



Fiber Optic Cable Expanded Beam Systems

EXPANDED BEAM SYSTEMS



The **PMD expanded beam fibre optic system** has been designed for use in the most demanding harsh environment applications including military tactical communications, outside broadcast, petrochemical plant, mining, and offshore systems.

The system consists of a ruggedised fibre optic cable assembly supplied on a high quality deployable reel terminated with free plugs, and pigtailed D-hole mount bulk-head connectors. The connectors utilise advanced expanded beam technology to ensure reliable optical performance in the most extreme environmental conditions, and feature hermaphroditic coupling, fully sealed shell and rubber covered grip ring. The connector is easily cleaned and requires no maintenance.

Standard cable lengths are 50m, 100m and 150m. These can be daisy-chained for longer transmission distances. Custom cable lengths can also be supplied.

The PMD expanded beam system offers high performance, flexibility and cost effectiveness for all critical field deployable harsh environment communication systems.



More product information at www.videlco.eu

Multimode Expanded Beam System



- Fully Sealed Ruggedised Hermaphroditic Connectors
- Multimode 50/125 & 62.5/125 Versions.
- 1 to 4 Channel Configurations.
- Rugged Military Specification Deployable Cable.
- Available as Patchcords and Pigtailed Bulkheads.
- Accessories include Patchpanels, Cable Reels & Loopbacks

Singlemode Expanded Beam System

- Fully Sealed Ruggedised Hermaphroditic Connectors
- Singlemode 9/125 Fibre
- 1 to 4 Channel Configurations
- Rugged Military Specification Deployable Cable
- Available as Patchcords & Pigtailed Bulkheads
- Accessories include Patchpanels, Cable Reels & Loopbacks



Connector Performance:

	MULTIMODE	SINGLEMODE
Insertion Loss	50/125 & 62.5/125 at 850nm / 1300nm: -1.0dB	9/125 Fibre at 1310nm / 1550nm: -1.5dB maximum
Return Loss		>-30dB
Durability	2000 Matings minimum	2000 Matings minimum
Operating Temperature	-40°C to +85°C	-40°C to +85°C
Storage Temperature	-55°C to +85°C	-55°C to +85°C
Water Immersion	1m	1m
Free Fall Resistance	500 Falls from 1.2m height	500 Falls from 1.2m height
Crush Resistance	3000N	3000N
Corrosion Resistance	500 Hours salt spray	500 Hours salt spray
Cable Retention	2000N	2000N

All tests compliant with BS EN 186000-1

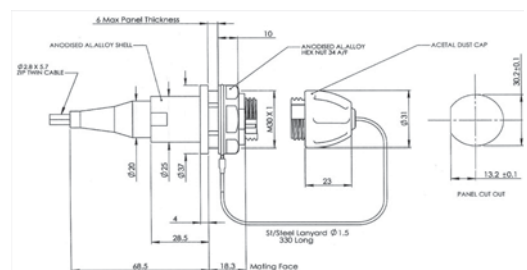
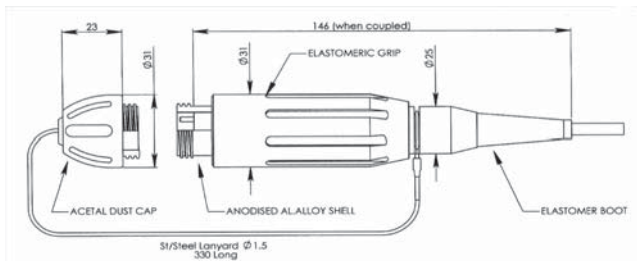
Hybrid Expanded Beam Systems



- 4x Singlemode Fibre Optic Channels
- 2x Size 16 MIL-C-39029 Power Contacts
- Field Terminable Plug and Bulkhead Connectors
- Fully Sealed Ruggedised Hermaphroditic Construction
- Compatible with hybrid cables up to 7.5mm diameter.



The system consists of a ruggedised hybrid electrical / fibre optic cable assembly supplied on a high quality deployable reel terminated with free plugs, and pigtailed D-hole mount bulkhead connectors. The connectors utilise advanced expanded beam technology to ensure reliable optical performance in the most extreme environmental conditions, and feature hermaphroditic coupling, fully sealed shell and rubber covered grip ring. The connector is easily cleaned and requires no maintenance. Electrical connections are made via standard gold plated MIL-Specification contacts.



Connector Performance:

Optical: Insertion Loss	9/125 Fibre at 1310nm / 1550nm : Maximum -1.5dB
Optical: Return Loss	>-30dB
Electrical: Power Contacts	Size 16 MIL-C-39029. Max 600Vrms, 10 Amp. Contact resistance <4mΩ
Electrical: Signal Contacts:	Size 20 MIL-C-39029. Max 42Vrms, 3 Amp. Contact resistance <5mΩ
Durability	2000 Matings minimum
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +85°C
Water Immersion	1m
Free Fall Resistance	500 Falls from 1.2m height
Crush Resistance	3000N
Corrosion Resistance	500 Hours salt spray
Cable Retention	700N Minimum, Cable Dependant

Hybrid Expanded Beam Systems

- 4x Singlemode Fibre Optic Channels
- 2x Size 16 MIL-C-39029 Power Contacts
- Field Terminable Plug and Bulkhead Connectors
- Fully Sealed Ruggedised Hermaphroditic Construction
- Compatible with hybrid cables up to 7.5mm diameter.

PMD hybrid expanded beam fibre optic connectors have been designed for use in the most demanding harsh environments including military tactical communications systems, television outside broadcast, mobile CCTV and many other industrial applications.

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The connectors utilise advanced expanded beam technology to ensure reliable optical performance in the most extreme environmental conditions, and feature fully sealed shells, hermaphroditic coupling, and rubber covered grip rings. The connectors are easily cleaned and require no maintenance.

PMD hybrid connectors are field terminable using standard termination tools and polishing equipment. Electrical connections are made via standard gold plated MILSpecification crimp contacts.

PMD hybrid expanded beam system offers high performance, flexibility and cost effectiveness for all critical external applications where electrical power is required in addition to high performance singlemode optical transmission.

