



# HIGH-RELIABILITY Glass-sealed Hermetic Connectors

Resolve gas, moisture and particle ingress problems with advanced-performance glass-sealed hermetic connectors

## Helium Leak Testing

All Series 806 hermetic connectors are 100% tested prior to shipment. A helium leak test is performed to certify the hermetic seal. This test is conducted by inducing 1 ATM of vacuum on one side of the connector. Helium gas is released on the other side, and a mass spectrometer “counts” the number of helium molecules that penetrate the connector seal. Helium leak testing takes advantage of the small size of a helium molecule compared to air or water vapor. Helium is inert, rare in our atmosphere, and is easy to detect with a mass spectrometer. Series 806 hermetic connectors are designed specifically for commercial and military aircraft zones such as engine compartments. These areas are typically exposed to fuel, oil and changes in elevation. Such conditions present the need to protect sensitive electronic equipment from the effects of caustic chemicals and moisture ingress through standard environmental connectors where high pressure leads to sealing failure. Other aircraft locations such as the fuselage require hermetic connectors to maintain passenger cabin pressure while allowing for data transmission through separated compartments of the aircraft.



## VITREOUS GLASS TECHNOLOGY ADVANTAGES

- Superior pressure resistance to 32,000+ PSI
- Higher resistance to extreme operating temperatures to 260°+ C
- Superior mechanical strength
- No material breakdown or aging over time
- Helium leak rate <math>1 \times 10^{-7}</math> cc/sec to <math>1 \times 10^{-10}</math>

Std cc/sec Approximate	Approximate Bubble Equivalent
1 x 10 <sup>-1</sup>	1 cc/10 sec
1 x 10 <sup>-2</sup>	1 cc/100 sec
1 x 10 <sup>-3</sup>	1 cc/hour
1 x 10 <sup>-4</sup>	1 cc/3 hours
1 x 10 <sup>-5</sup>	1 cc/24 hours
1 x 10 <sup>-6</sup>	1 cc/2 weeks
1 x 10 <sup>-7</sup>	3 cc/year
1 x 10 <sup>-8</sup>	1 cc/3 year
1 x 10 <sup>-9</sup>	1 cc/30 years
1 x 10 <sup>-11</sup>	1 cc/3000 years