

# MTP 12/24 CASSETTES DATASHEET

PRE-TERMINATED MODULAR CASSETTE SYSTEM



## Products Description

Fiber Optic MTP Cassettes consist of pre-terminated LC, SC, MDC or MTP adapters for quick and easy deployment in high density applications and provide efficient utilization of rack space and design flexibility. The cassettes interconnect with high-density fiber cable assemblies for quick connection of remote or data center applications.

## Features

- High-density modular design, up to 96 fibers (LC) in 1U, and up to 192 fibers (LC) in 2U for efficient utilization
- Pre-terminated cassette for improved reliability and quick deployment.
- High performance connectors to achieve a low loss optical budget.
- Plug-N-play modules allow fast installation of multiple fiber links.
- Offered in a wide range of performance and polarity configurations.
- The corning fiber compliant

## Applications

- Fiberoptic & copper backbone termination in data closets
- FiberOptic & copper distribution
- FiberOptic & copper horizontal termination
- Fiber to desk applications
- Central Office equipment
- Data-Centers



**I. Product Constructions**

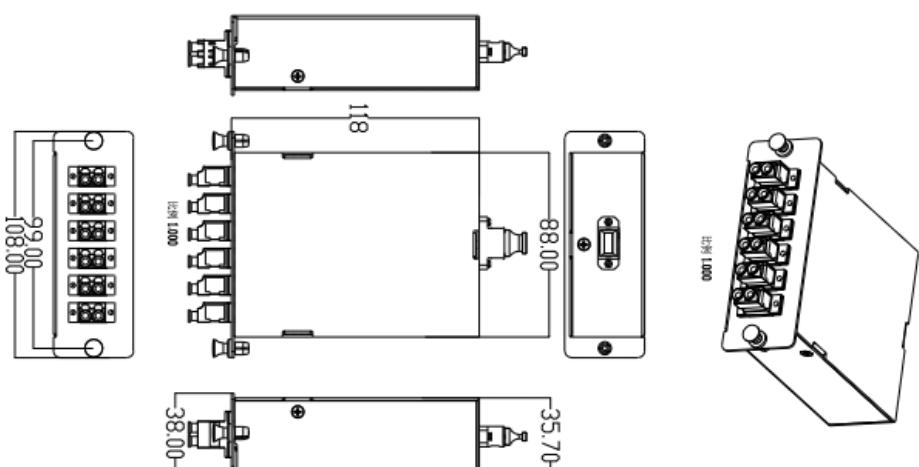
Parameters	
Fiber Count	12 Fibers/24 Fibers
Fiber Mode	Multimode: OM3 50/125µm, OM4 50/125µm, OM5 50/125µm Single Mode: OS2 9/125µm
Front Connector	Multimode: LC/SC Duplex (UPC), MTP® Adapter(s) with Male Ferrules (pins) and UPC Polish Single Mode: LC/SC Duplex (UPC/APC), MDC Duplex (UPC), MTP® Adapter(s) with Male Ferrules (pins) and APC Polish
Rear Connector	Multimode: MTP® Adapter(s) with Male Ferrules (pins) and UPC Polish Single Mode: MTP® Adapter(s) with Male Ferrules (pins) and APC/UPC Polish
Polarity Type	Type A/B/C/Universal
Material	Cold Steel
Dimensions (HxWxD)	(H) 118 mm X (W) 88 mm, X (D) 35.7 mm.

**II. Performance Properties**

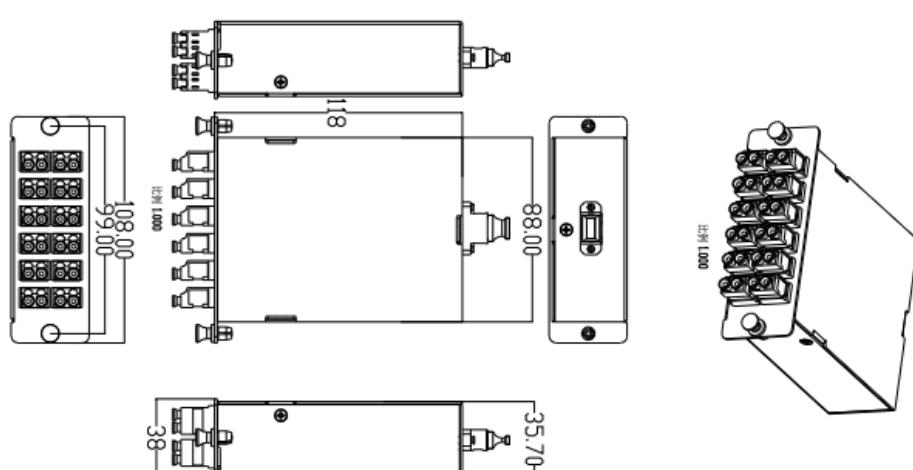
Rear Connector	MTP
Insertion Loss	Multimode: Stand IL 0.6dB max. Ultra Low IL 0.2dB Max. Single Mode: Stand IL 0.75dB Max. Ultra Low IL 0.2dB Max.
Return Loss	Multimode: $\geq$ 20dB Single Mode: $\geq$ 60dB
Connector Durability	MTP Connector Meets TIA/EIA-568.C.3A.4.9 Durability: 500 Mating Cycles

## MPO/MTP CASSETTES DATASHEET

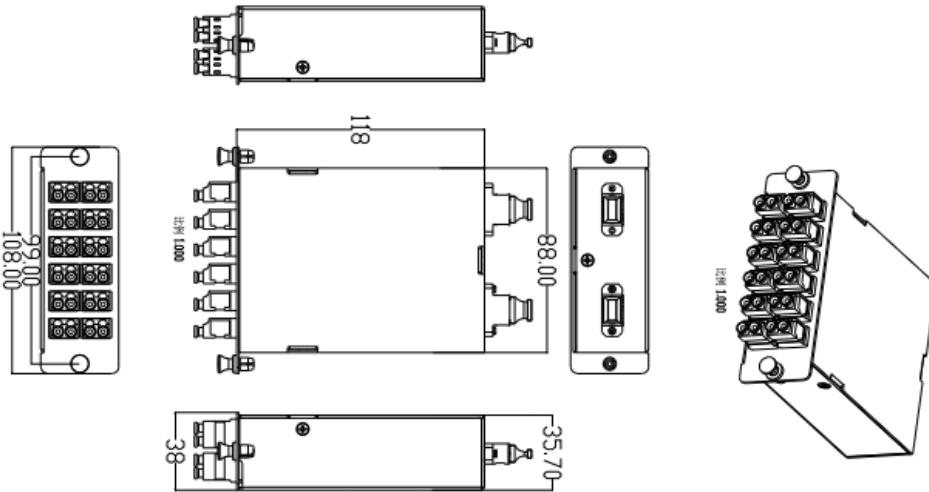
6 Port LC DX adapter cassette



12 Port LC DX ADT cassette



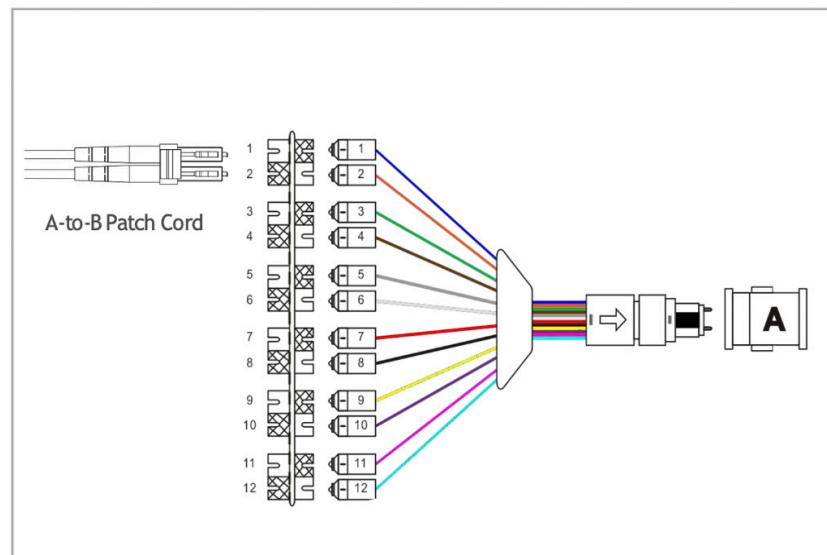
12 Port LC DX ADT cassette



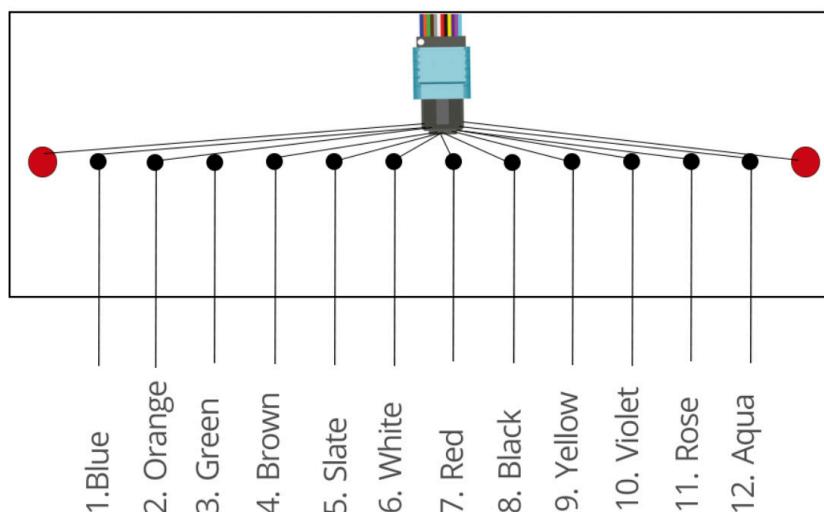
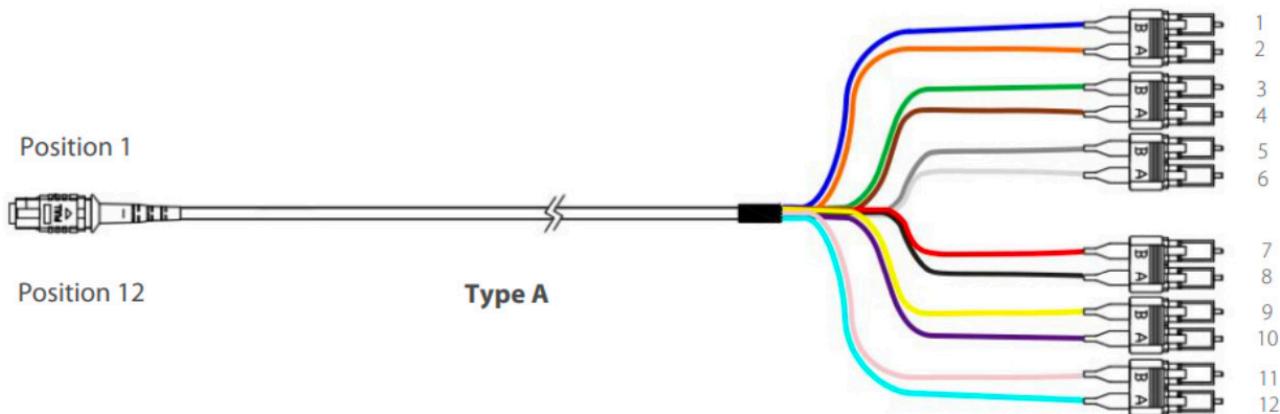


Port Labeling	1	3	5	7	9	11
	2	4	6	8	10	12

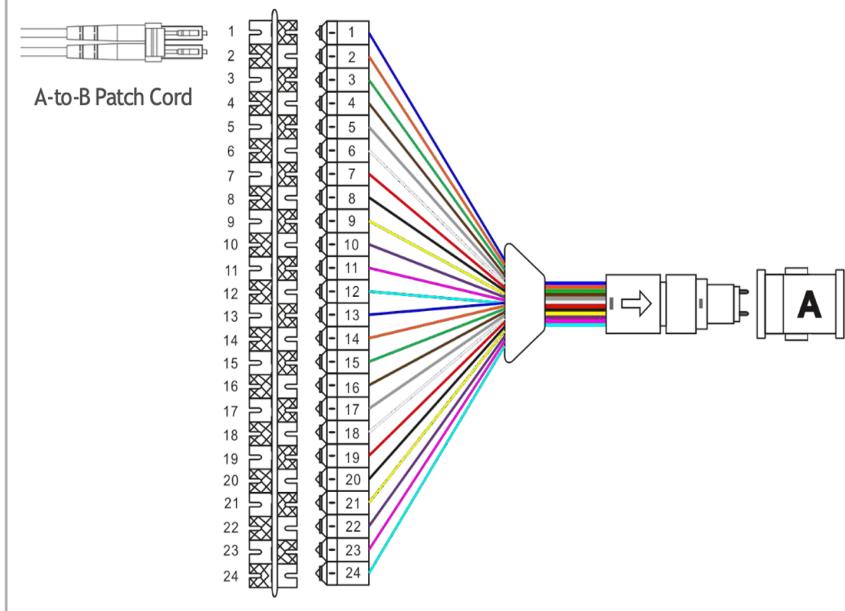
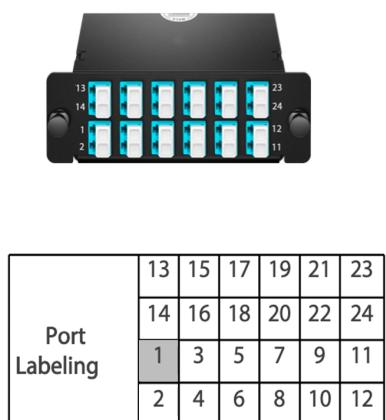
Inner Sequence	1	3	5	7	9	11
	2	4	6	8	10	12



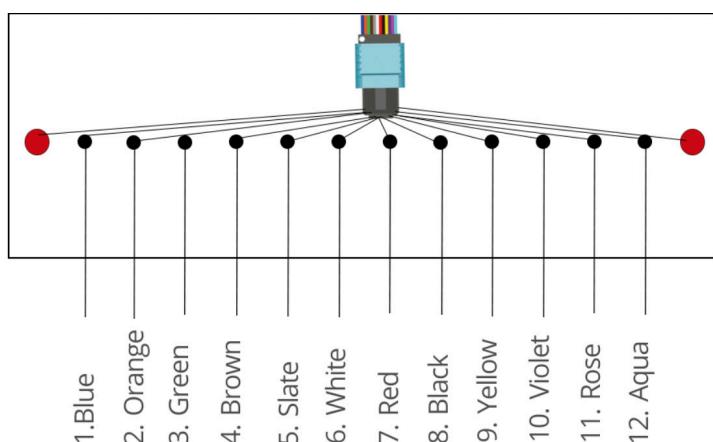
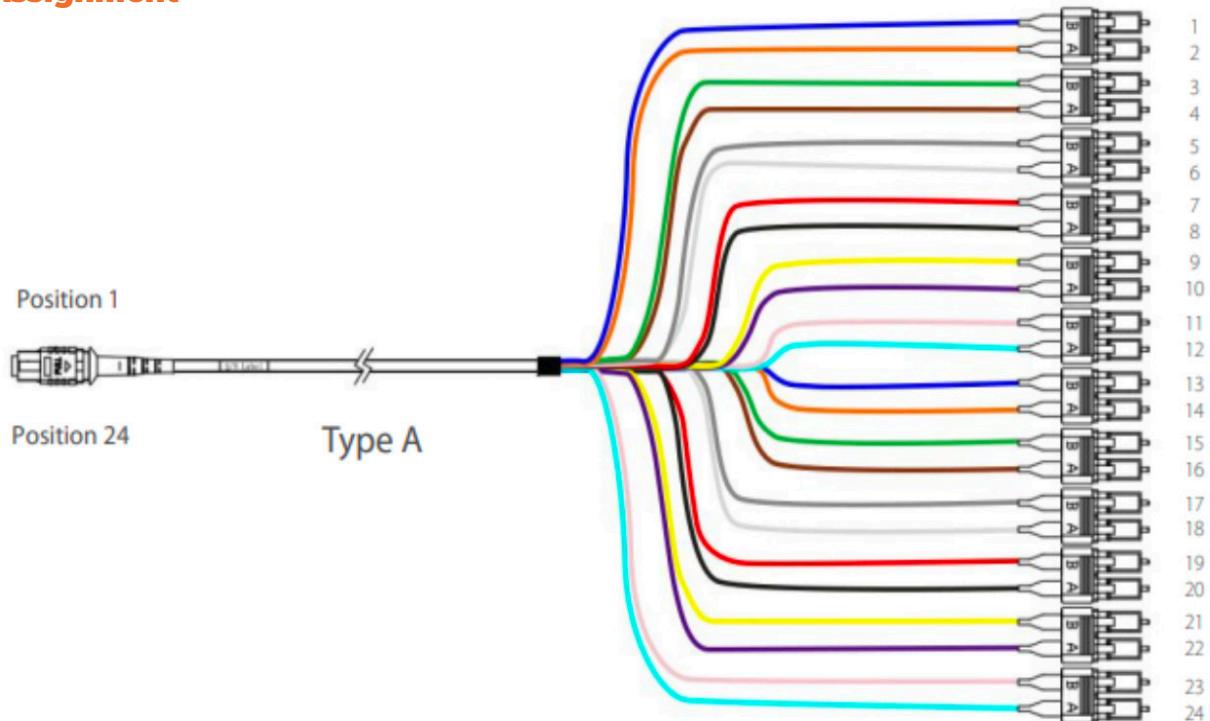
### Pin Assignment



## MPO/MTP - 24 Cassette, Type A



## Pin Assignment

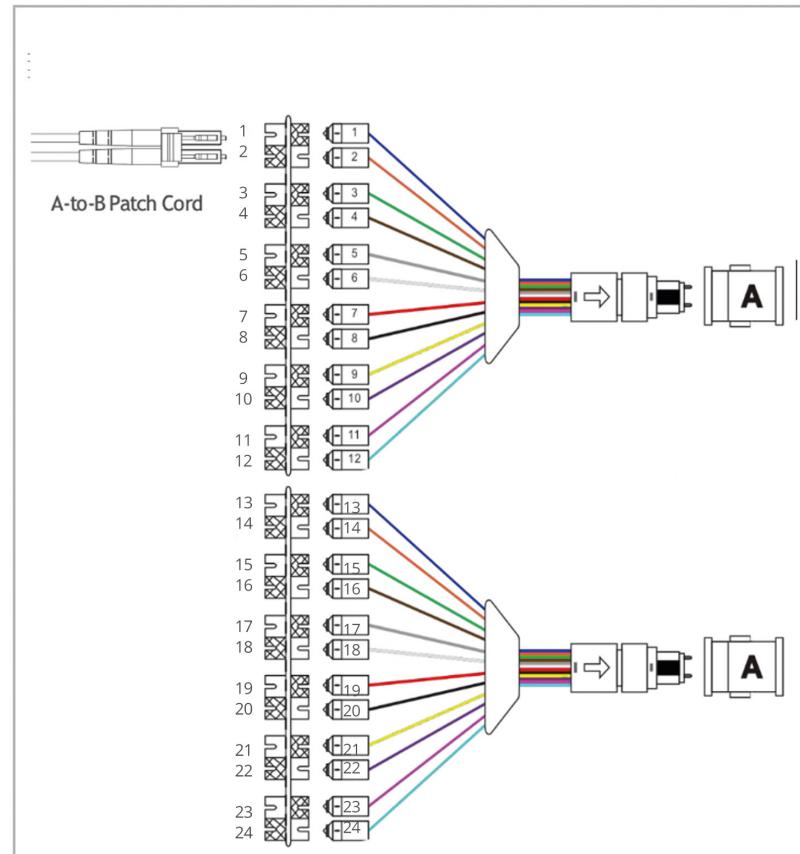
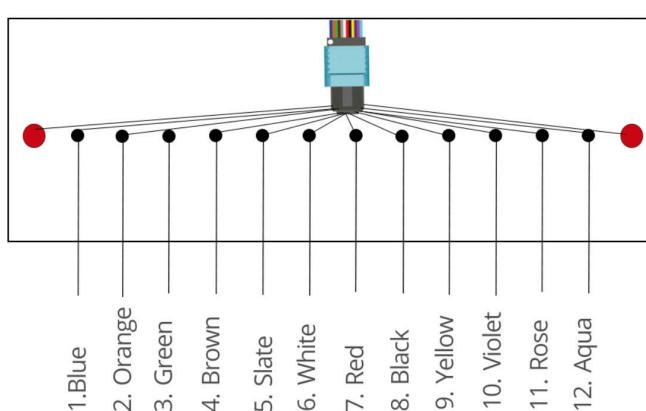
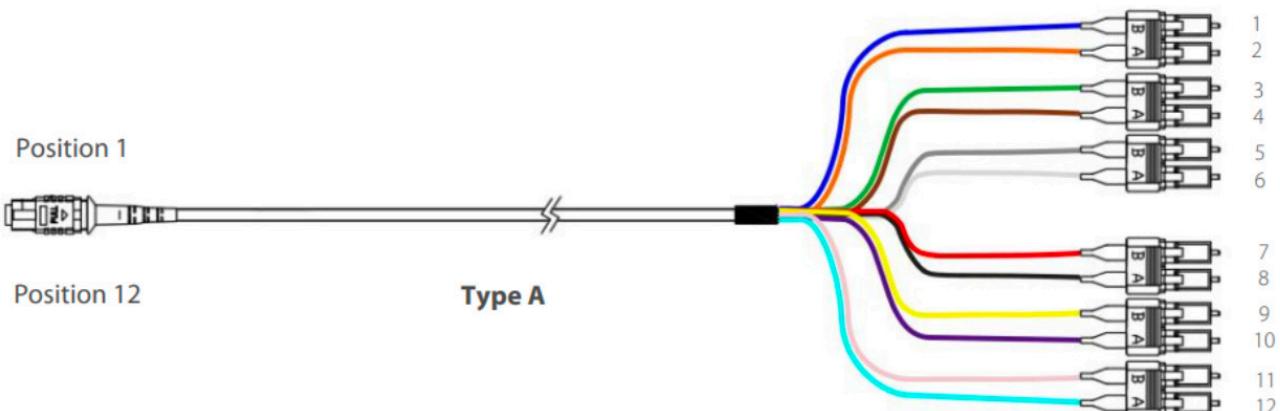


The second sequence is repeated in the same order. (13-24)

**MPO/MTP - 24 Cassette, Type A (2x12)**


Port Labeling	13	15	17	19	21	23
	14	16	18	20	22	24
	1	3	5	7	9	11
	2	4	6	8	10	12

Inner Sequence	13	15	17	19	21	23
	14	16	18	20	22	24
	1	3	5	7	9	11
	2	4	6	8	10	12


**Pin Assignment**


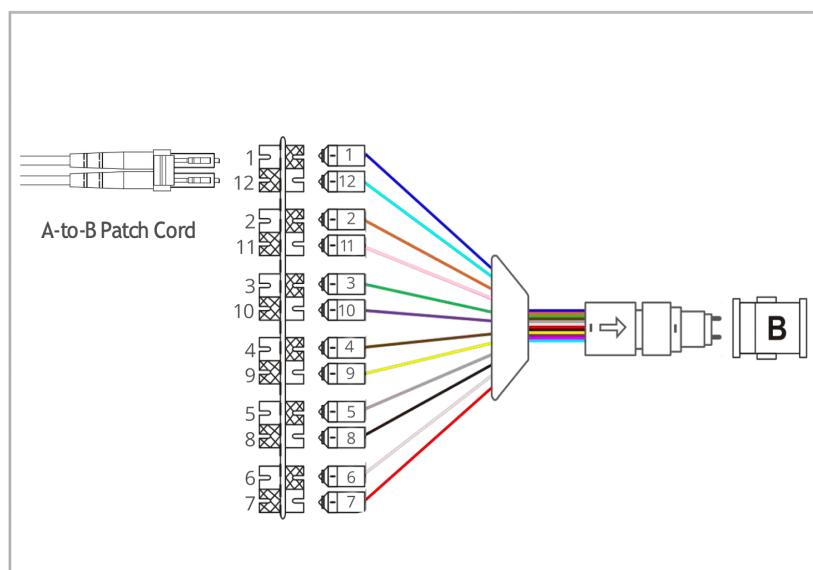
The second MPO has the same layout

## MPO/MTP - 12 Cassette, Type B

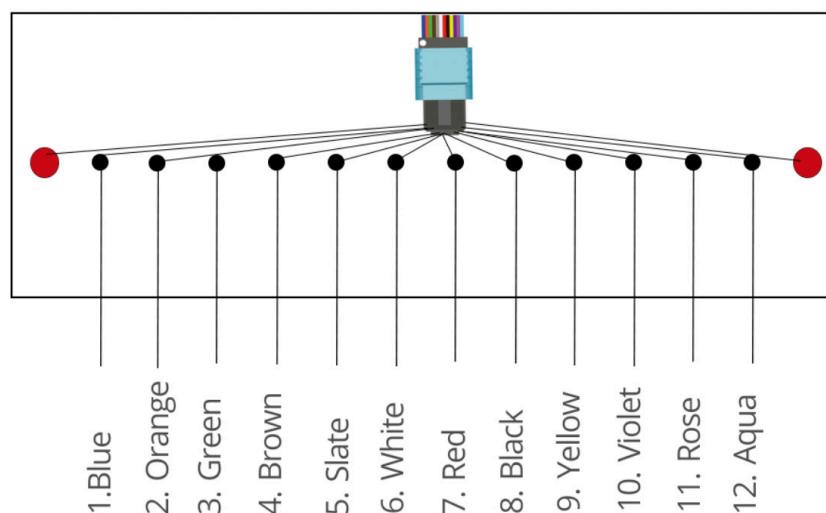
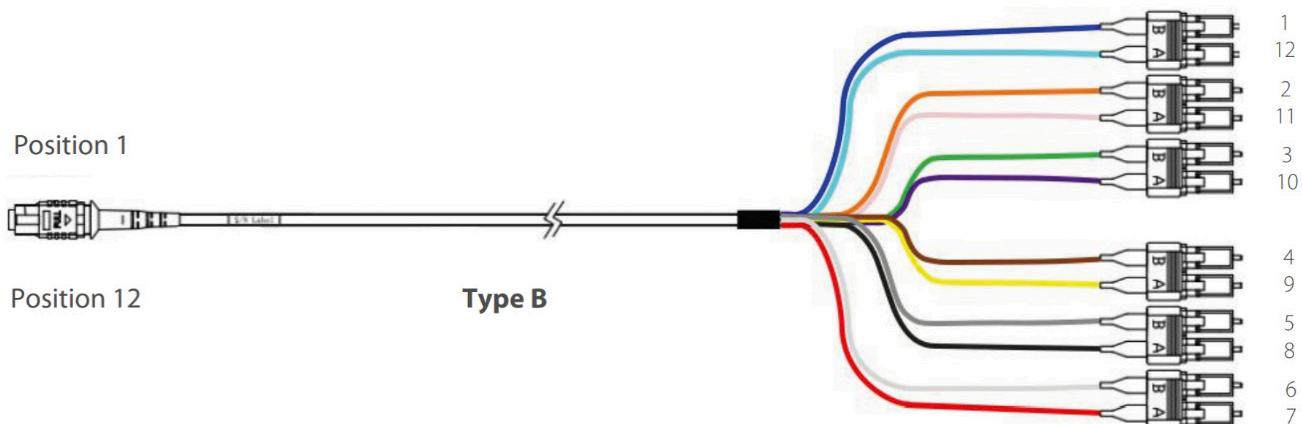


Port Labeling	1	2	3	4	5	6
	12	11	10	9	8	7

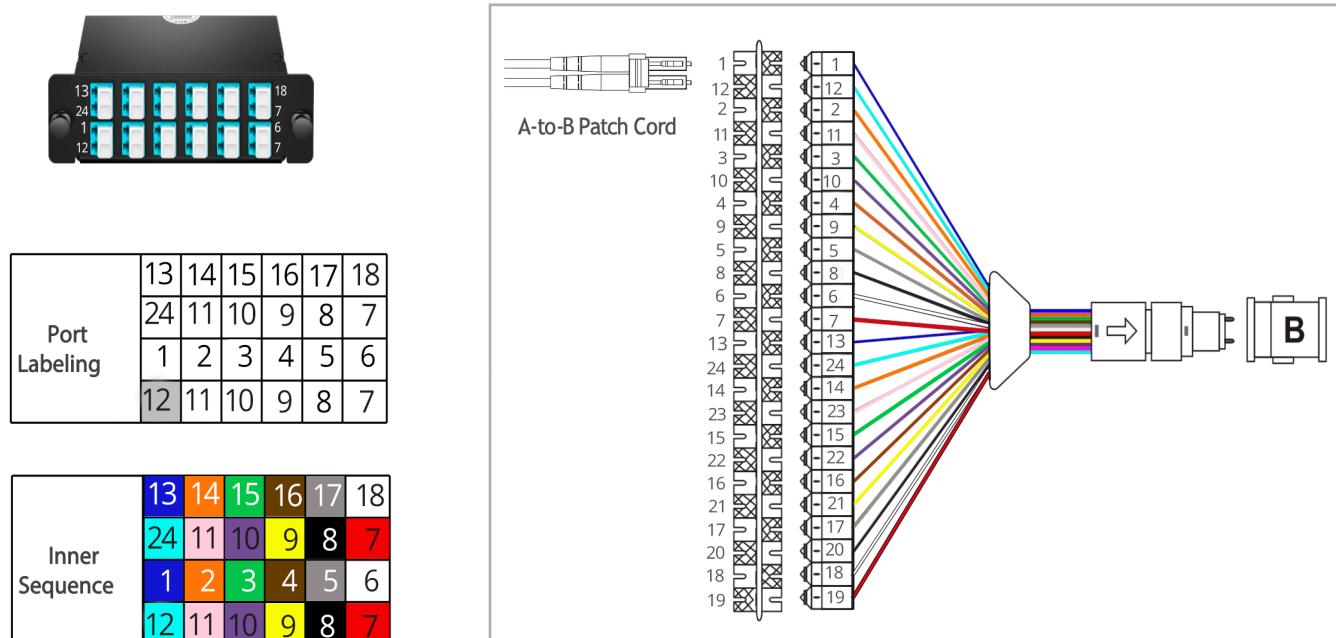
Inner Sequence	1	2	3	4	5	6
	12	11	10	9	8	7



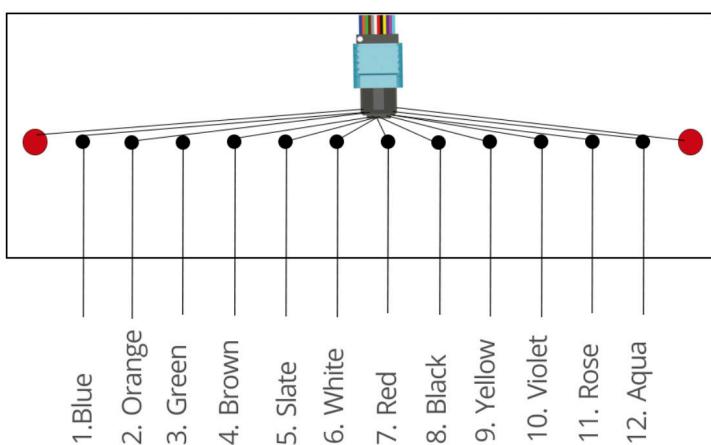
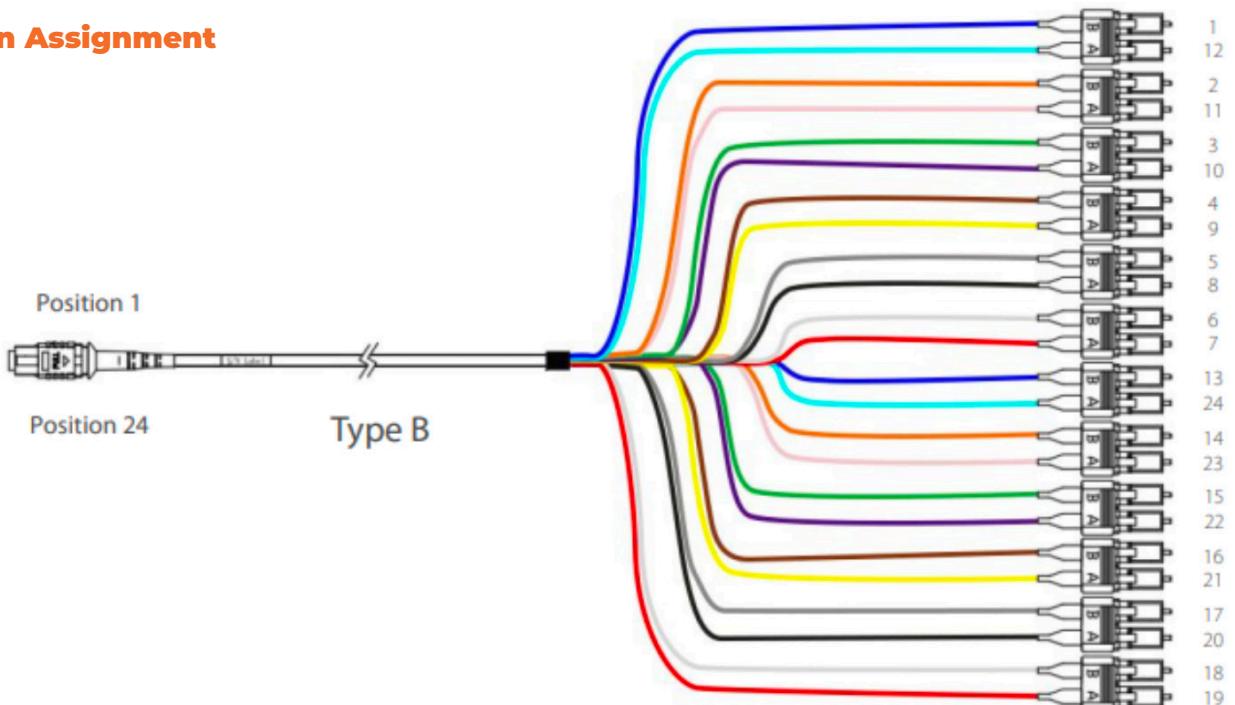
## Pin Assignment



## MPO/MTP - 24 Cassette, Type B



### Pin Assignment

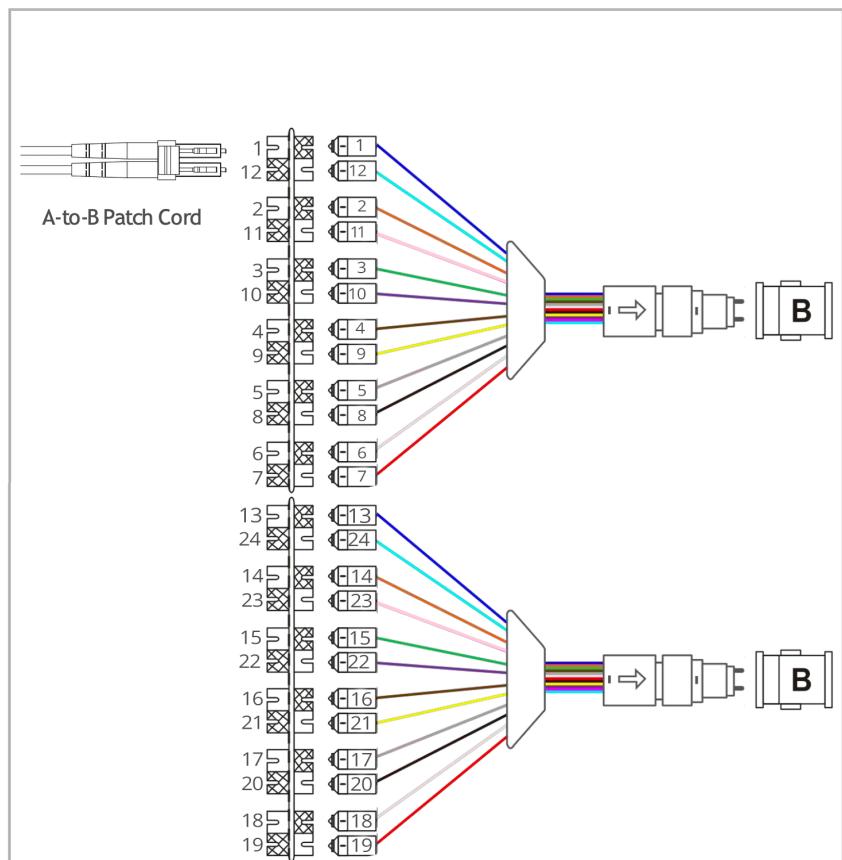
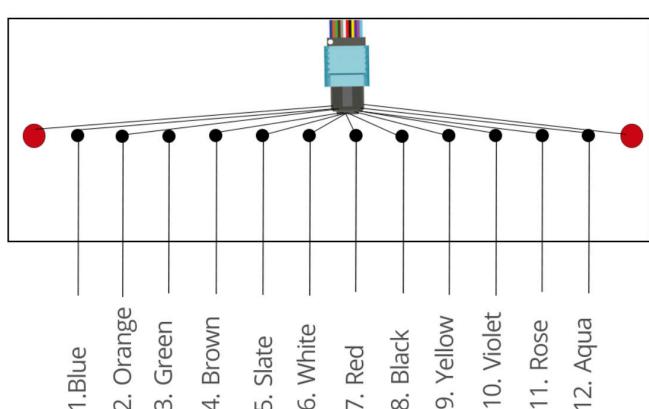
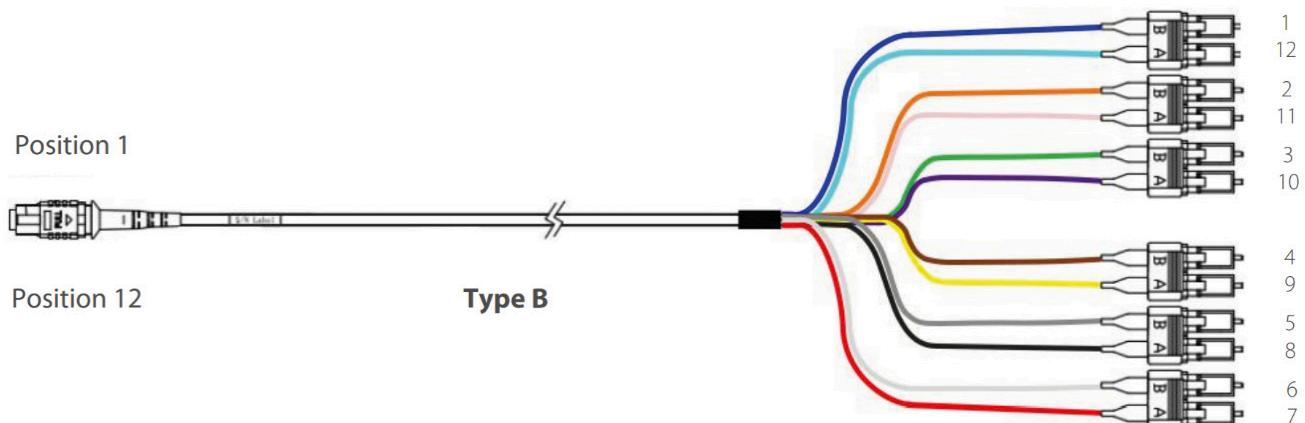


The second sequence is repeated in the same order. (13-24)

**MTP -12 Cassette, Type B****MPO/MTP - 24 Cassette, Type B (2x12)**

Port Labeling	13	14	15	16	17	18
	24	23	22	21	20	19
	1	2	3	4	5	6
	12	11	10	9	8	7

Inner Sequence	13	14	15	16	17	18
	24	23	22	21	20	19
	1	2	3	4	5	6
	12	11	10	9	8	7

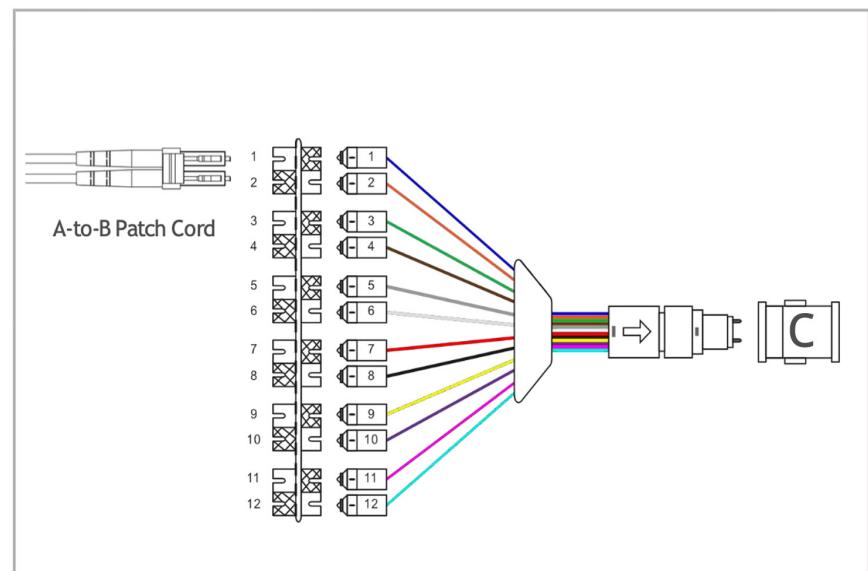
**Pin Assignment**

The second MPO has the same layout

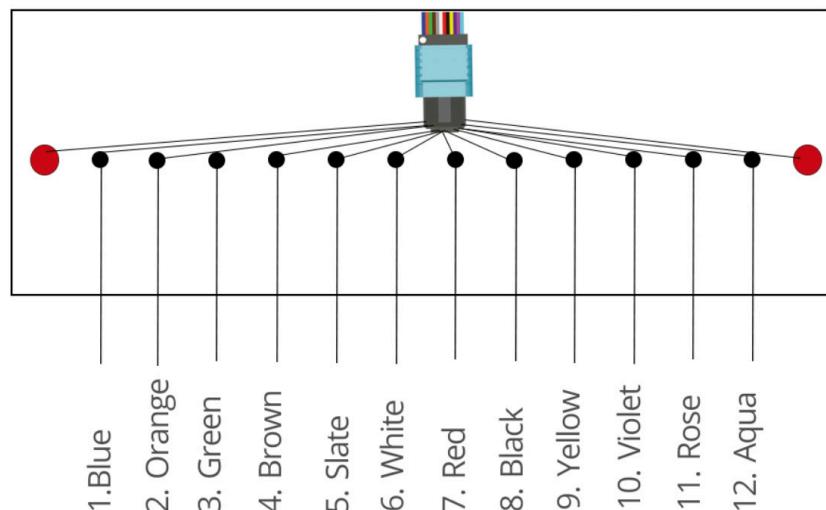
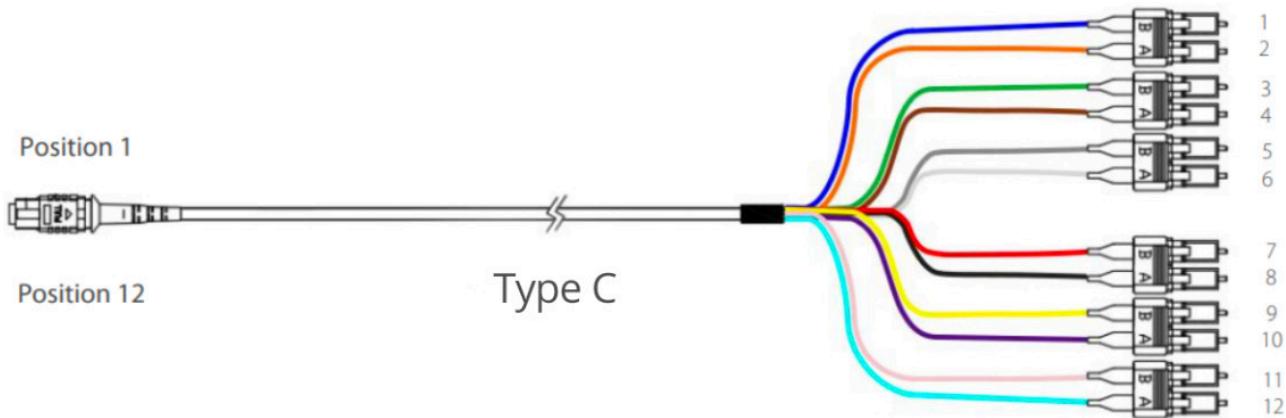


Port Labeling	2	4	6	8	10	12
Inner Sequence	1	3	5	7	9	11

Inner Sequence	2	4	6	8	10	12
Port Labeling	1	3	5	7	9	11



### Pin Assignment

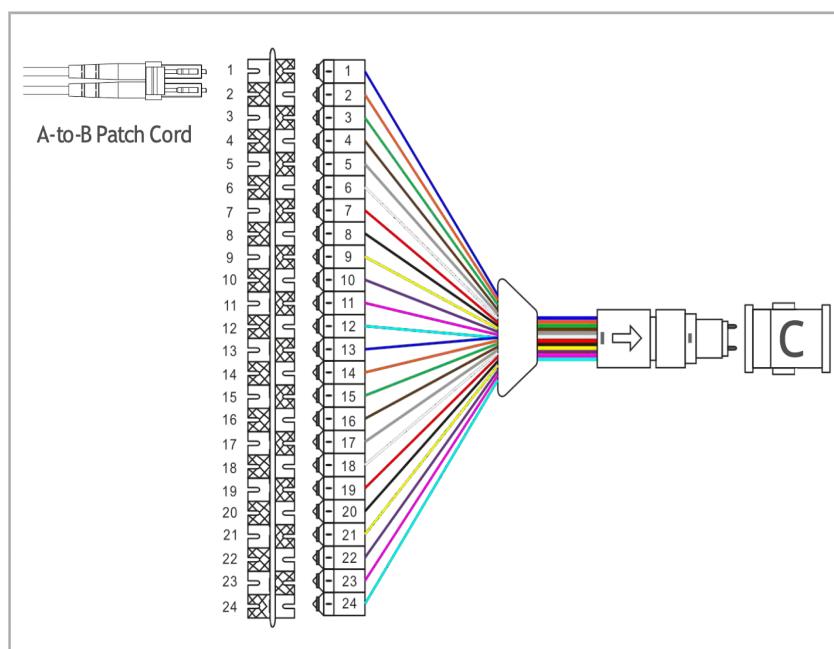


## MPO/MTP - 24 Cassette, Type C

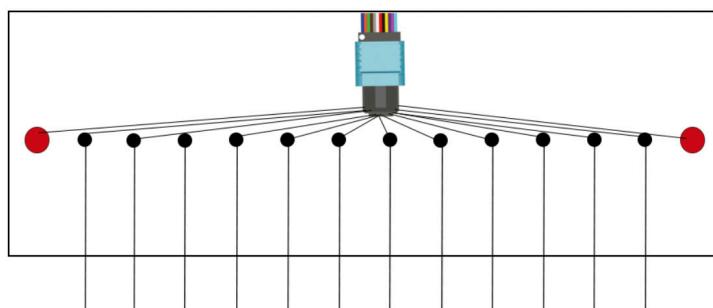
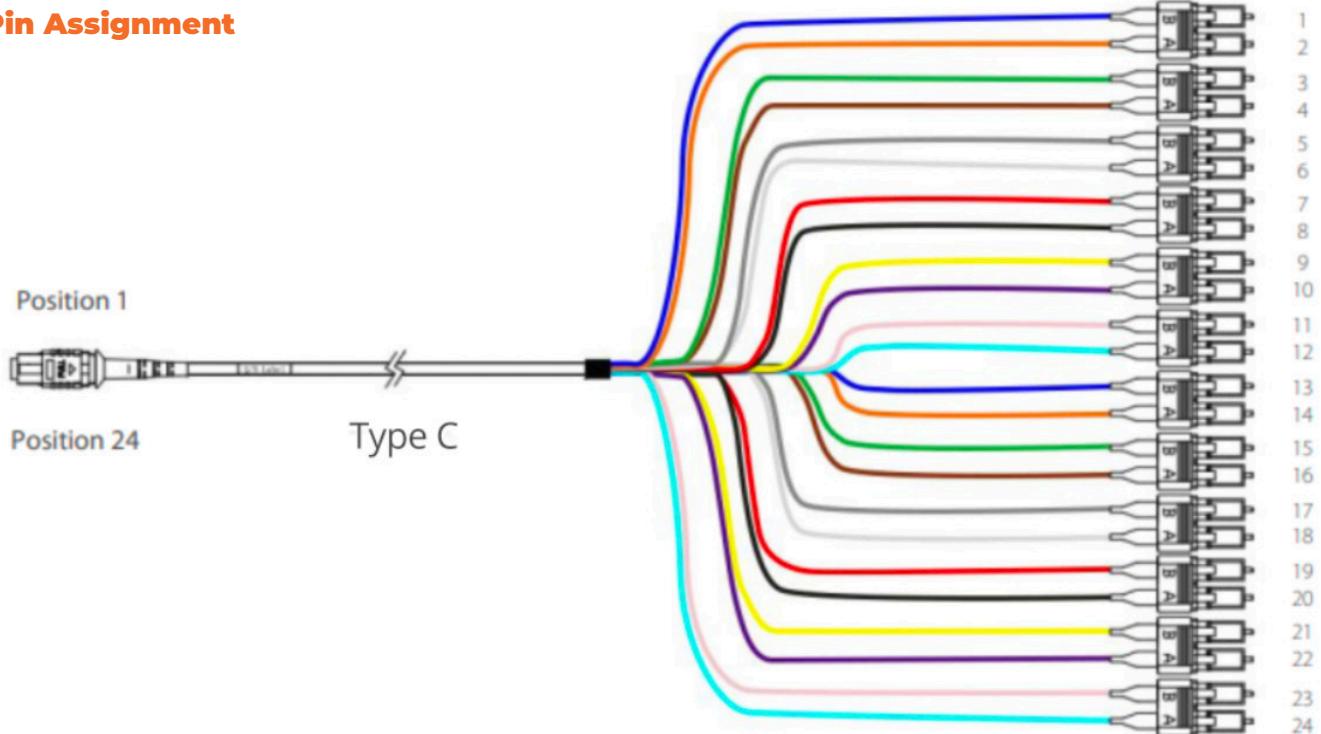


Port Labeling	14	16	18	20	22	24
	13	15	17	19	21	23
	2	4	6	8	10	12
	1	3	5	7	9	11

Inner Sequence	14	16	18	20	22	24
	13	15	17	19	21	23
	2	4	6	8	10	12
	1	3	5	7	9	11



## Pin Assignment



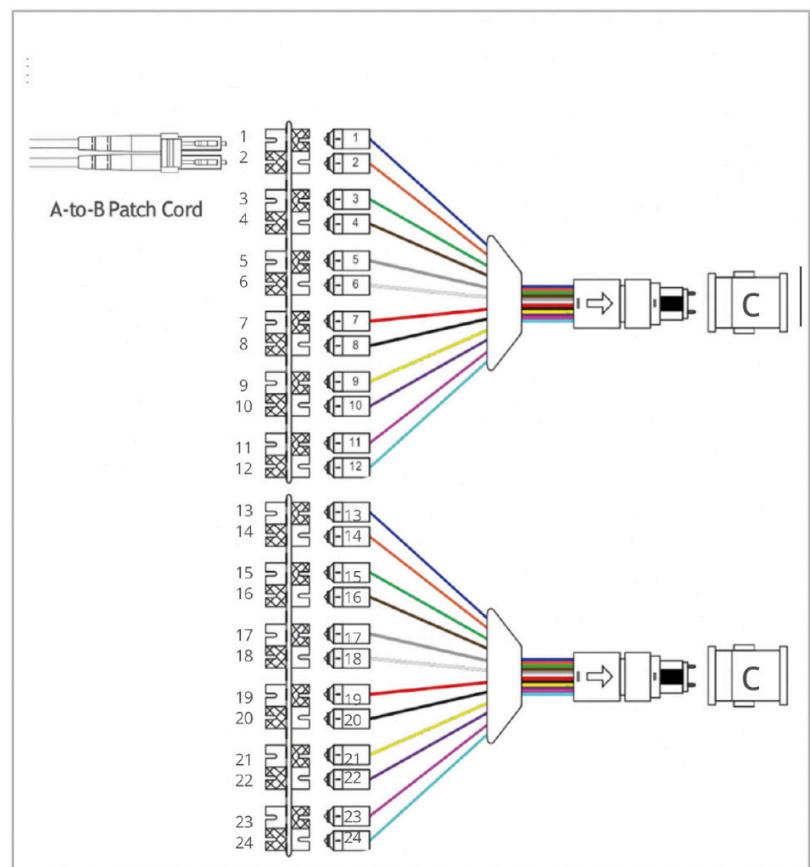
1. Blue
2. Orange
3. Green
4. Brown
5. Slate
6. White
7. Red
8. Black
9. Yellow
10. Violet
11. Rose
12. Aqua

The second sequence is repeated in the same order. (13-24)

**MTP -12 Cassette, Type C**
**MPO/MTP - 24 Cassette, Type C (2x12)**


Port Labeling	14	16	18	20	22	24
	13	15	17	19	21	23
	2	4	6	8	10	12
	1	3	5	7	9	11

Inner Sequence	14	16	18	20	22	24
	13	15	17	19	21	23
	2	4	6	8	10	12
	1	3	5	7	9	11

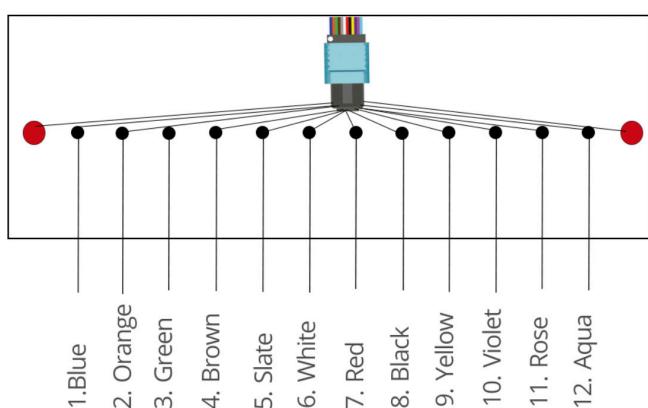
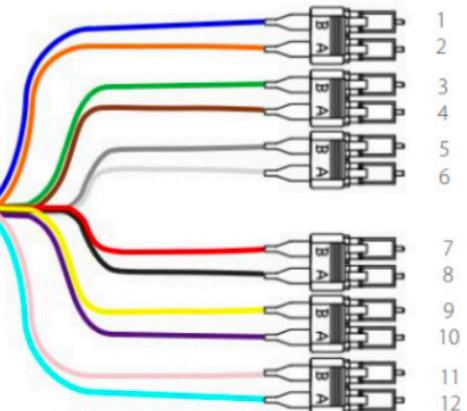

**Pin Assignment**

Position 1



Position 12

Type C



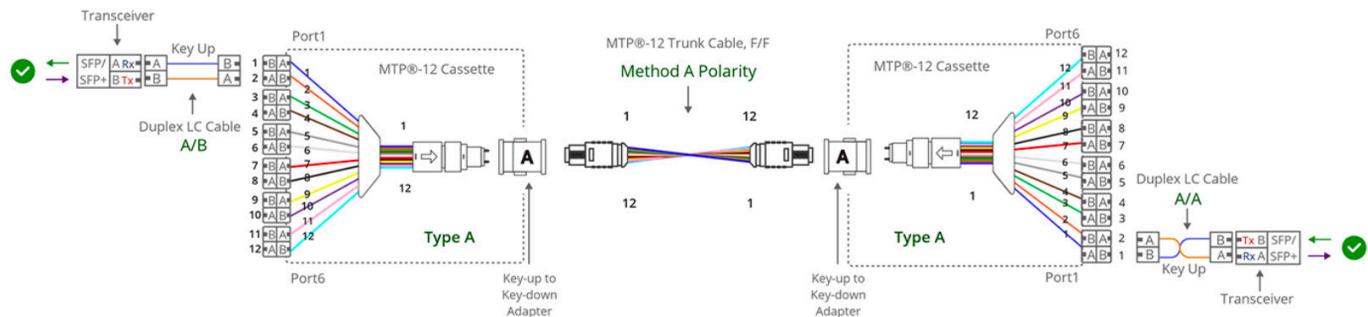
The second MPO has the same layout

## Polarity Methods

All array connectivity methods have the same goal: to create an optical path from the transmit port of one device to the receive port of another device. Different methods to accomplish this goal may be implemented; however these different methods may not be interoperable. Any connectivity method requires a specific combination of components to maintain polarity. Some of the components may be common to other connectivity methods.

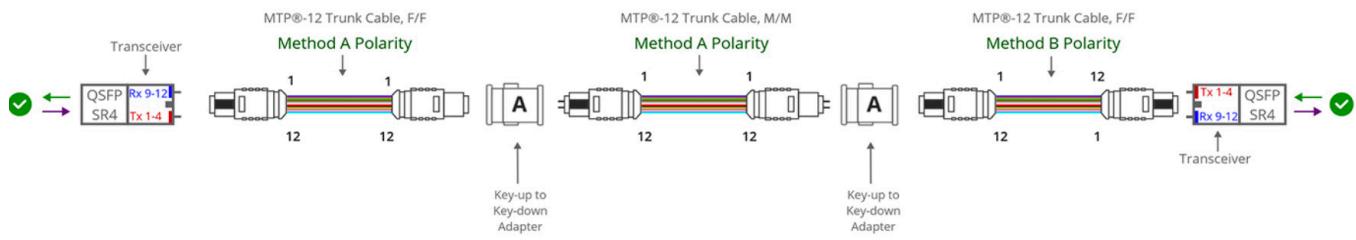
### Method A

#### Connectivity Method A for duplex signals



**Note:** The transmission of the signal is P2 in and P2 out. This method requires two separate patch cable types (one A-to-B and the other A-to-A).

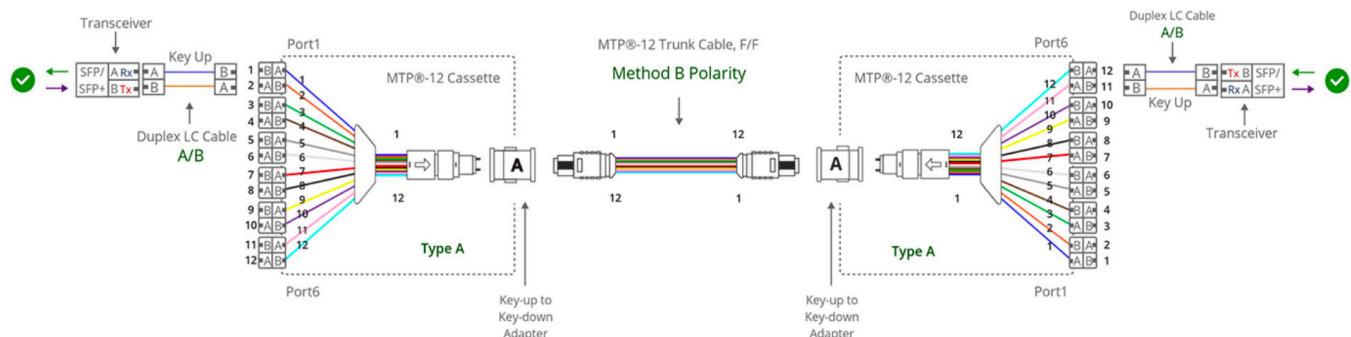
#### Connectivity Method A for parallel signal



## Polarity Methods

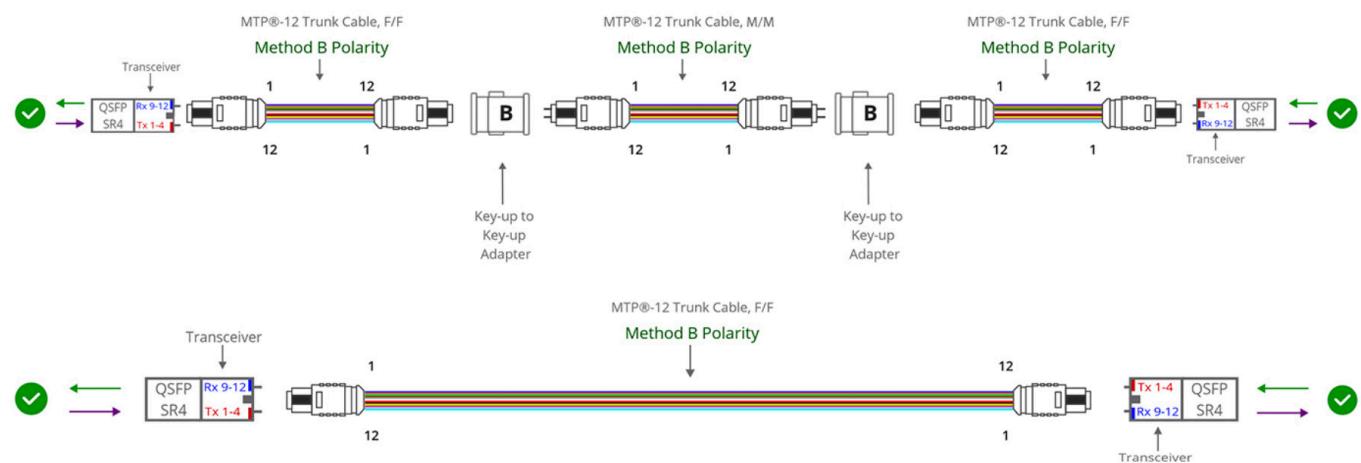
### Method B

#### Connectivity Method B for duplex signals



**Note:** The transmission of the signal is P2 in and P11 out.

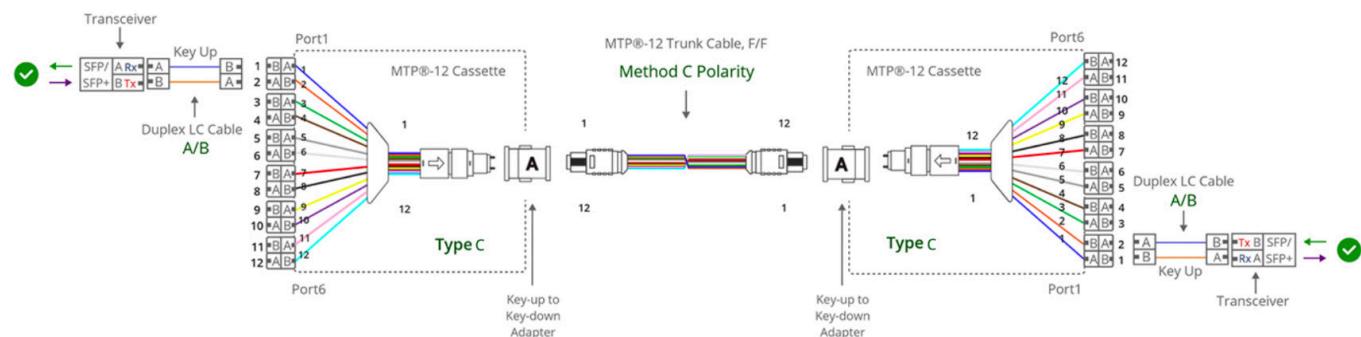
#### Connectivity Method B for parallel signal



**Note:** The key-up to key-up adapter (Type B) does not support Single Mode with standards compliant connector endfaces.

### Method C

#### Connectivity Method C for duplex signals



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