

APPLICATION NOTE

www.ittcannon.com

Lightweight Hermetic Connector

The Challenge

Most all Mil-DTL-38999 Series III Hermetic Connectors are designed to provide compression glass sealing with no leakage in excess of 0.01 micron cubic feet per hour (x 10 to minus 7 cubic cm/s.) The connectors utilize heavy stainless steel shells that operate at an upper temperature range of 200 degree C and will withstand a pressure differential in excess 750 PSI. However, there are many water immersion applications where hermetic sealing is only required at a one atmosphere pressure differential (15 PSI) and with an operating temperature of 150 degree C or less. The challenge was to design a lightweight, hermetically sealed connector for low pressure water immersion or fording applications.

Product Features

- Lightweight aluminum shells and copper alloy contacts
- Special sealant based hermetic design
- Designed to meet the requirements of MIL-STD-810 Method 512.5 and IP67
- Offered in wall and Jam-nut mounting receptacles sizes 9-25
- Operating temperature of -55° C to +150° C
- Offered in PC Tail and poke home crimp piggyback termination with a socket on wire standard design
- Poke home crimp piggy termination uses socket on wire for both pin and socket connectors
- Available in 38999-Style standard insert patterns

Benefits to Customer

- Lowest cost hermetic connector
- Water immersion sealed
- 50% reduction in overall connector weight
- Copper based contacts provide for reduced electrical resistance
- Drop in PC tail connectors for fast termination to the PCB or flex circuitry
- Crimp versions use standard M39029/57 short socket contacts for quick cable termination, standardization and inventory reduction
- Complete 38999 design range selection



The ITT Cannon Solution

ITT Cannon's new KJAYA, a lightweight aluminum shell hermetic connector, meets the challenge and provides water proof hermetic sealing for a pressure differential of 15 PSI. The KJAYA hermetic utilizes a special sealant and the connector is designed to meet the water immersion requirements of MIL-STD-810 and IP67. The result is a low cost, hermetically sealed, aluminum based connector that also provides a 50% reduction in the connector's weight.

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