

Step Seven: Select Wire and Cable Construction—From Convoluted Tubing to Armored and Overmolded Cable Designs



The Widest Range of Protective Materials in the Industry are Available From Glenair

Depending on your selection of input-output devices—from simple wire feed-through fittings to environmental connectors—Glenair can outfit the junction box assembly with an appropriate cable or conduit design. Tested and qualified products, including a broad range of environmental jacketing and shrink-boot materials are available for standard cable-to-connector designs. Glenair can also supply overmolded cables for harsh environments made from polymer compounds such as Viton®, Neoprene and Polyurethane.

Given the need to complete final installation of the box interconnect system on-site, many customers specify plastic and metal-core convoluted tubing as their preferred media protection material. Flexible, high-temperature convoluted tubing is an ideal material choice for interconnect systems designed around the Glenair junction box. The material provides a durable, highly-flexible enclosure for all types of wires. And Glenair is able to supply the all the end-fittings and transitions necessary to meet any installation configuration. Available materials include ETFE, FEP, PFA, PTFE and halogen-free, light weight PEEK. Glenair conduit, systems and fittings are approved to the US Navy's MIL-PRF-24758 standard. Our new FIRST Conduit Fitting System features a unique swivel design for easy installation.

Relevant Industry Standards:

IEC IP Ingress Ratings

The IP Rating indicates the measure of an enclosure's protection against dirt and water. Glenair CostSaver Composite EMI/RFI Boxes are rated to IP 67, where 6 = Total Protection Against Solid Objects, and 7 = Protection against the effects of temporary immersion in water. Glenair's Mini 147-100 Box is rated to IP64 which indicates total protection against dust, and from water sprayed from all directions.

SP-R-0022A and ASTM-E-595 Vacuum Stability

Both specifications govern the "outgassing" of non-metallic materials for use in spacecraft. Tests measure Total Mass Loss which may not exceed 1.0% of the total specimen mass. Tests for this standard also measure Collected Volatile Condensable Materials from Outgassing in a Vacuum Environment; which means they measure odor and toxicity emitted from the material. All Glenair CostSaver Composite EMI/RFI Boxes are tested and approved to these standards.

IEC 79-7 MOD (ISA-S12.16.01) Hazardous Area Explosion Protection

Electrical enclosures are certified for use in hazardous areas such as oil-rigs and tankers by standards organizations such as CENELEC. Tests measure the ability of an electrical apparatus to prevent the emission of sparks, arcs or hot surface temperatures from igniting a fire in a hazardous area. Glenair Composite EMI/RFI Boxes meet E EX e IIB T3 (increased safety) in Class I, Zones 1 and 2 hazardous locations.

UL 94: Flammability of Plastic Materials

This requirement covers flammability of plastic materials used in devices and appliances. The flammability properties of materials are measured in response to heat and flame under controlled laboratory conditions. All Glenair CostSaver Composite EMI/RFI boxes are tested and approved to this standard.