

Senior Expanded Beam Connector

Fiber Optic Connectors

The Cinch Advantage

The Senior Fiber Optic Connectors have been designed for use in the most demanding harsh environment applications including military tactical communications, outside broadcast, petrochemical plant, mining, and offshore systems.

The Senior connector range includes 1, 2, 4, 6 and 8 optical channel versions and four fiber optic / electrical hybrid variants.

The connectors are terminated using an epoxy-polish ferrule termination process with standard fiber optic termination tools and equipment. The terminated ferrules are simply inserted into the expanded beam housing and fixed in place via a spring and cover-plate. Ferrule alignment to the lenses is achieved automatically by the unique optical arrangement developed and patented by Cinch-Fibreco. In hybrid connectors, electrical connections are made via standard gold plated MIL-C-39029 crimp contacts.

In the event of the connector suffering severe damage in use, the connector design enables replacement of the expanded beam insert, connector front body and grip ring without the need to re-terminate the fibers. Typically, an expanded beam insert can be replaced within 30 minutes in field conditions.

The Senior expanded beam connectors offer high performance, flexibility and cost effectiveness, combined with a simple termination process allowing rapid in-field termination and repair.

Features

- 1 to 8 Optical Channels
- Fiber Optic / Electrical hybrid variants
- Singlemode or Multimode
- Field terminable / repairable
- Hermaphroditic design
- Aluminum, Nickel Aluminum Bronze or Stainless Steel shell options
- Four bulkhead mounts available - Square Flange, D-Hole and low-profile versions of each
- RoHS compliant



Outline Specification

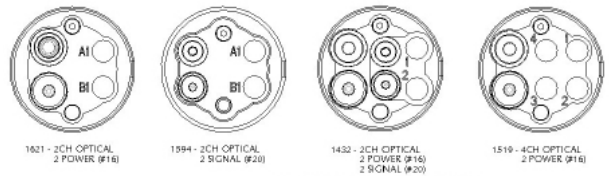
Senior Expanded Beam Connector

Insertion Loss	9/125 Fiber at 1310nm / 1550nm: 1 to 4 channels: -1.5dB max / 6 & 8 channels: -2.0dB max* 50/125 Fiber at 850nm / 1300nm: 1 to 4 channels: -1.0dB max / 6 & 8 channels: -1.5dB max*		
Return Loss	> 32dB (typical 40dB) singlemode / >20dB multimode*		
Electrical: Power Contacts	Size 20 & size 16 MIL-C-39029/93A & 94A. Contact resistance <4mΩ. Operating voltage 1000VAC. Operating current 5A (short term 15A)		
Electrical: Test Voltage	Between contacts and contact / housing: 3000V / 50 Hz, 1 minute EN61984		
Durability	3000 Matings minimum		
Operating Temperature	-40°C to +85°C		
Storage Temperature	-55°C to +85°C		
Water Immersion	IP68		
Free Fall Resistance	500 Falls from 1.2m height		
Vibration	10-500Hz, 3 directions, 0.75mm amplitude @ 10g acceleration		
Bump	4000 bumps @ 40g acceleration		
Crush Resistance	6.7kN		
Corrosion Resistance	500 Hours Salt Spray		
Cable Retention	1500N (Cable Dependant)		
Weight (approx)	Aluminum	Stainless Steel	Nickel Aluminum Bronze
Plug:	160g	300g	285g
Bulkhead:	150g	255g	240g
Connector Shell Material / Color	Black anodised Aluminum, Nickel Aluminum Bronze or Stainless Steel Grip & Boot. Black or Olive Green		

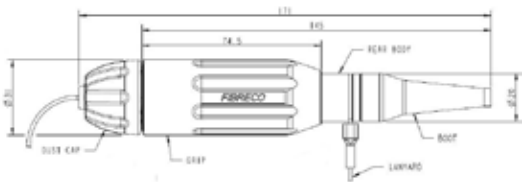
Optical Insert Arrangements



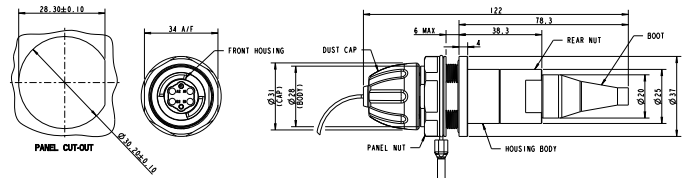
Hybrid Insert Arrangements



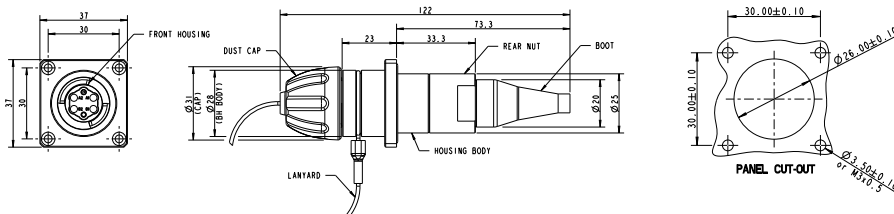
Plug Connector



Bulkhead Connector D-Hole Mount



Bulkhead Connector Square Flange Mount



Cinch Connectivity Solutions reserves the right to change specifications without notice



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