

# **HXB CONNECTOR SERIES**

**EXPANDED BEAM FIBER OPTIC CONNECTOR**

## **HXB15**

- Large size - Shell size 15
- 2 , 4 , 6 Optical Channels
- Optical 2Ch / AWG16 2Ch / AWG20 2Ch
- Intermateability : Tyco Pro Beam Jr., Stratos HMA, Fibreco Senior

## **HXB13**

- Medium size - Shell size 13
- 2 , 4 Optical Channels
- Optical 2Ch / AWG16 2Ch
- Intermateability : Fibreco Junior MIL-DTL-83526, Tyco Pro Beam Jr., QPC Qmini, Stratos HMA,

## **HXB11**

- Mini size - Shell size 11
- 2 , 4 Optical Channels
- Intermateability : Tyco Pro Beam mini, QPC Qmicro, Stratos HMC, Fibreco Mini2



# Fiber Optic Connector Series

Fiber Optic Connector, Circular, Hermaphroditic, Hybrid, MIL-83526, Expanded beam, 2-6 Optical channels, 2-4 Electric channels, Plug, In-Line Mount, Receptacle, Jam nut, Square flange mount, Bulkhead, Defense, Avionics, Mining, Offshore, Broadcast, Rugged field deployable applications



## HXB15 CONNECTOR

- Advanced expanded beam technology
- Rugged field deployable fiber optic connector
- Hermaphroditic interconnection
- 2 to 6 Optical Channels for Single or Multi-mode
- Optical / Electric hybrid configurable
- Custom configuration available
- Environmental sealing (IP68)
- Very high resistance to vibration, shock, environmental effects, dust, and debris

### Description

The HXB15 Connectors, featuring expanded beam technology, hermaphroditic connection, rugged construction for field deployment and hybrid configurability, have been designed for harsh environment applications such as military tactical communications, avionics, offshore systems, outside broadcast, mining and plant.

The HXB-15 Connectors uses expanded and collimated beams to couple optical fibers without any contact. It could allow for optics to be used in areas that have been quite restrictive due to presence of damage or contamination at the fiber end. Hermaphroditic connector design enables fast deployment by daisy-chaining multiple cable segments. HXB15 connectors also enable transfer of electrical signal or power using hybrid insert configuration.

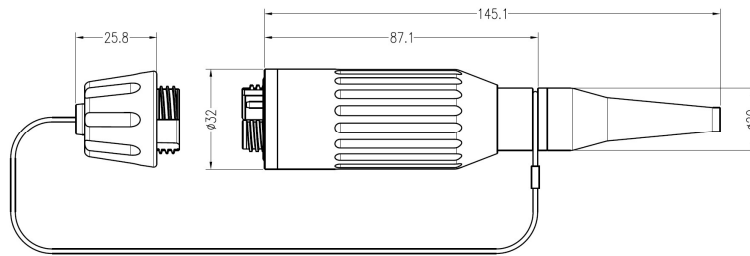
### Specification

Optical Performance		
Insertion Loss	Typical 0.8 - 1.8 dB @ 1310, 1550 nm Typical 0.5 - 1.0 dB @ 850, 1300 nm	Single mode Multi mode
Return Loss	> 32 dB	Single mode only
Mechanical performance		
Durability	3,000 mating cycles	
Operating Temperature	-40 °C to 85 °C	
Storage Temperature	-55 °C to 85 °C	
Water Immersion	Up to 15 m	
Free Fall	500 falls @ 1.2 m	
Vibration	10 - 500 Hz, 3 axis, 0.75 mm, 10 g	
Shock	11 ms, 3 axis, 50 g	

# HXB15 CONNECTOR

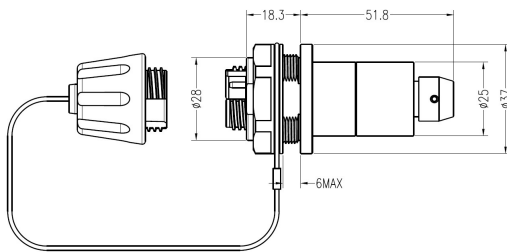
## Dimensions

- HXB15 Plug

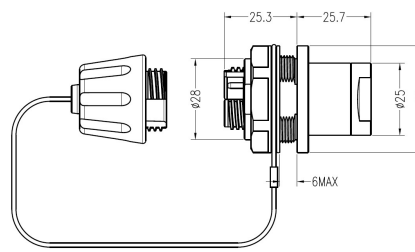


Standard Plug

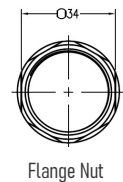
- HXB15 Receptacle - Jam Nut



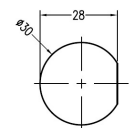
Standard Receptacle



Low profile Receptacle



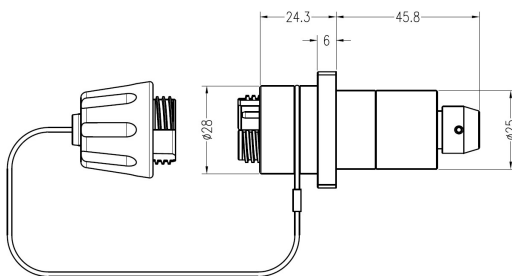
Flange Nut



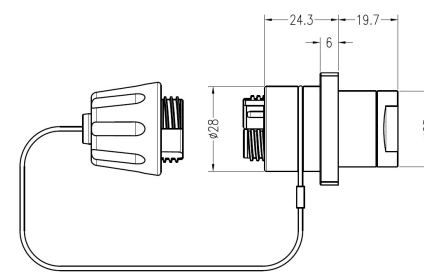
Mount Panel Cut Out

D-Hole Mount Data

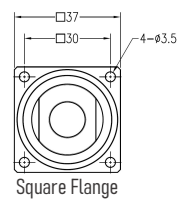
- HXB15 Receptacle - Square Flange



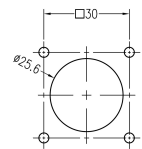
Standard Receptacle



Low profile Receptacle



Square Flange



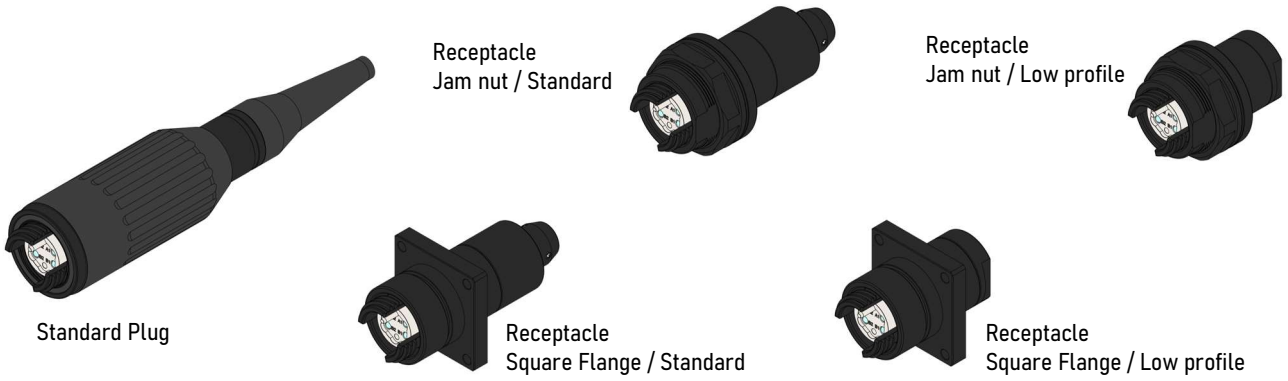
Mount Panel Cut Out

Square Flange Mount Data

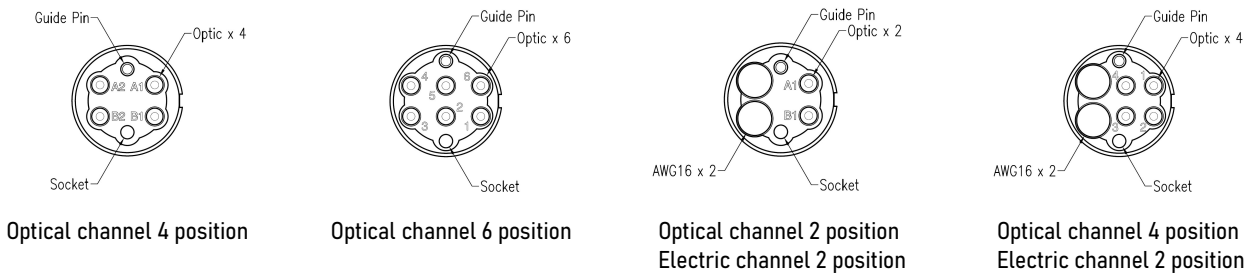
**Note.** Other configurations, materials and finishes available upon request

# HXB15 CONNECTOR

## Modelings



## Insert Arrangement



## HXB Connector Series



**Note.** Other configurations, materials and finishes available upon request

# HXB15 CONNECTOR

## ORDER INFORMATION

Order Example )

**Plug** HXB15 P - SD - B - 04 - M1 - D55 \_(C02)  
**Receptacle** HXB15 R - JS - B - 04 - M1 - S20 \_(C02)

1
2
3
4
5

<b>Connector style</b> 1	SD	Plug with Dust cap
	JS	Receptacle, Jam nut, Standard, Dust cap
	JL	Receptacle, Jam nut, Low profile, Dust cap
	QS	Receptacle, Square Flange, Standard, Dust cap
	QL	Receptacle, Square Flange, Low profile, Dust cap
	CX	Customized connector type
<b>Material &amp; Finish</b> 2	B	Aluminum alloy, Black hard anodize
	O	Aluminum alloy, Olive drab
	P	Stainless steel, Passivate
	X	Others
<b>Arrangement</b> 3	O2	Optical 2 channel
	O4	Optical 4 channel
	O6	Optical 6 channel
	H2	Optical 2 channel, AWG 16 2 channel
	H4	Optical 4 channel, AWG 16 2 channel
	OX	Others
<b>Fiber</b> 4	S1	9 μm Single mode fiber
	M1	62.5 μm core Multi mode fiber
	M2	50 μm core Multi mode fiber
<b>Cable Option</b> 5	S09	0.9 mm Buffer fiber - JL, QL
	S20	2.0 mm Jacket fiber - JS, QS
	D55	5.5 mm Diameter Outdoor cable -SD, JS, QS
	DXX	Others

**Note.** Other configurations, materials and finishes available upon request

### EXAMPLE:

➔ HXB15P-SD-B-04-M1-D55\_(C02)

Plug with Dust Cap,  
 Aluminum alloy, Black hard anodize  
 Optical 4 channel, 62.5 μm fiber  
 850, 1300 nm Wavelength  
 Cable Out Diameter 5.5 mm



# Fiber Optic Connector Series

Fiber Optic Connector, Circular, Hermaphroditic, Hybrid, MIL-83526, Expanded beam, 2-4 Optical channels, Plug, In-Line Mount, Receptacle, Jam nut, Square flange mount, Bulkhead, Defense, Avionics, Mining, Offshore, Broadcast, Rugged field deployable applications



## HXB13 CONNECTOR

- Advanced expanded beam technology
- Rugged field deployable fiber optic connector
- Hermaphroditic interconnection
- 2 to 4 Optical Channels for Single or Multi-mode
- Custom configuration available
- Environmental sealing (IP68)
- Very high resistance to vibration, shock, environmental effects, dust, and debris

### Description

The HXB13 Connectors, featuring expanded beam technology, hermaphroditic connection, rugged construction for field deployment have been designed for harsh environment applications such as military tactical communications, avionics, offshore systems, outside broadcast, mining and plant.

The HXB-13 Connectors uses expanded and collimated beams to couple optical fibers without any contact. It could allow for optics to be used in areas that have been quite restrictive due to presence of damage or contamination at the fiber end. Hermaphroditic connector design enables fast deployment by daisy-chaining multiple cable segments.

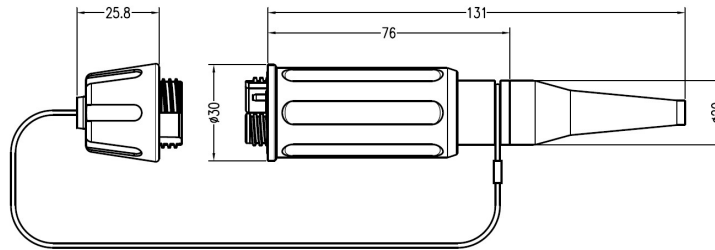
### Specification

Optical Performance		
Insertion Loss	Typical 0.8 - 1.8 dB @ 1310, 1550 nm Typical 0.5 - 1.0 dB @ 850, 1300 nm	Single mode Multi mode
Return Loss	> 32 dB	Single mode only
Mechanical performance		
Durability	3,000 mating cycles	
Operating Temperature	-40 °C to 85 °C	
Storage Temperature	-55 °C to 85 °C	
Water Immersion	Up to 15 m	
Free Fall	500 falls @ 1.2 m	
Vibration	10 - 500 Hz, 3 axis, 0.75 mm, 10 g	
Shock	11 ms, 3 axis, 50 g	

# HXB13 CONNECTOR

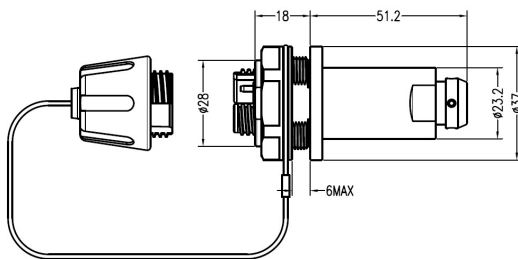
## Dimensions

- HXB13 Plug

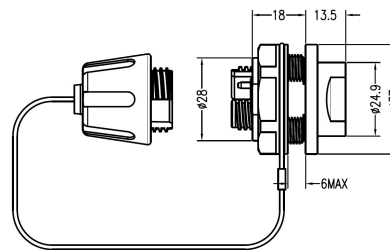


Standard Plug

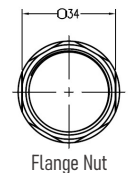
- HXB13 Receptacle - Jam Nut



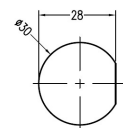
Standard Receptacle



Low profile Receptacle



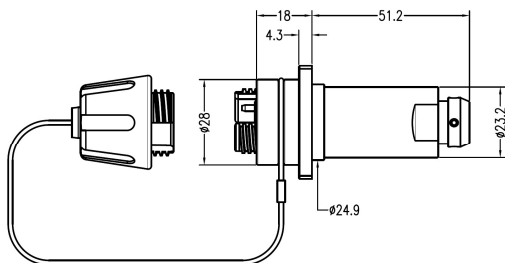
Flange Nut



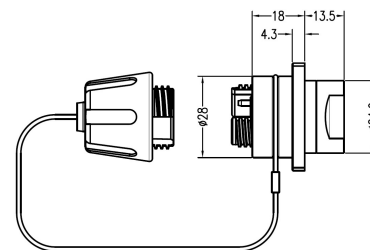
Mount Panel Cut Out

D-Hole Mount Data

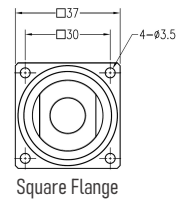
- HXB13 Receptacle - Square Flange



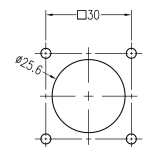
Standard Receptacle



Low profile Receptacle



Square Flange



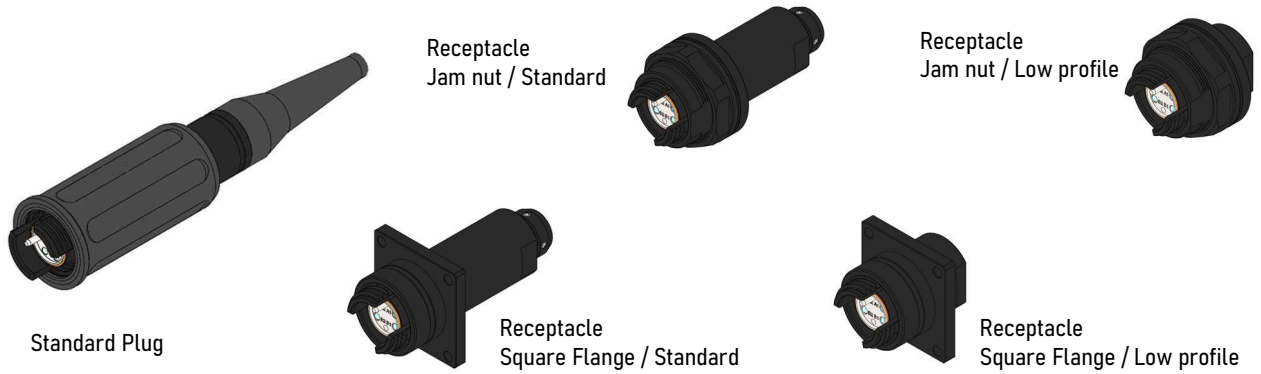
Mount Panel Cut Out

Square Flange Mount Data

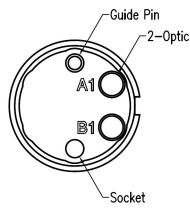
**Note.** Other configurations, materials and finishes available upon request

# HXB13 CONNECTOR

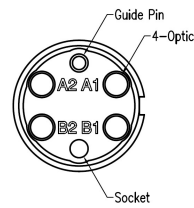
## Modelings



## INSERT ARRANGEMENT



Optical channel 2 position



Optical channel 4 position

## HXB Connector Series



**Note.** Other configurations, materials and finishes available upon request



# HXB13 CONNECTOR

## ORDER INFORMATION

Order Example )

**Plug** HXB13 P - SD - B - 04 - M1 - D55 \_(C02)  
**Receptacle** HXB13 R - JS - B - 04 - M1 - S20 \_(C02)  
1      2      3      4      5

<b>Connector style</b> 1	SD	Plug with Dust cap
	JS	Receptacle, Jam nut, Standard, Dust cap
	JL	Receptacle, Jam nut, Low profile, Dust cap
	QS	Receptacle, Square Flange, Standard, Dust cap
	QL	Receptacle, Square Flange, Low profile, Dust cap
	CX	Customized connector type
<b>Material &amp; Finish</b> 2	B	Aluminum alloy, Black hard anodize
	O	Aluminum alloy, Olive drab
	P	Stainless steel, Passivate
	X	Others
<b>Arrangement</b> 3	O2	Optical 2 channel
	O4	Optical 4 channel
	OX	Others
<b>Fiber</b> 4	S1	9 μm Single mode fiber
	M1	62.5 μm core Multi mode fiber
	M2	50 μm core Multi mode fiber
<b>Cable Option</b> 5	S09	0.9 mm Buffer fiber - JL, QL
	S20	2.0 mm Jacket fiber - JS, QS
	D55	5.5 mm Diameter Outdoor cable -SD, JS, QS
	DXX	Others

**Note.** Other configurations, materials and finishes available upon request

### EXAMPLE:

→ HXB13P-SD-B-04-M1-D55\_(C02)

Plug with Dust Cap,  
 Aluminum alloy, Black hard anodize  
 Optical 4 channel, 62.5 um fiber  
 850, 1300 nm Wavelength  
 Cable Out Diameter 5.5 mm



# Fiber Optic Connector Series

Fiber Optic Connector, Circular, Hermaphroditic, Hybrid, MIL-83526, Expanded beam, 2-4 Optical channels, Plug, In-Line Mount, Receptacle, Jam nut, Square flange mount, Bulkhead, Defense, Avionics, Mining, Offshore, Broadcast, Rugged field deployable applications



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- Environmental sealing (IP68)
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The HXB-11 Connector uses expanded and collimated beams to couple optical fibers without any contact. It could allow for optics to be used in areas that have been quite restrictive due to presence of damage or contamination at the fiber end. Hermaphroditic connector design enables fast deployment by daisy-chaining multiple cable segments.

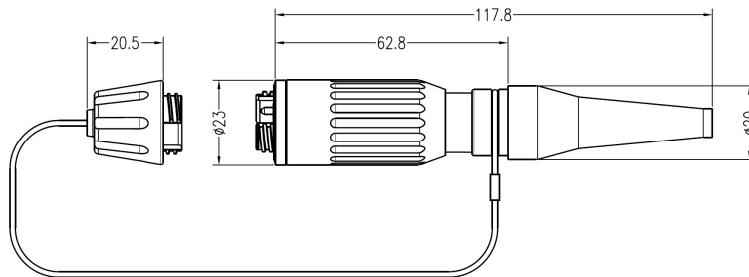
### Specification

Optical Performance		
Insertion Loss	Typical 0.8 - 1.8 dB @ 1310, 1550 nm Typical 0.5 - 1.0 dB @ 850, 1300 nm	Single mode Multi mode
Return Loss	> 32 dB	Single mode only
Mechanical performance		
Durability	3,000 mating cycles	
Operating Temperature	-40 °C to 85 °C	
Storage Temperature	-55 °C to 85 °C	
Water Immersion	Up to 15 m	
Free Fall	500 falls @ 1.2 m	
Vibration	10 - 500 Hz, 3 axis, 0.75 mm, 10 g	
Shock	11 ms, 3 axis, 50 g	

# HXB11 CONNECTOR

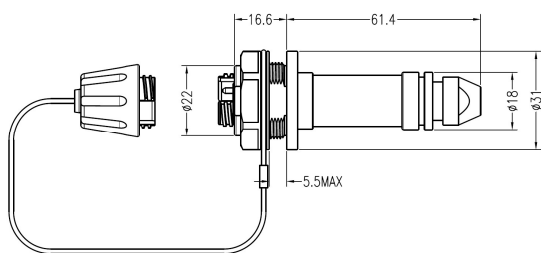
## Dimensions

- HXB11 Plug

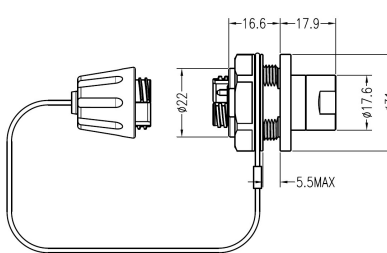


Standard Plug

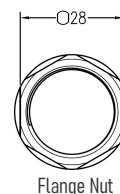
- HXB11 Receptacle - Jam Nut



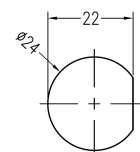
Standard Receptacle



Low profile Receptacle



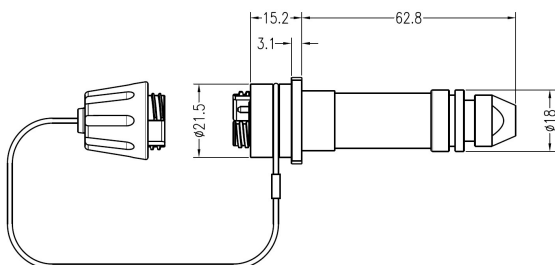
Flange Nut



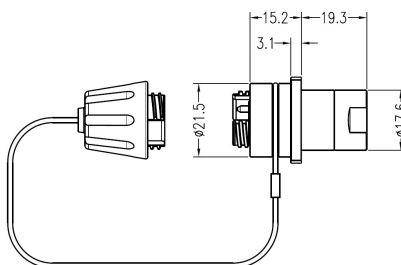
Mount Panel Cut Out

D-Hole Mount Data

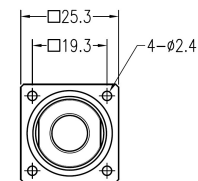
- HXB11 Receptacle - Square Flange



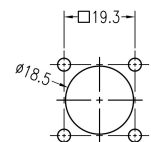
Standard Receptacle



Low profile Receptacle



Square Flange



Mount Panel Cut Out

Square Flange Mount Data

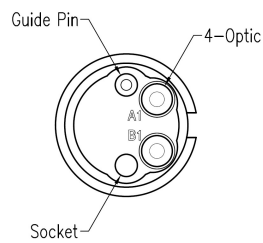
**Note.** Other configurations, materials and finishes available upon request

# HXB11 CONNECTOR

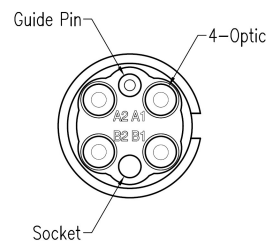
## Modelings



## Insert Arrangement



Optical channel 2 position



Optical channel 4 position

## HXB Connector Series



**Note.** Other configurations, materials and finishes available upon request

# HXB11 CONNECTOR

## ORDER INFORMATION

Order Example )

**Plug** HXB11P - SD - B - 04 - M1 - D55 \_(C02)  
**Receptacle** HXB11R - JS - B - 04 - M1 - S20 \_(C02)

1
2
3
4
5

<b>Connector style</b> 1	SD	Plug with Dust cap
	JS	Receptacle, Jam nut, Standard, Dust cap
	JL	Receptacle, Jam nut, Low profile, Dust cap
	QS	Receptacle, Square Flange, Standard, Dust cap
	QL	Receptacle, Square Flange, Low profile, Dust cap
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<b>Material &amp; Finish</b> 2	B	Aluminum alloy, Black hard anodize
	O	Aluminum alloy, Olive drab
	X	Others
<b>Arrangement</b> 3	O2	Optical 2 channel
	O4	Optical 4 channel
	OX	Others
<b>Fiber</b> 4	S1	9 μm Single mode fiber
	M1	62.5 μm core Multi mode fiber
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<b>Cable Option</b> 5	S09	0.9 mm Buffer fiber - JL, QL
	S20	2.0 mm Jacket fiber - JS, QS
	D55	5.5 mm Diameter Outdoor cable -SD, JS, QS
	DXX	Others

**Note.** Other configurations, materials and finishes available upon request

### EXAMPLE:

→ HXB11P-SD-B-04-M1-D55\_(C02)

Plug with Dust Cap,  
 Aluminum alloy, Black hard anodize  
 Optical 4 channel, 62.5 μm fiber  
 850, 1300 nm Wavelength  
 Cable Out Diameter 5.5 mm

