Adaptors and Backshells

Definitions

Introduction

For high performance sealing and strain relief, offering the perfect solution for harsh environment wiring applications. IS-Rayfast offers a variety of adapters for applications in many industries, including aerospace, marine and mass transit.

These adapters are:

- Available in many configurations to match applications
- Easy to install
- · Ideal for high-reliability applications
- · Kitted for customer convenience.

In this section we present an outline of Solid and Spin Coupling adaptors to more specialist Spin-Lock, Shielded and Tinel-Lock adapters, plus accessories.

Adaptor Type

Covered in these pages are six adaptor types: Solid (sometimes called "fixed"), Spin-Coupling, Spin-Lock, Shielded, Tinel-Lock and Bandstrap. Each is designed to offer a suitable interface between a connector and a heatshrinkable moulded part.

Adaptor Code

A numerical code is used to identify connectors with similar adapter interfaces. This code is used to determine the adaptor family and part number.

Adaptor Part Number

The part number is the sequence of numbers and letters that describes the adaptor family (or series), size, material, finish and modifications. The part numbering system is explained later in this section.

Adaptor Family

Several families (or series) of adapter products are offered. Each adaptor part number begins with an alpha numeric prefix denoting the product family.

Entry Size

Entry size is the diameter of the hole through which the cable enters into the adaptor. For example, the 08 entry is 12.7mm. Entry sizes are specified on shielded and Tinel-Lock adapters only.



Ring Designator

This is a two-letter code that is part of each Tinel-Lock adapter part number. It specifies the size of the Tinel-Lock ring suited to specific types of cable braid.

(if used)

Shell Size

This is the size of a connector as specified by the connector manufacturer. It is normally a twodigit number between 08 and 24, although certain connectors are obtainable in either larger or smaller sizes and some use letter codes.

Order Number

This is a two-digit number that specifies the size of the adaptor that will mate to the corresponding shell size of a connector. The order number is frequently the same as the connector shell size, but should be checked by reference to the appropriate product page(s) in this catalogue.

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Key Types of Adaptors



Solid Adaptors (Fixed)





Shielded Adaptors



Introduction

Several types adaptors for unscreened and screened termination systems are available. The choice is largely dependent upon the screening level required and the braid termination method. The four principal adapter types are:

- Solid (fixed)
- Spin-Coupling
- Shielded
- Tinel-Lock

Solid Adaptors (Fixed)

Designed for use where no access is required; for example, when potting is necessary or a lower space profile is needed. These adaptors have a boot groove to accommodate a lipped heat-shrinkable boot. Repair cannot be made without removing the boot.

Spin-Coupling Adaptors

Have a rotatable coupling nut and a grooved body, designed to accommodate lipped type heat shrinkable boots. Spin-couplings with an appropriate moulded part are used for environmental protection and strain relief of unscreened cable terminations. Additionally cable repairs can be made without damaging the boot.

Shielded Adaptors

These are essentially spin-coupling adaptors with a short length of tubular braided shield attached to the rear. The tinned copper wire braid can be pulled down onto a wide range of cable diameters, allowing a standard entry size to be used with most cable sizes. The shield can be terminated to the cable braid using a SolderSleeve device, which provides screen continuity through to the connector.

Tinel-Lock Adaptors

This termination system consists of a modified spin-coupling adaptor with a Tinel-Lock ring. The Tinel-Lock ring is made from a special shape memory metal that shrinks uniformly when heated. The Tinel-Lock ring is used to terminate copper cable braid directly onto the rear of the adaptor. The adaptor entry size and ring designator must be selected to suit the cable diameter and braid type. The resulting 360° termination withstands severe shock, vibration, temperature cycling and corrosion.

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