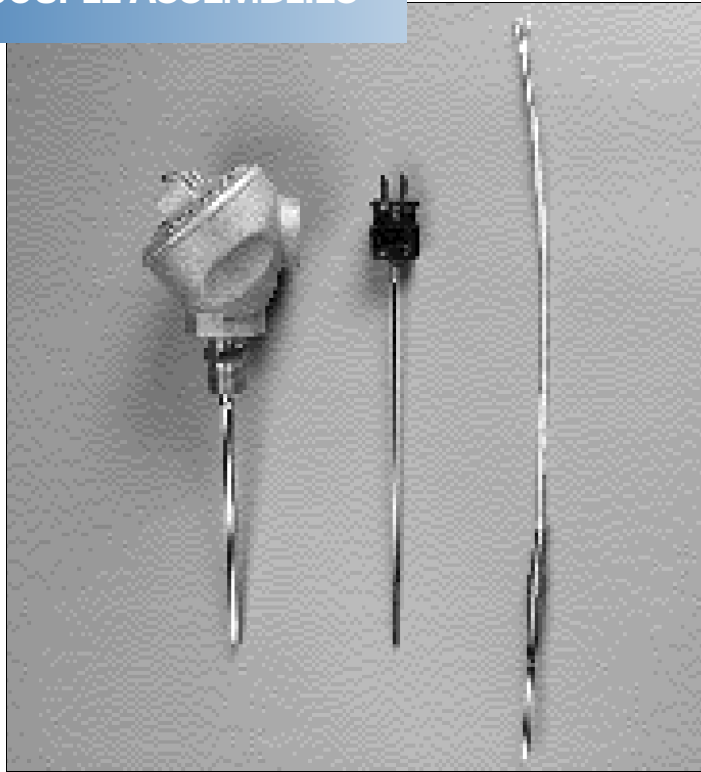
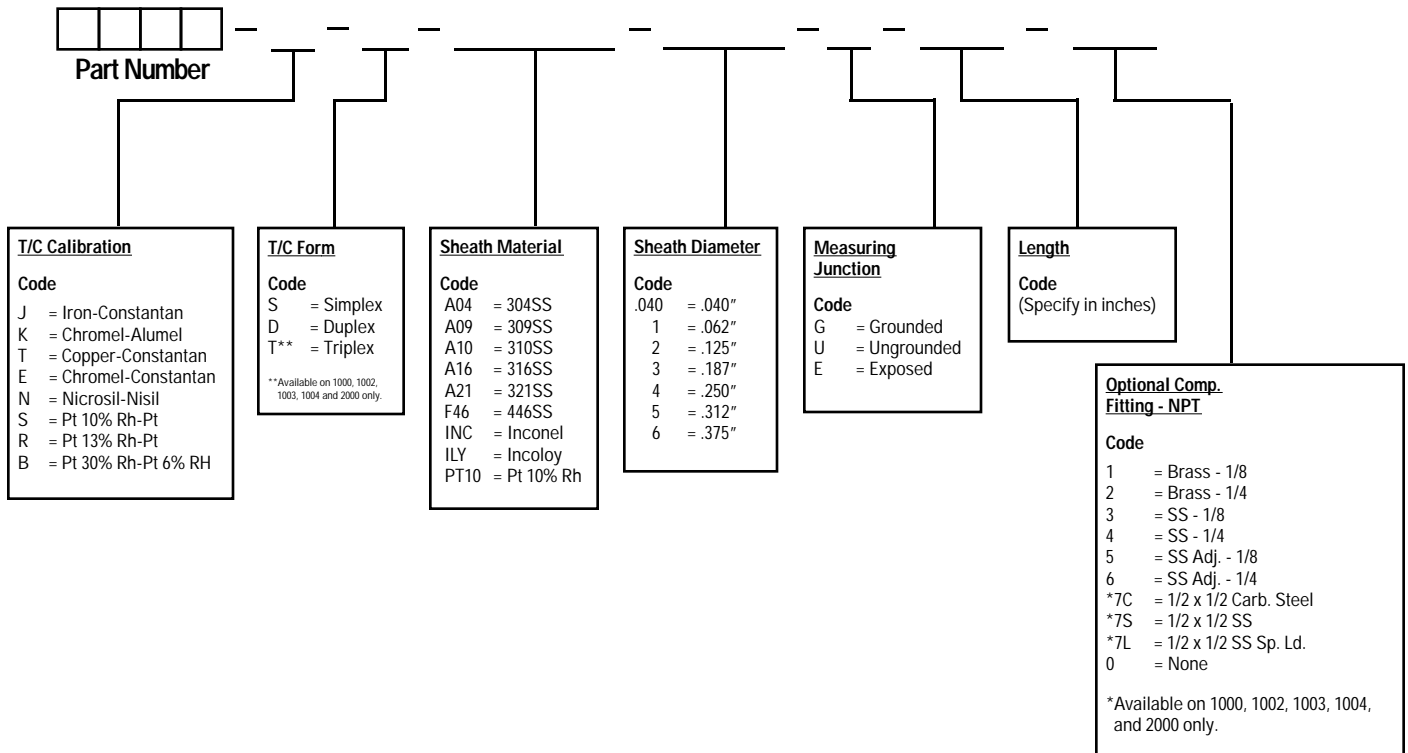


TU-PAK® THERMOCOUPLE ASSEMBLIES

Tu-Pak® is a departure from the traditional assembly of tubes, wires and insulators. It has a unit-construction with no replacement parts. Tu-Pak has improved thermal response, greater flexibility and, size for size, it is longer lasting than traditional types.



Ordering Information



TU-PAK® HEAD-TYPE THERMOCOUPLE ASSEMBLIES

Tu-Pak® Sheath Material Limitations

Recommended Limit

Materials	Melting Point, °F/°C	Maximum in Air, °F/°C	Recommended Operating Atmosphere	Continuous Maximum Temp. °F/(°C)
Stainless steel:				
304	2560/1404	1920/1049	ORNV	1650/899
309	2560/1404	2000/1093	ORNV	2000/1093
310	2560/1404	2000/1093	ORNV	2100/1149
316	2500/1371	1650/899	ORNV	1700/927
321	2550/1399	1650/899	ORNV	1600/871
347	2600/1427	1680/916	ORNV	1600/871
430	2700/1482	1550/843	ORNV	1200/649
446	2700/1482	2000/1093	ORNV	2000/1093
Inconel	2550/1399	2000/1093	ONV†	2100/1149
Inconel X	2620/1438	1500/816	ONV†	2200/1204
Platinum	3217/1770	3000/1649	ON†	3000/1649
Pt-Rh 10%	3362/1850	3100/1704	ON	3100/1704

Symbols describing atmospheres are O = oxidizing; R = reducing; N = neutral; V = vacuum.

† Very sensitive to sulfur corrosion.

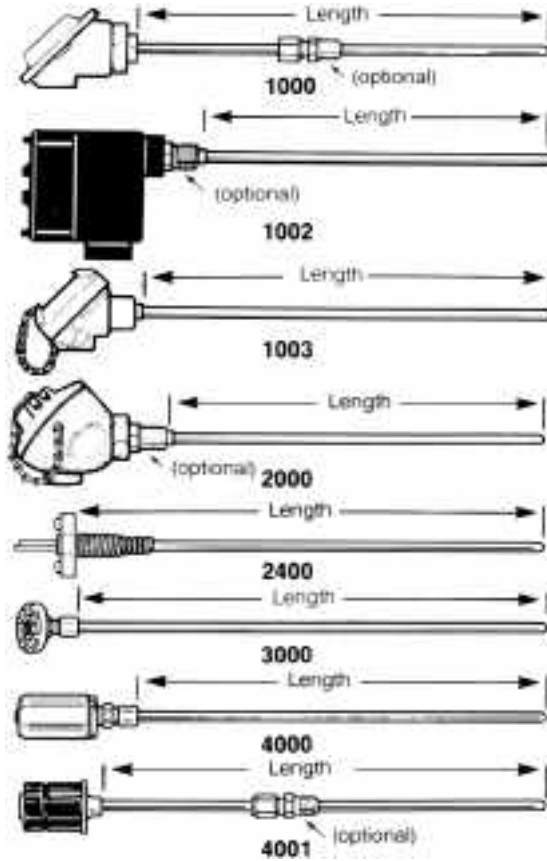
Tu-Pak® Dimensions and wire sizes

Sheath Outside Diameter	Outside Diameter	Nominal Wall Thickness	Approximate Wire	Nom. Conductor Diameters, in.
Diameter	Tolerance, ±in.	Thickness, in.	B&S gauge	2-wire 4-wire
0.062	0.002	0.010	29	0.011 0.006
0.125	0.002	0.018	24	0.022 0.011
0.188	0.003	0.025	18	0.032 0.022
0.250	0.003	0.032	17	0.040 0.032
0.313	0.003	0.040	16	0.051 0.040
0.375	0.003	0.049	14	0.064 0.051

Tu-Pak® Maximum recommended long-term service temperature

Nom. Dia. (in.)	0.062	0.125	0.188	0.250
Nom. wall (in.)	0.010	0.018	0.025	0.032
Type K (°F/°C)	1600/871	1600/871	1600/871	1800/982
Type J (°F/°C)	1200/649	1400/760	1400/760	1600/871
Type E (°F/°C)	1400/760	1400/760	1600/871	1700/927

Measuring Junctions

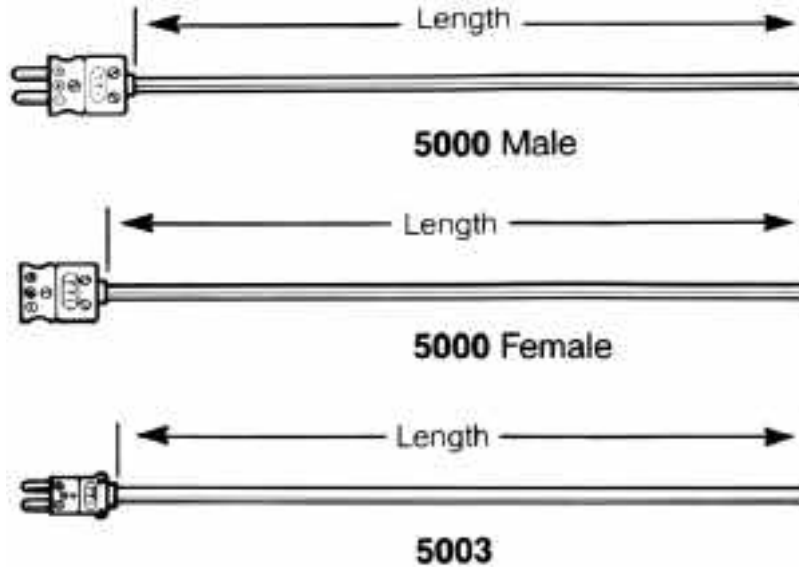


Terminations & Length Specifications

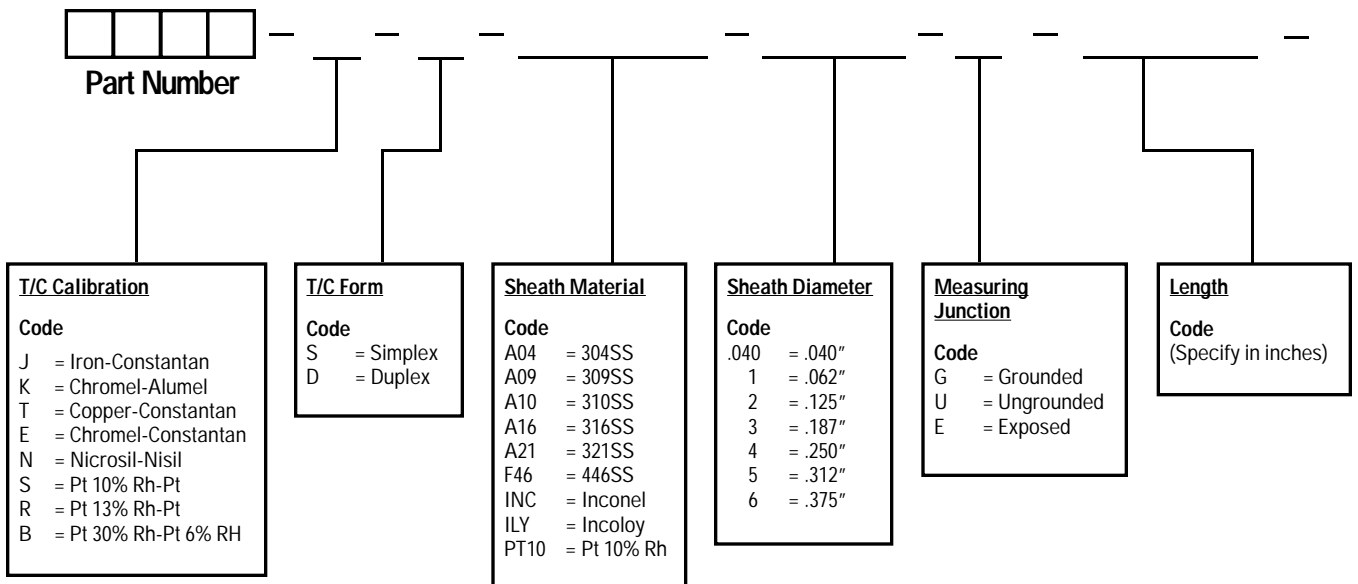
(Custom Head Type Terminations also available on request)

Part No.	Style
1000	General Purpose Cast Aluminum Head.
1002	Hazardous Location Cast Aluminum Head.
1003	Screw-Cover Thermoplastic Head.
1004	Screw-Cover Cast Iron Head.
2000	Screw-Cover Cast Aluminum Head.
2002	Screw-Cover Aluminum Head with 1/2" NPT SS spring loaded oil and vapor seal.
2004	Spring Loaded Replacement Element for Industrial Process type assemblies.
2400	Spring-Loaded Replacement Element for Industrial Process type assemblies
3000	300°F (149°C) max. Open Head.
3002	1000°F (538°C) max. Open Head – Simplex only.
4000	Screw Cover Mini-Head.
4001	Snap-On Cover Mini Head – Simplex only.
4002	Bayonet Cover Mini Head.

TU-PAK® CONNECTOR-TYPE THERMOCOUPLE ASSEMBLIES



Ordering Information



*Available in sizes .040 to 3/16" only.
 **Not available with 5003.

TU-PAK® CONNECTOR-TYPE THERMOCOUPLE ASSEMBLIES

Standard Terminations & Length Specifications

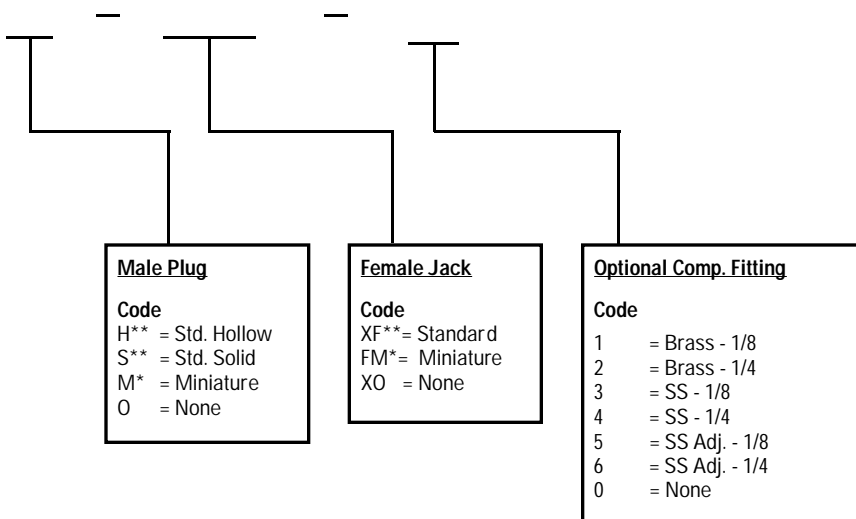
(Custom terminations also available on request)

Part No.	Style
5000	350°F (177°C) Max Standard Connector
5001	500°F (260°C) Max Standard Connector
5002	1000°F (538°C) Max Standard Connector
5003	350°F (177°C) Max Miniature Connector*

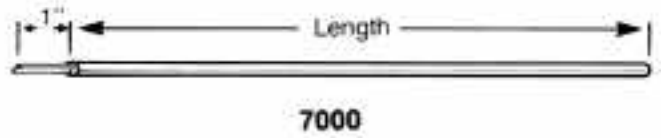
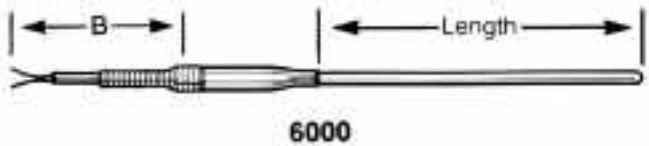
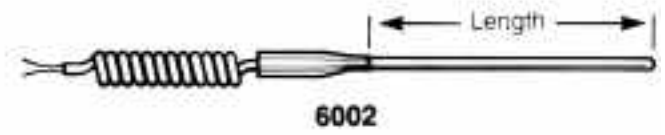
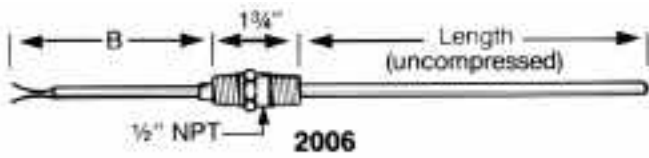
Temperatures are exposure ratings for connectors only.

*Available in sizes .040 to 3/16" only.

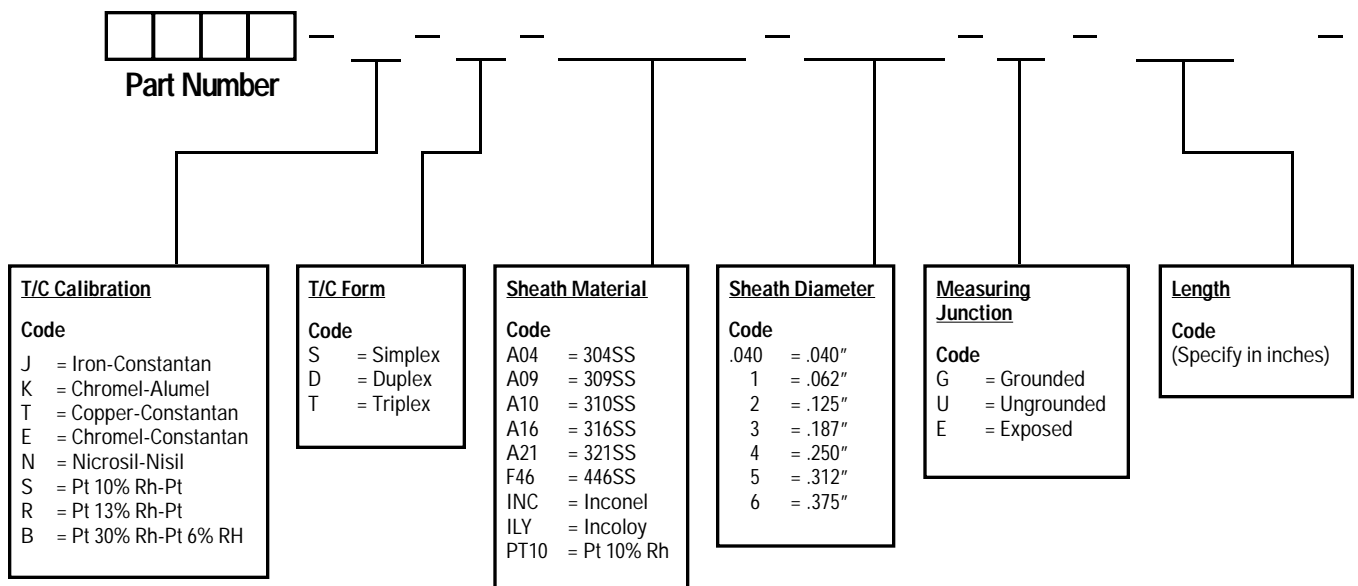
**Not available with 5003.



TU-PAK® LEAD WIRE-TYPE THERMOCOUPLE ASSEMBLIES



Ordering Information



Noble metal elements are not recommended for use with base metal sheaths.

*Available on 6002 only. Expands to approximately 5' per coiled foot.

**Omit tables 8 & 9. N/A in S, R or B calibration.

***3/16" & 1/4" diameter only.

TU-PAK® LEAD-WIRE TYPE THERMOCOUPLE ASSEMBLIES

Standard Terminations & Length Specifications

(Custom terminations also available on request)

Part No.	Style
2004	1/2" NPT x 1/2" NPT Carbon Steel Ftg.
2005	1/2" NPT x 1/2" NPT SS Fitting
2006***	1/2" NPT x 1/2" NPT Spring Loaded Stainless Steel Fitting
6000	Transition Ftg. with Strain Relief Spring
6001	Transition Ftg. w/o Strain Relief Spring
6002**	Transition to Polyurethane Coiled Cord. Simplex only.
7000	Stripped 1" Leads

Noble metal elements are not recommended for use with base metal sheaths.

*Available on 6002 only. Expands to approximately 5' per coiled foot.

**Omit tables 8 & 9. N/A in S, R or B calibration.

***3/16" & 1/4" diameter only.

