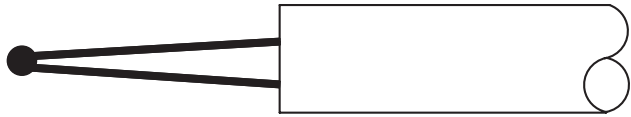


Temperature Sensors: Thermocouple Junction Types

How do I select a Thermocouple Junction Type?

Junction Types:

Exposed Junction



Thermocouple wires are welded and insulation is sealed against liquid or gas penetration. This junction style provides the fastest possible response time but leaves the thermocouple wires unprotected against corrosive or mechanical damage.

Grounded Junction



The sheath and conductors are welded together forming a completely sealed integral junction. Recommended in the presence of liquids, moisture, gas or high pressure. The wire is protected from corrosive or erosive conditions. Response time with this style approaches that of the exposed junction.

Ungrounded Junction



On this type, the thermocouple junction is fully insulated from the welded sheath end. The ungrounded junction is excellent for applications where stray EMF's would affect the reading and for frequent or rapid temperature cycling. Response time is longer than for the grounded junction.

In general the **Grounded Junction** offers the best compromise of performance and reliability. It is usually the best choice for general purpose measurements. If your leadwire will be shielded and attached to the sheath, select an **Ungrounded Junction**.

The **Ungrounded Junction** is also used to avoid ground loops between instruments, power supplies and the sensor. If you are unsure of the Junction Type you require, contact our staff of engineers who will be happy to assist you.