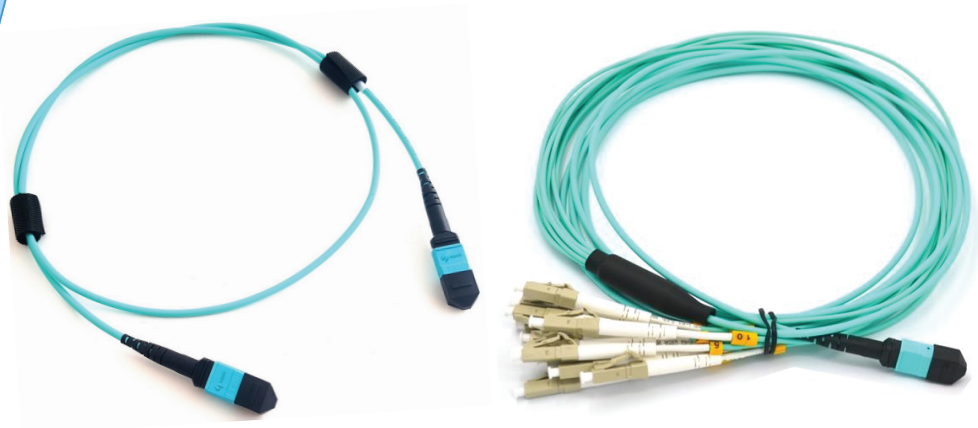




## MPO Patch Cord



# DATA SHEET

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## MPO Patch Cord

Webb MPO patch cords are designed to provide connections to equipment transceivers, on switches or servers that use an MPO interface such as the QSFP. They are compact in size to provide improved scalability in heavy transmission networking environments, making them cost-effective and efficient.

MPO connectors can contain anywhere from 4 to 24 fibers, with 12-fiber arrays being the most common for enterprise data center applications like 40G and 100G.

### Technical specifications

- Compatible with QSFP models
- Available in single mode and multi-mode types
- Available in straight, reversed, and flipped pair polarities
- Available in 4G – 200G QSFP connectivity range
- Available in round or flat types
- Available with 4 – 24 cores, fibre count
- End one connector available in MPO male or MPO female types
- End two connector available in, MPO male, MPO female, SC, LC, FC, ST types
- Maximum insertion loss: <math><0.75\text{dB}</math>, <math><0.5\text{dB}</math>
- Return loss: UPC<math>\geq 55\text{dB}</math>, APC<math>\geq 60\text{dB}</math>
- Durability: maximum 500 mating cycles
- Operating temperature: <math>-40^{\circ}\text{C}</math> ~ <math>80^{\circ}\text{C}</math>

### Applications

- Local area networks
- Telecommunication networks
- CATV/CCTV systems
- FTTx networks

*\*Specifications are subject to change without notice based on technical recommendations and related product enhancements*

## Structure of the MPO connector



**Male connector**



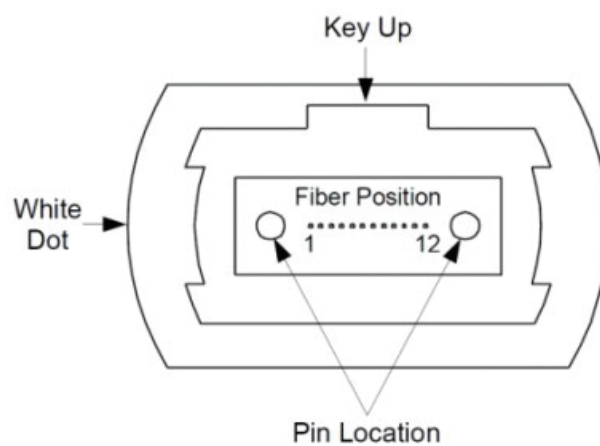
**Female connector**



**12 fibre connector**

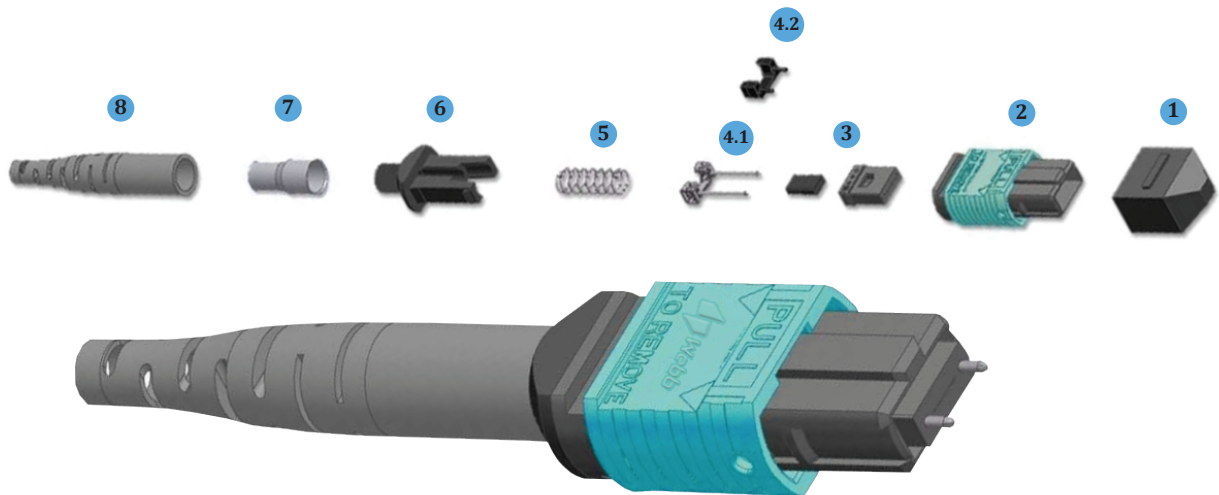


**24 fibre connector**



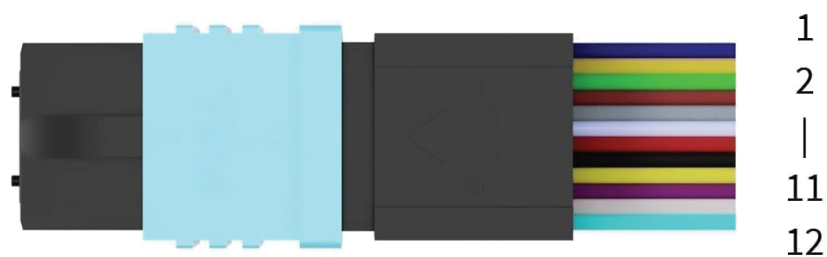
*\*Specifications are subject to change without notice based on technical recommendations and related product enhancements*

## Internal structure of the MPO patch cord



- 1. Dust cap
- 2. Housing
- 3. Ferrule/ Boot kit
- 4.1 Male pin clamp assembly
- 4.2 Female pin spacer
- 5. Spring
- 6. Spring push
- 7. Crimp band
- 8. Cable boot

## Internal cable colour code of MPO patch cord



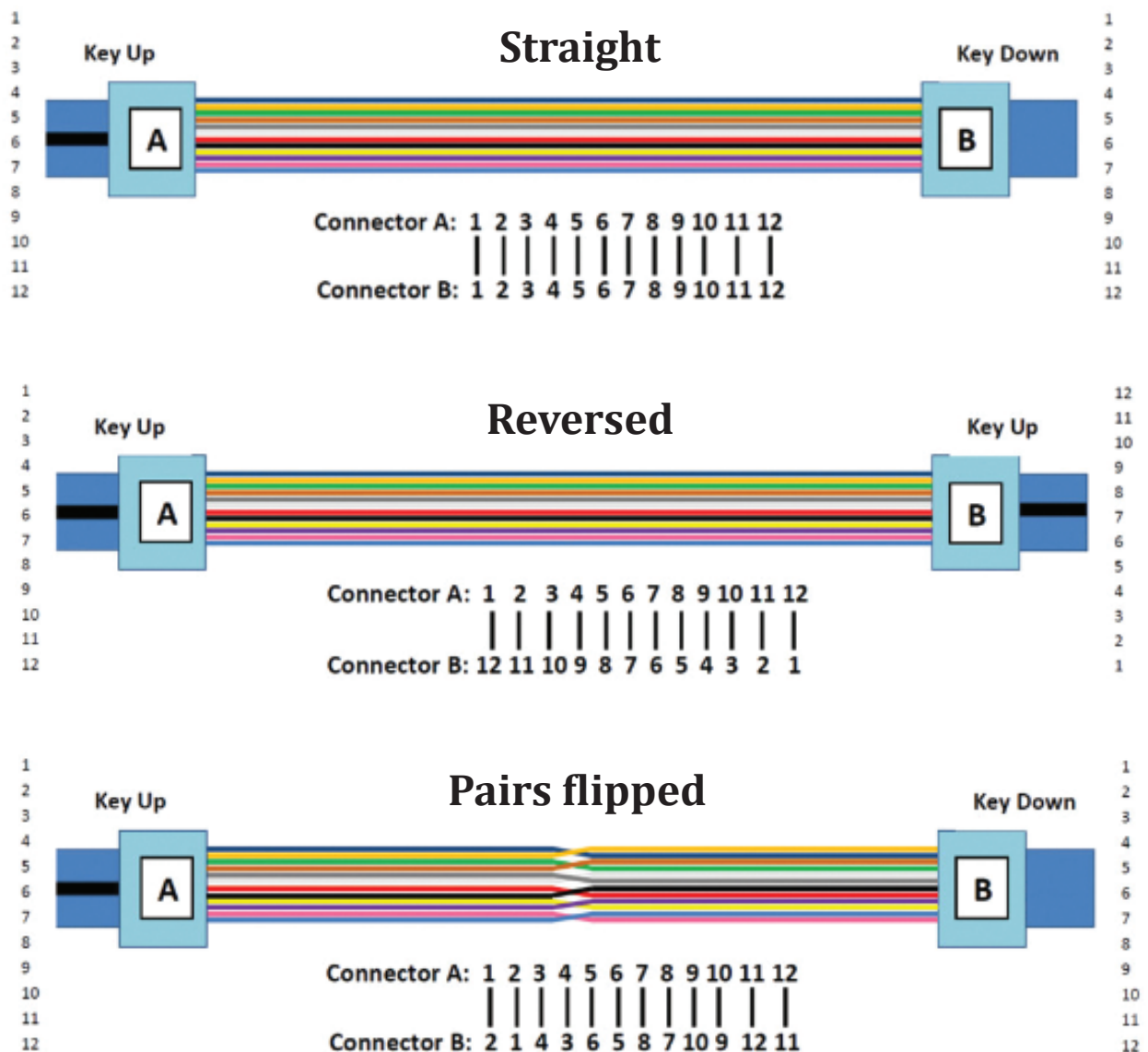
- 1. Blue
- 2. Orange
- 3. Green
- 4. Brown
- 5. Slate
- 6. White
- 7. Red
- 8. Black
- 9. Yellow
- 10. Violet
- 11. Pink
- 12. Aqua

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## MPO Polarities

There are three different types of MPO cable polarities:

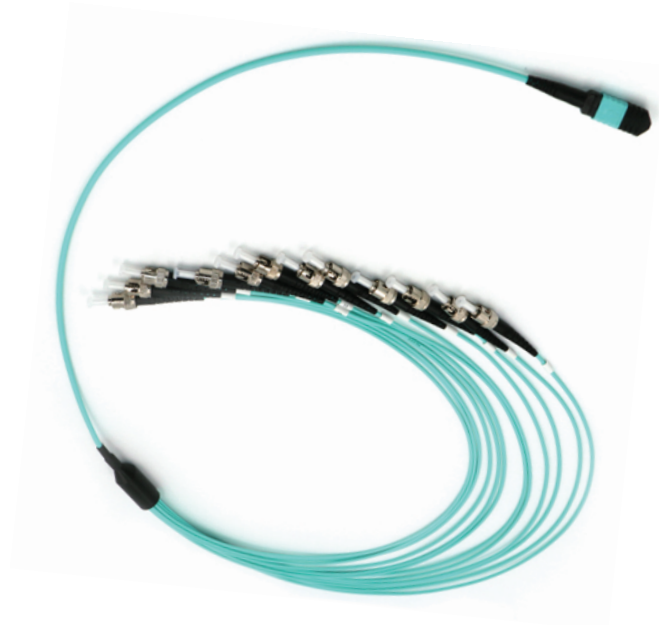
The straight type cables come with a key-up connector on one end and a key-down connector on the other end that results in the fiber located in position 1 arriving at position 1 at the other end. Reversed type cables are key up to key up so that the fiber located in position 1 arrives at position 12 at the opposite end. Flipped pair cables flip the pairs so that the fiber in position 1 arrives at position 2 at the opposite end and the fiber in position 2 arrives at position 1.



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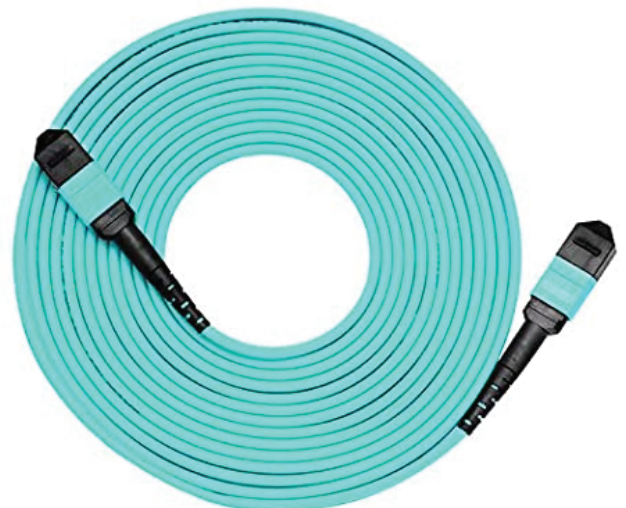
**MPO-LC patch cord**



**MPO-ST patch cord**



**MPO-FC patch cord**



**MPO-MPO flat cable**

*\*Specifications are subject to change without notice based on technical recommendations and related product enhancements*

## MPO PATCH CORD PART NUMBER KEY

Part Number: C.05.PC.MPO. . . . .

C.05.PC.MPO.Mode.End one.End two.Angle.fibre.length.Thickness.QSFP range.Cable type.Polarity

Please add the codes from the tables below in the above format to derive at your desired product part number

| Mode                        | Code |
|-----------------------------|------|
| Single Mode (OS1) (9/125)   | S1   |
| Single Mode (OS2) (9/125)   | S2   |
| Multi Mode (OM1) (62.5/125) | M1   |
| Multi Mode (OM2) (50/125)   | M2   |
| Multi Mode (OM3) (50/125)   | M3   |
| Multi Mode (OM4) (50/125)   | M4   |

| QSFP range        | Code |
|-------------------|------|
| 4 Gbit/s QSFP     | 04   |
| 40 Gbit/s QSFP+   | 40   |
| 50 Gbit/s QSFP14  | 50   |
| 100 Gbit/s QSFP28 | 100  |
| 200 Gbit/s QSFP56 | 200  |

| End one    |      |
|------------|------|
| Connector  | Code |
| MPO male   | MM   |
| MPO female | MF   |

| End two    |      |
|------------|------|
| Connector  | Code |
| FC         | FC   |
| SC         | SC   |
| ST         | ST   |
| LC         | LC   |
| MPO male   | MM   |
| MPO female | MF   |

| Angle(End two) |      |
|----------------|------|
| Angle          | Code |
| UPC            | U    |
| APC            | A    |
| MPO            | M    |

| Fibre        |         |
|--------------|---------|
| No of fibres | Code    |
| 04           | 04      |
| 06           | 06      |
| 08           | 08      |
| 12           | 12      |
| 24           | 24      |
| Custom       | Specify |

| Length(m) | Code    |
|-----------|---------|
| 01        | 01      |
| 03        | 03      |
| 05        | 05      |
| 10        | 10      |
| 15        | 15      |
| 30        | 30      |
| Custom    | Specify |

| Thickness(mm) | Code    |
|---------------|---------|
| 0.9           | 9       |
| 2             | 2       |
| 2.8           | 8       |
| 3             | 3       |
| Custom        | Specify |

| Cable type | Code |
|------------|------|
| Round      | R    |
| Flat       | F    |

| Polarity |      |
|----------|------|
| Type     | Code |
| Stright  | S    |
| Reverse  | R    |
| Flipped  | F    |

\* Minimum order quantities may be applicable for non stock items

\*Specifications are subject to change without notice based on technical recommendations and related product enhancements