarity



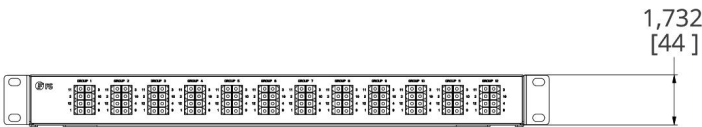
Note: The transmission of the signal is P2 in and P1 out.

# Layout and Dimensions

## Top view



## Front view



## Rear view



## Products Listing

### 96-Fiber Cassettes

| ID    | Description                                                                                           |
|-------|-------------------------------------------------------------------------------------------------------|
| 43552 | 1U MTP®-LC Cassette, OS2 Single Mode, Universal, 96 Fibers, 12 x MTP®-8 (Male) to 24 x LC Quad (Blue) |
| 43514 | 1U MTP®-LC Cassette, OM4 Multimode, Universal, 96 Fibers, 12 x MTP®-8 (Male) to 24 x LC Quad (Aqua)   |

## Matching Products

### Floor Standing Cabinets

| ID     | Description                                                                                               |
|--------|-----------------------------------------------------------------------------------------------------------|
| 177894 | 42U GR800-Series Floor Standing Cabinet 800 x 1100mm with 2 Pre-installed Cable Managers and PDU Brackets |

### Wall Mount Cabinets

| ID    | Description                                                           |
|-------|-----------------------------------------------------------------------|
| 75869 | 12U GW600-Series 19" 4-Rails Wall Mount Cabinet with Glass Front Door |

### MTP® Jumpers

| ID     | Description                                                                                                                      |
|--------|----------------------------------------------------------------------------------------------------------------------------------|
| 317743 | 1m (3ft) MTP® Jumper, MTP®-8 APC (Female) to MTP®-8 APC (Female), 8 Fibers, Single Mode (OS2), Plenum (OFNP), 0.35dB Max, Type B |
| 317731 | 1m (3ft) MTP® Jumper, MTP®-8 UPC (Female) to MTP®-8 UPC (Female), 8 Fibers, Multimode (OM4), Plenum (OFNP), 0.35dB Max, Type B   |

### Fiber Patch Cables

| ID    | Description                                                                                                  |
|-------|--------------------------------------------------------------------------------------------------------------|
| 40191 | 1m (3ft) Fiber Patch Cable, 2 Fibers, LC UPC Duplex to LC UPC Duplex, Single Mode (OS2), Riser (OFNR), 2.0mm |
| 40180 | 1m (3ft) Fiber Patch Cable, 2 Fibers, LC UPC Duplex to LC UPC Duplex, Multimode (OM4), Riser (OFNR), 2.0mm   |