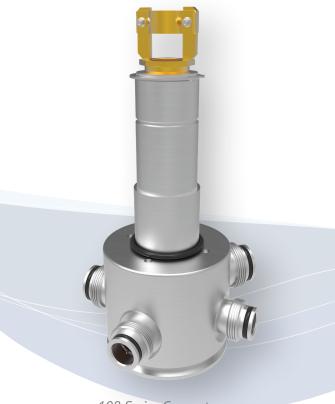
# **108 Series Submarine Hull Penetrators**

## **RELIABLE TO FULL OCEAN DEPTH**

This series incorporates our pressure hull penetrators for manned submarines around the world. These submarine hull penetrators are used to bring a circuit (electric, fiber optic and/or RF) from outside a submarine pressure hull to the inside, while assuring under all operating and failure modes there is no leak path to the inside of the submarine. The 108 series incorporates glass-to-metal sealing into the penetrator for the maximum protection of the sailors inside.

The product line offers a complete arrangement of electrical penetrators, custom cable assemblies and more. They feature dual o-rings into the hull insert sealing. Specifically, electrical cable assembly designs are geared for a fully integrated system consisting of hull penetrators, dip loops and mast receptacles. These assemblies provide complete design integration from the inboard equipment to the outboard sensor for submarine applications. Other designs are also available in turret style and bottle style penetrators.



108 Series Connector

The optic cables range from single mode optic connections

to multiple mode connections, specifically 1-15 channels for a variety of solutions. Insertion loss is less than 1.0 dB and return loss is less than -35 dB. The fiber optic cables are set to be designed to accommodate multimode fiber sizes  $50/125\mu$  or  $62.5/125\mu$  and single mode fiber size of  $9/125\mu$ .

## **PRODUCT FEATURES**

- Three-phase power
- 1-361 conductors

- Electrical and optical systems
- Sonar, communication and towed array systems



## **108 Series Connector**

Hull Penetrator Products

### **TECHNICAL SPECIFICATIONS\***

### **GENERAL SPECIFICATIONS**

Max Operational Pressure	2,000 psi (~4,500ft), for molded assemblies
Material Options	Stainless Steel, Monel, Nickel Aluminum Bronze, per NES-832 specification
ELECTRICAL SPECIFICATIONS	
Operational Current	3-8 Amps (depending on wire size)
Max Operating Voltage	625 VRMS
Insulation Resistance	5 Ghoms at 500VDC
Frequency Range	0-18 Ghz

\*Performance values generally based on historical application requirements





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