

## Connector solution


### Wilcoxon Research model R6Q IP68 cable assembly

The R6Q connector is a tremendously rugged, factory or field installable boot for any MIL-C-5015 style 2-pin sensor. The R6Q connector can be used with bulk cable to give the most cost effective and flexible solution. Wilcoxon's R6Q is the most versatile connector in the market that is useable in many harsh environments.

- Compatible with 2-pin MIL-C-5015 style sensors
- Provides wash down protection
- Offers flexibility to add / remove shield isolation

The R6Q Connector is manufactured using DuPont Viton®B fluoroelastomer. Viton®B offers a service temperature range from -25°C to 200°C (-10°F to 392°F) and is highly resistant to most industrial chemicals including oils, aqueous media and most other fluids.

The mechanical design of the R6Q connector has been evaluated by Wilcoxon and found to tolerate submersion in water to various depths. The connector assembly is rated as IP68, for submersion to depths greater than one meter.



**R6Q connector**

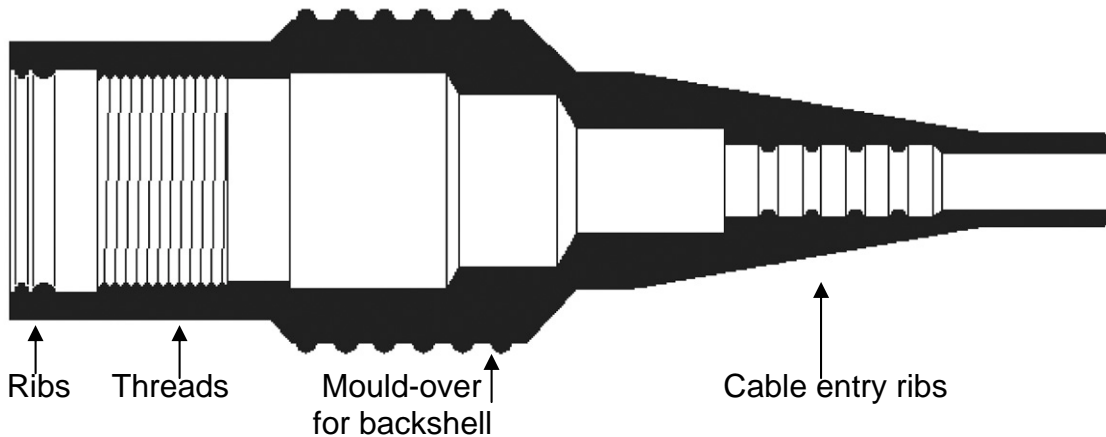
- ▶ MIL-C-5015 style
- ▶ 2-socket
- ▶ IP-68 rated, submersible
- ▶ Field installable
- ▶ Cost effective

Compatible with Wilcoxon Research cables: J5A, J61, J81, J9T, J9T2A, and other 0.19+.005 inch diameter cables

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### **Ribs on cable entry**

At the rear of the boot are four sets of ribs that “grip” the cable. Wilcoxon cables are specifically designed to be round. Wilcoxon uses cable fillers to insure the roundness of the cables. When combined with the ribs at the cable entry the roundness of the cable insures a tight fit and works to minimize water entry around the cable.

### **Threads interior to boot**

At the front of the boot there are 5/8-24 UNEF-2A threads molded into the boot. These molded threads mate to and engage the sensor connector threads to form a tight fit. This fit operates in a similar fashion to a labyrinth seal whereby the pressure loss in water keeps it from entering the connector boot interior body.

### **Ribs on sensor end of boot**

Even before water can enter the threaded portion of the sensor end of the boot, there are two ribs. They seal the face of the boot against the sensor connector body to “grip” the connector.

### **Epoxy-filled backshell, boot molded to fit**

When the R6Q connector is installed, the connector electrical connections are sealed with epoxy inside the metal backshell. The epoxy fill serves to seal the back of the electrical connections from moisture entry.

### **Grease connector “cup” of sensor**

When assembling the R6Q cable to the sensor, it is highly advisable to fill the sensor connector “cup” with non-conductive grease. Wilcoxon has a 5.3 ounce tube of SILGREASE or a single-use SILPAK of non-conductive grease for this purpose. The grease displaces most, if not all, the air in the face of the connector and provides further sealing of the electrical connections from water entry.

For chemical resistance information on the Viton® boot, please call DuPont at 1-800-853-5515.

To purchase an R6Q 2-socket connector for accelerometers, contact:

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