Senior Expanded Beam Connector

Fiber Optic Connectors

The Cinch Advantage

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 five 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
- Low insertion loss / high return loss
- Field terminable / repairable
- Hermaphroditic design
- Aluminum, Nickel Aluminum Bronze or Stainless Steel shell options

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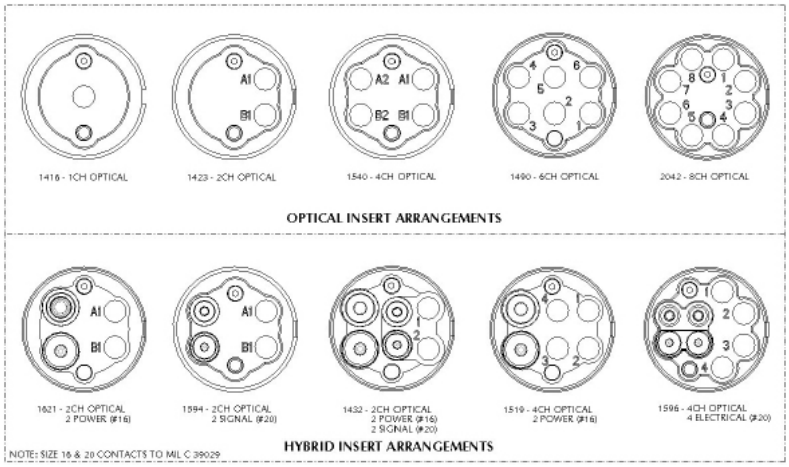
Outline Specification

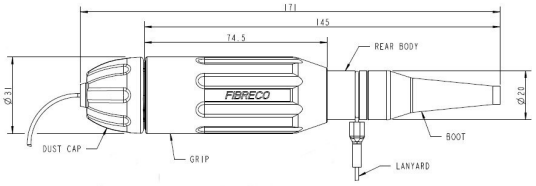
Senior Expanded Beam Connector - Outline Specification

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. Contact resistance <4mΩ. Operating voltage 1000VAC. Operating current 5A (short term 15A)			
Electrical: Test Voltage	Between contacts and contact / housing: 3000V / 50Hz, 1 minute EN61984			
Durability	3000 Matings minimum			
Operating Temperature	-40°C to +85°C			
Storage Temperature	-55°C to +85°C			
Water Immersion	15m			
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			

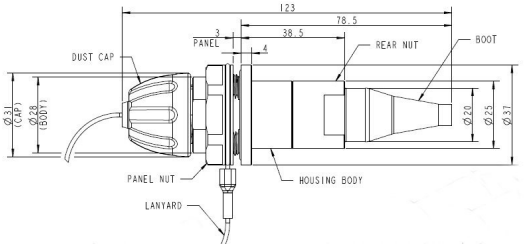
*Measurements against reference—random mate performance in line with MIL83526



Plug Connector



Bulkhead Connector D-Hole Mount



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