Advanced Lightwave Interconnect

Setting the Standards for Airborne Optical Applications

Packard Hughes INTERCONNECT

The Packard-Hughes Interconnect Fiber Optic Advanced Flight Interconnect (AFI)™

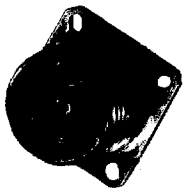
The AFI™ Fiber Optic connector from Packard-Hughes Interconnect incorporates many advanced features required to interface Flight Critical Systems. PHI's coupling mechanism offers a rugged positive locking (anti-vibration) feature, in addition provides for increased mating cycles. This feature is transparent to the user and complies with MIL-C-38999 Series III. The AFI™ houses high performance fiber optic termini per MIL-T-29504/14&15 (ceramic).

Feature Guidelines

Installation footprint and all other dimensional characteristics comply with MIL-C-38999 Series III.
Backshell coupling thread complies with MIL-C-38999 Series III.
Available in shell sizes 11, 15, 17, 19, 21, 23 and 25.
Termini conform to MIL-T-29504/14&15.
Interchangeable with MIL-C-38999 Series III but not intermateable.
Dedicated Fiber Optic connector.
Termini/cabling density equals or better than MIL-C-38999.
No special tools required.
Repeatable alignment of mating fiber.
Improved coupling mechanism to withstand high vibration applications.
Plugs/receptacles support either pin or socket termini arrangement.
Socket insert available with "Detachable Face" providing for quick termini optical face cleaning.

Applications

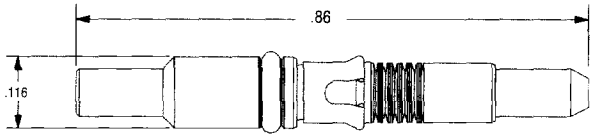
- Commercial Aviation.
- Avionics.
- Military Tactical Deployment.
- Datalink for Shipboard and Communicatoins.

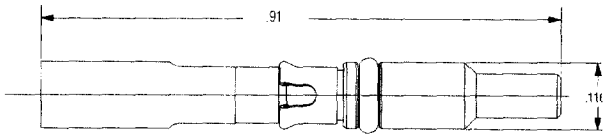



Connector Specifications

Durability	1000 cycles per MIL-STD-1344
Vibration	Per MIL-C-38999 Series III
Thermal Cycling	Per MIL-C-38999 Series III
Fluid Immersion	Per MIL-C-38999 Series III
Humidity	Per MIL-C-38999 Series III
Mechanical Shock	Per MIL-C-38999 Series III
Optical Insertion Loss	.5dB EIA-455-2 **Average loss 62.5 micron core*

Ceramic Termini





** Single mide applications require the use of Ceramic Termini.*

Materials and Finishes

	CeramicTermini	
Description	**Materials**	**Finishes**
Terminus Body	Stainless Steel	Passivate
Alignment Sleeve	Ceramic	None
Fiber Guide Bushing	Ceramic	None
Retaining Clip	Beryllium Copper	None
Belleville Springs	Beryllium Copper	None
Alignment Sleeve Cover	Beryllium Copper	Nickel
O-Ring Seal	Flourosilicone Rubber	None

38999 (AFI) Plug, Wall Mount, Jam-Nut Receptacles Part Numbers

1126340 - 1 D F P 1

TYPE

1 - Plug
2 - Receptacle Wall-Mount
3 - Receptacle Jam-Nut

SIZE

B	D	E	F	G	H	J
11	15	17	19	21	23	25

Class

C - Aluminum Hard Anodized
F - Aluminum Electroless Nickel Plated
T - Stainless Steel Passivated

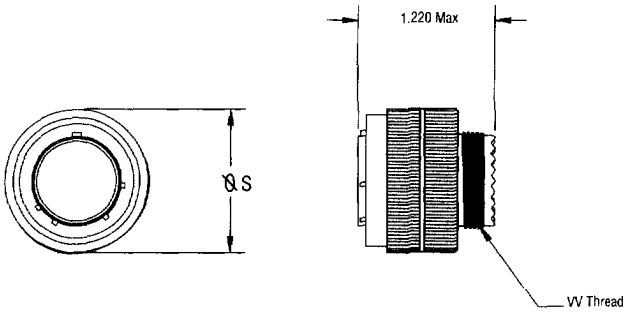
Contact

P - Pin
S - Socket
R - Socket, Removeble Face (not available in size B)

Polarization Positions

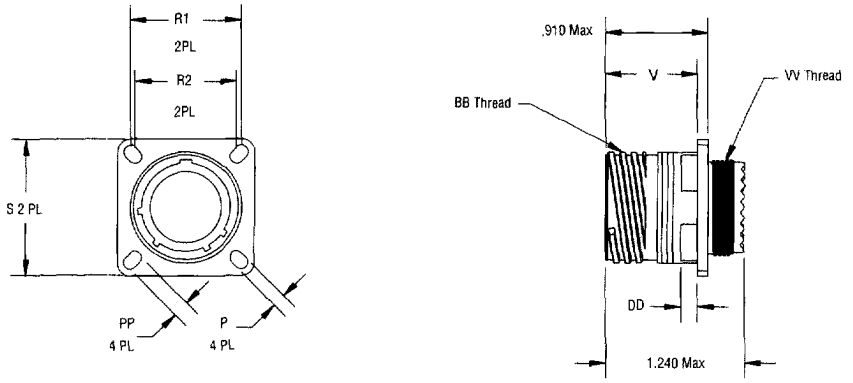
1, 2, 3, 3, 5, 6 (Universal Key)

Straight Plug



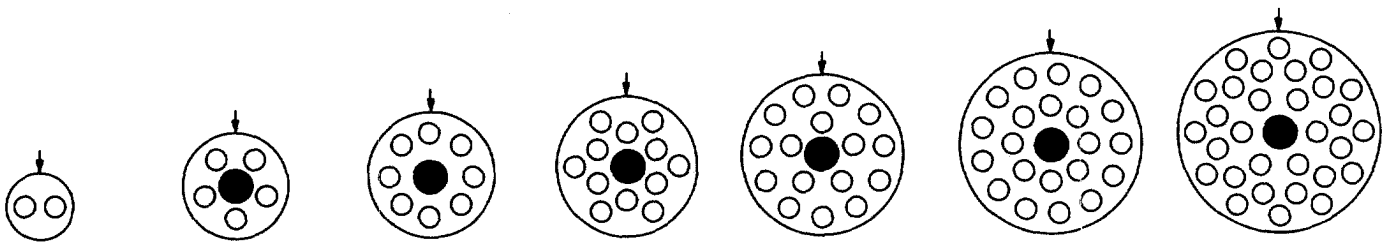
Shell Size	S Max	VV Thread Metric
11	.969	M15X1-6g
15	1.266	M22X1-6g
17	1.391	M25X1-6g
19	1.500	M28X1-6g
21	1.750	M31X1-6g
23	1.875	M34X1-6g
25	1.625	M37X1-6g

Wall Mount Receptacle



Shell Size	BB Thread Class 2A 0.1P-0.3L-TS (Plated)	V +.000 -.005	R_1	R_2	S Max	P +.000 -.005	DD Max Panel Thickness	PP +.008 -.006	VV Thread Metric
11	.7500	.820	.812	.719	1.043	.128	.234	.194	M15X1-6g
15	1.0000	.820	.969	.906	1.232	.128	.234	.173	M22X1-6g
17	1.1875	.820	1.062	.969	1.323	.128	.234	.194	M25X1-6g
19	1.2500	.820	1.156	1.062	1.449	.128	.234	.194	M28X1-6g
21	1.3750	.790	1.250	1.156	1.575	.128	.204	.194	M31X1-6g
23	1.5000	.790	1.500	1.375	1.823	.154	.204	.242	M34X1-6g
25	1.6250	.790	1.500	1.375	1.823	.154	.204	.242	M37X1-6g

Insert Arrangement



2
No. 16 termini
shell size 11

5
No. 16 termini
shell size 15

8
No. 16 termini
shell size 17

12
No. 16 termini
shell size 19

16
No. 16 termini
shell size 21

21
No. 16 termini
shell size 23

30
No. 16 termini
shell size 25

The Company

Packard-Hughes Interconnect (PHI) blends advanced technology from Hughes Aircraft with the worldclass manufacturing of Delphi Packard Electric Systems. This successful combination provides customers state-of-the-art products at prices in line with the demands of commercial markets. PHI fiber optic products were originally developed to address the rigid specifications and robust designs associated with advanced military applications. They are now available through Packard-Hughes to meet the demands for cost-efficient commercial applications while providing significant performance gains in aviation, military, computer, telecommunication and industrial applications.

Packard-Hughes Interconnect is a subsidiary of General Motors Corporation and is managed through Delphi Packard Electric Systems of General Motors. PHI has over 1,600 employees in five manufacturing facilities in North America with customer support centers located in the U.S.A. and Europe.

Irvine, California, Corporate Headquarters for Packard-Hughes Interconnect, is the center for technology development and engineering of interconnection products. A complete range of high performance fiber optic connectors are designed, manufactured and assembled at our Irvine facility.

FACILITIES and LOCATIONS WORLDWIDE

Customer support centers

Seattle, Washington
Santa Clara, California
Warren, Ohio
Kokomo, Indiana
Phoenix, Arizona
Cockeysville, Maryland
Conklin, New York
Toulouse, France
Alton, Hants, U.K.

Manufacturing Locations

Irvine, California
Tijuana, Mexico
Fort Defiance, Arizona
Foley, Alabama

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Packard-Hughes Interconnect is a subsidiary of General Motors Corporation

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