

Thermocouple

PEK382



Applications

- Chemical and petrochemical industries
- Machinery, plant and tank measurement
- Oil and gas industries
- Power and utilities
- Pulp and paper

Special features

- For mounting in all standard thermowell designs
- Spring-loaded measuring insert (replaceable)
- Explosion-protected versions
- Fixed fitting (welded) measuring insert

Description

Thermocouples in this series can be combined with a large number of thermowell designs. Use without a thermowell is permitted when using a fixed (welded) fitting.

A wide variety of possible combinations of sensor, connection head, insertion length, neck length, connection to thermowell etc. are available for the thermometers; suitable for almost any thermowell dimension.

Sensor types

Type	GENERIC		Wire Color
K	Chromel (Nickel – Chromium) Alumel (Nickel – Aluminum)	-40 ... +1,200 °C	Yellow Red
J	Iron Constantan (Copper-Nickel)	-40 ... +750 °C	White Red
T	Copper Constantan (Copper-Nickel)	-40 ... +350 °C	Blue Red
S	Platinum 10% Rhodium Platinum	-40 ... +1,480 °C	Black Red
R	Platinum 13% Rhodium Platinum	-40 ... +1,480 °C	Black Red
E	Chromel (Nickel – Chromium) Constantan (Copper- Nickel)	-40 ... +900 °C	Purple Red

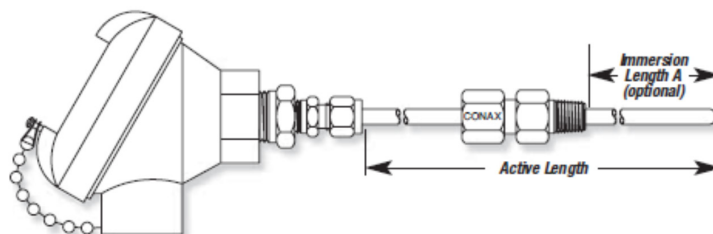
The actual operating temperature of the thermometers is limited both by the maximum permissible working temperature and the diameter of the thermocouple and the MI cable, as well as by the maximum permissible working temperature of the thermowell material.

Tolerance value

For the tolerance value of thermocouples, a cold junction temperature of 0 °C has been taken as the basis.

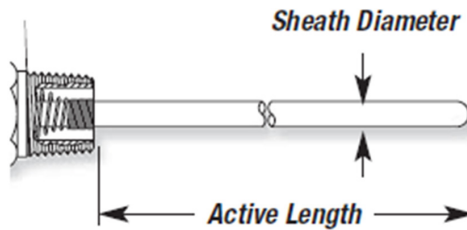
Active Length

The active length must be specified as the last portion of the Order description. The active length is the distance in inches or mm from the termination to the sensor tip, as shown in the drawing. Note that you must order the active length, not the immersion. The active length is available in 1/16" increments. With adjustable fittings and spring-load assemblies, the immersion length is measured from the end of the fitting to the tip of the probe.

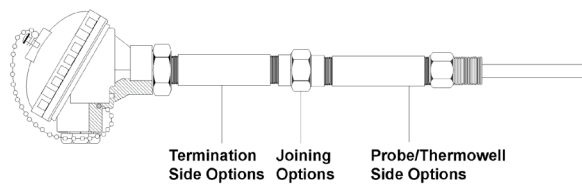


Spring load

Spring-loaded assemblies are used to maintain positive contact between the sensor tip and the surface to be monitored. Spring-loaded assemblies can be provided with all terminal heads.

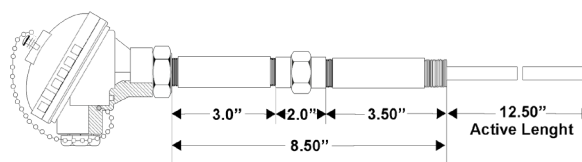


PEK offers numerous combinations of pipe nipples, hex nipples, unions and couplings to be used to mount your assembly to a vessel. These may also be used in combination with spring-loaded mounting devices. All pipe nipples and unions are 1/2 NPT stainless steel unless otherwise specified. Carbon steel is also available.



Calculating the Length of Nipple Combinations

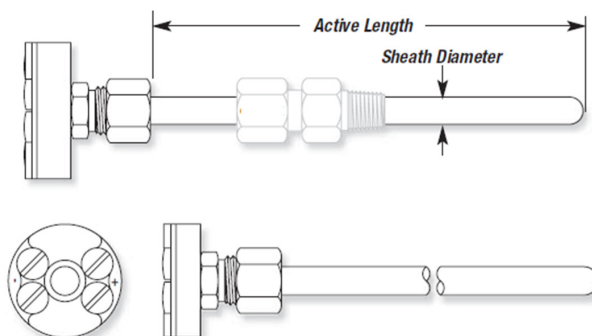
For assemblies using pipe nipples, the active length is the distance from the sensor end of the probe to the end of the pipe nipple. The length of the pipe nipple must also be specified in an order, keeping in mind that when engaging 1/2 NPT threads, approximately 1/2" is lost per connection. If a spring-loaded pipe nipple is ordered, the active length is measured with the spring uncompressed.



Terminal Head

The Head disc-style termination is small, compact, lightweight and provides easy access and convenient wire termination. It is excellent for use in clean areas and confined spaces. The disc is molded from high performance thermoset compounds, color-coded by thermocouple type. The discs are mounted directly to the sheath using a brass metal-to-metal compression fitting.

Head termination is compatible for 2, 3, 4 wires.



- Bodies are molded of high performance thermoset compounds, color-coded by type
- Heads are mounted directly to the sheath using a brass metal-to-metal compression fitting
- Service temperature upper limit: 205° C
- Available with 0.062", 0.125", 0.187" or 0.250" diameter sheath

Note: High temperature models are also available. Service temperature upper limit: (425° C)

Connection to thermowell and adjustable mounting fittings

The many possible designs ensure that the model PEK362 thermocouple can be combined with almost all possible thermowells.

Specify Mounting Gland

- Stainless steel construction
- Stainless steel ferrule
- Mounting thread 1/2 NPT or 1/4 NPT

