



Expanded Beam Fiber Optic Connectors



FemtoBeam introduces state-of-the-art Expanded Beam Fiber Optic Connectors, meticulously crafted to meet stringent MIL-DTL-83526/20 & /21 Military Specifications. Engineered for reliability in challenging environments, these connectors utilize non-contact fibre optic termini positioned behind advanced anti-reflective coated ball lenses. This innovative design significantly enlarges the beam size, ensuring precise optical alignment and resilience against dust, debris, vibrations, and environmental factors.

Features and Benefits

- **Exceptional Durability:** Withstand over 3,000 mating cycles without wear, ensuring a long service life.
- **Versatile Connectivity:** Hermaphroditic design allows flexible integration of multiple plug-to-plug cable assemblies.
- **Configurations:** Available in two or four channels with options for single mode or multimode lenses.
- **Enhanced Options:** Includes 45- and 90-Degree Back shell options, and a Low Profile Back shell for space-constrained applications.
- **Compatibility:** Receptacle to LC Adapter facilitates integration with LC Duplex interfaces.

Applications

- **Military & Defence:** FemtoBeam connectors are deployed in military communication networks, providing robust, reliable connections critical for mission success.
- **Aerospace:** Essential in aerospace applications for data transmission in avionics systems, ensuring secure and uninterrupted connectivity.
- **Mining & Heavy Equipment:** Used in mining operations and heavy equipment for reliable data and communication links in rugged environments.
- **Factory Automation:** Facilitate seamless data transmission and control in factory automation systems, enhancing operational efficiency.
- **Marine & Offshore:** Withstand maritime conditions, providing reliable fibre optic connections on ships and offshore platform.

FBEAM Sr.

- Large size - Shell size 15
- 2 , 4 , 6, 8 Optical Channels
- Optical 2Ch / AWG16 2Ch / AWG20 2Ch
- Intermateability : Tyco Pro Beam Sr., Stratos HMA, Fibreco Senior

FBEAM Jr.

- 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,

FBEAM Mini

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

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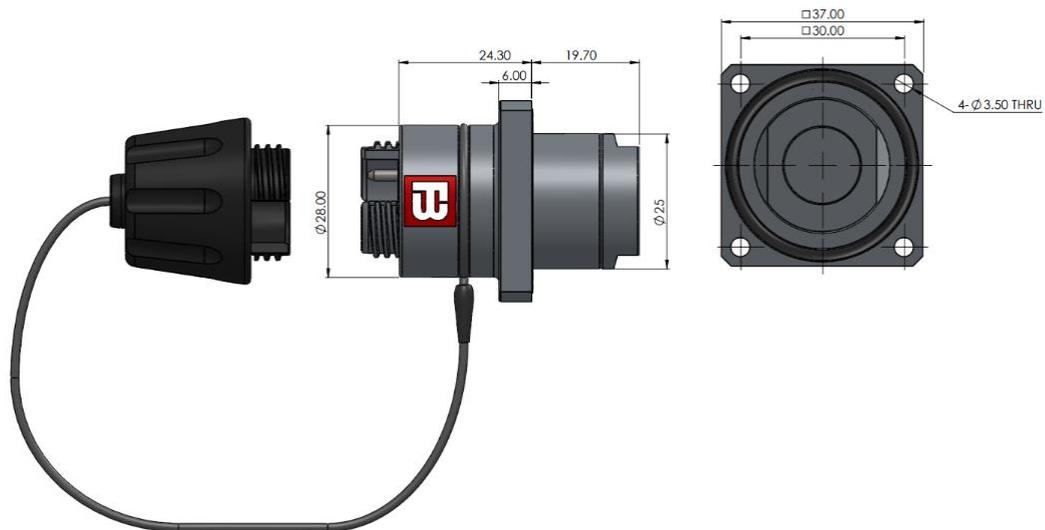
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- **Broadcast & Entertainment:** Ensure high-quality audio and video transmission in broadcast studios and entertainment venues.
- **Pro-Audio & Sensing:** Ideal for sensitive audio/video applications and sensing technologies requiring robust optical connections.

Specifications

Insertion Loss, SM	Typical 0.5 - 1.8 dB @ 1310, 1550 nm
Insertion Loss, MM (50, 62.5/125µm)	Typical 0.5 - 1.0 dB @ 850, 1300 nm
Return Loss	-33 dBm
Durability	3000 Mating cycles
Operating Temperature	-40 °C to 85 °C
Storage Temperature	-55 °C to 85 °C
Water Immersion	Up to 15 m
Vibration	10 - 500 Hz, 3 axis, 0.75 mm, 10 g
Shock	11 ms, 3 axis, 50 g

Detailed Model of FBEAM 13 Low profile receptacle



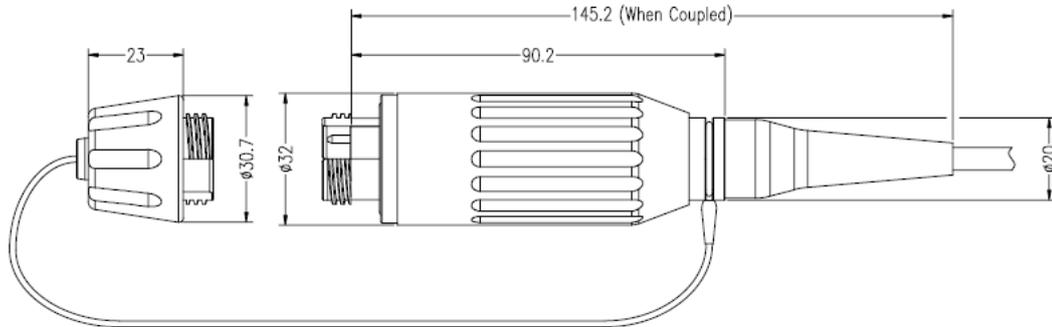
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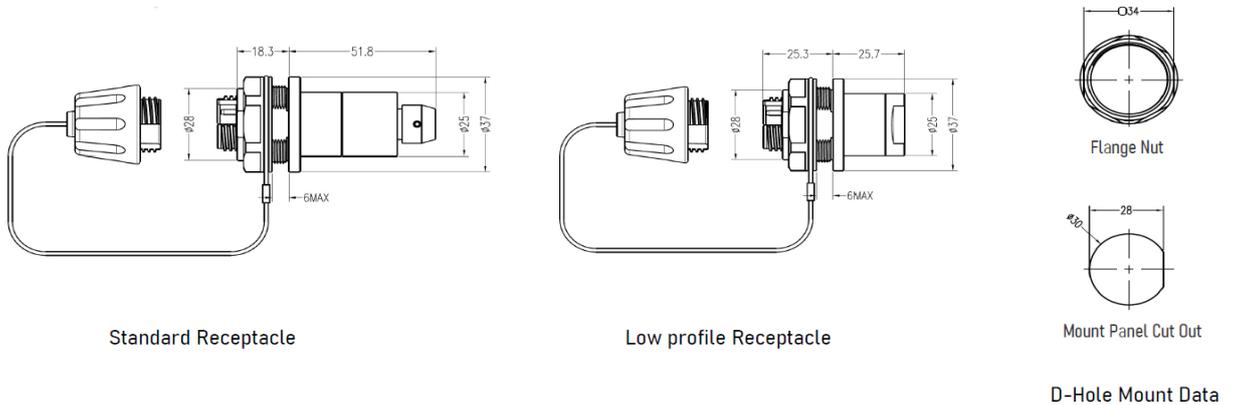
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FBEAM Sr Dimensions

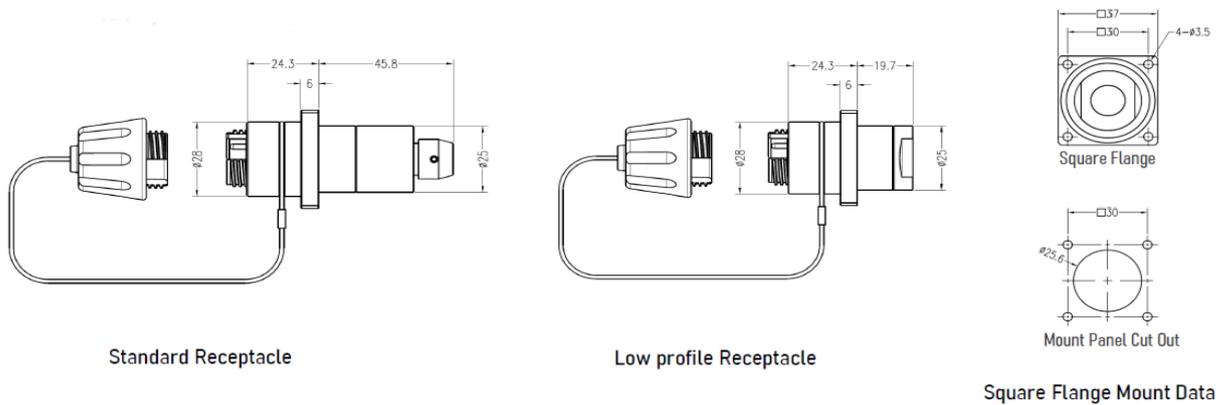
- FBEAM Sr Plug



- FBEAM Sr Receptacle - Jam Nut



- FBEAM Sr Receptacle – Square Flange



FBEAM Sr Models



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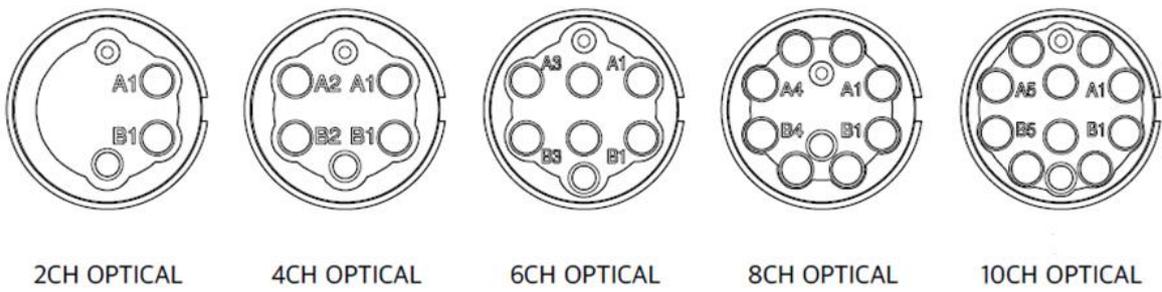
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FBEAM Sr Insert Arrangements



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Expanded Beam Fiber Optic Connectors

FBEAM Sr Partnumbering

Series:	-PFD	-A	-4	- S1	-S20
FBeam Sr					
Connector:	PFD- Standard Plug with Dust cap RFS-Receptacle Square Flange Standard Dust Cap RFL-Receptacle Square Flange Low Profile Dust Cap RFBL-Receptacle Jam Nut Low Profile Dust Cap RFBS-Receptacle Jam Nut Standard Dust Cap				
Material & Finish	A - Aluminum Alloy Black Hard Anodized S - Stainless Steel Passivated				
Channel Count	02, 04 ,06 ,08,10				
Tyber Type	S1 - SM - 9 μm core Singlemode Fiber M1- OM1 - 62.5 μm core Multimode Fiber M2- OM2 - 50 μm core Multimode Fiber M3 - OM3 - 50 μm core Multimode Fiber				
Cable Diameter	F09 0.9 mm Buffered Fiber F20 2.0 mm Jacketed Cable F55 5.5 mm Outdoor Cable				

Example: FBeam Sr-PFD-S-08-S1-F55 (Stainless stell passivated Standard Plug with 8 Channel Expanded Beam Insert for Single mode Fiber supports 5.5mm Outdoor cable termination)

Femto Beam Expanded Beam Fiber Optic Connectors are the trusted choice across diverse industries for their durability, versatility, and reliable performance in critical applications. Contact us today to learn more about how Femto Beam can enhance your connectivity solutions.

Military Tac communication



Avionics



Broadcast



Off shore Mining



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