

Hermetic Electrical Penetrators, Connectors and Packages

Advanced Fiber Products Ltd. (AFP) is a leading designer, developer and manufacturer of optical and optoelectronic products for telecom/datacom, oil-and-gas, industrial, military and broadcast markets. AFP offers a wide range of components and modules in addition to specialized fiber assemblies for integration into complete solutions. The company is headquartered at Haverhill, near Cambridge, in the United Kingdom with additional manufacturing facilities in Chicago, USA.

AFP's highly miniaturized and robust multi-pin (up to 200 pins) penetrators, feed-throughs and connectors, feature hermetic ceramic sealing technology for superior in-service performance over industry-standard epoxy-based or even glass sealed electrical feedthroughs. This feedthrough technology provides end-users and integrators with extreme reliability and significant lifecycle cost savings compared to legacy solutions.

The AFP product line was developed to withstand prolonged exposure to aggressive media such as oil, mud, chemicals and salt water. The feedthroughs are qualified to perform reliably to temperatures from -55 up to 300 C° and pressures up to 35,000 psi, making them an ideal solution for down-hole, wellhead or subsea environments. The products are easily mounted to wellheads, manifolds, pipes, tanks, or in ROV/UUV for both shallow and deep-water applications. Feedthroughs are available in single and multi-pin configurations. Custom configurations and full packaging services are welcomed.

Applications

- Oil-and-Gas Industry
- Sub-Sea Exploration
- Submarine Telecom
- Aerospace
- Defence Communication and Sensing
- Energy Applications

Features

- Extreme pressures up to 35 kpsi
- Wide $T_{op} = -55, +400\text{ C}$
- Harsh environment resistant
- Swagelok, welding, flange mounts
- BeCu contacts
- Primary and secondary seals



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**Advanced
Fiber
Products**

Harsh Environment Hermetic Electrical Penetrators

Properties	Specifications
Dimensions	As required, <u>any</u> form factor
Materials feedthrough	SST, Ti, Inconel, Nitronic50, Ti/Al
Materials sealing	Ceramax
Metal plating	No plating or Au/Ni
Maximum Pressure	30 kpsi
Contact Material	BeCu and Inconel
Pin Count	1-200
Operating Temperature	-40C, +400C
IR/DWV	5000 Mega Ohms at 500V DC/up to 1000V DC
Leak Rates	<10 ⁻⁹ cc/s
Design Life time	25 years
Environment	Oil, gas, mud, salt water, etc.
Connectorization	Any type as required



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