# ITT's Custom, Low-cost MIL-DTL 38999 Connectors

*Military connector features printed circuit board contact and rear seal*

ITT Interconnect Solutions has developed a custom, highly durable and low-cost MIL-DTL 38999 Series II connector that features a contact for a printed circuit board and a rear seal for use in corrosive environments. Constructed to customer specifications, the interconnect solution was not only designed to be intermateable with standard MIL-DTL 38999 connectors, but also to withstand thermal cycling and exhibit air pressure sealing to a mandatory 5 PSI.

ITT engineers created the MIL-DTL 38999 Series II connector as a modification of an existing product, thus reducing the cost of custom tooling for the customer. ITT engineers re-designed the rear insulator and shell of a Mil-DTL 38999 Series II series connector to incorporate an epoxy compound, creating a low-cost alternative to a hermetic product by evaluating many epoxy compounds in order to meet the customer’s stringent testing requirements.

The project had to run on a tight timescale during both the design and manufacturing stages, which was achieved by close cooperation between ITT design engineers and the manufacturing facility. The teamwork proved flexible enough to accommodate two customer design changes during the project.

“ITT is a renowned industry leader in reliable MIL-DTL 38999 connectors for military applications, with an enviable track record stretching back more than 30 years, during which time they have supplied more than 40 million interconnects to this important industry. In addition to the standard MIL-DTL 38999 qualified connectors, ITT regularly tackles custom and value-added designs and is now qualified to offer drawings for quotes, making it a leader in pricing quotations and adding value to its customer proposition. The company’s value-added service modifies products to suit customer needs without increasing costs. In addition, ITT engineers are skilled at creating customized connectors to provide innovative solutions and solve customers’ interconnect problems.”

Applications for the low-cost hermetic custom MIL-DTL 38999 connector with printed circuit board contact include: military communications systems, such as portable radios and military vehicle radios.

Further details are available at www.ittcannon.com [1].

**Posted by Ron M. Seidel, Editorial Intern**

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