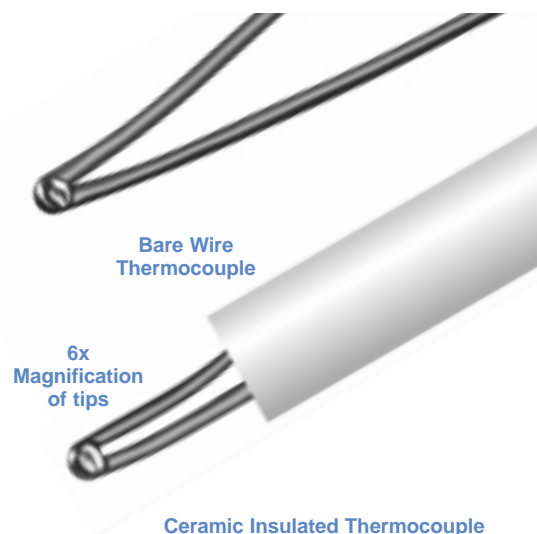


A34 Thermocouples

Iron-Constantan Thermocouples (Type J)

Iron-constantan thermocouples are low cost devices used to measure temperatures to 800°C. These iron-constantan thermocouples are often referred to as J thermocouples and are the standard thermocouples used in gas chromatographs, mass spectrometers, and other laboratory and industrial equipment. The smaller the diameter of the thermocouple wires, the faster the response time but the more limited the temperature range and structural strength of the thermocouple. All thermocouples are supplied with 12" leads. Two styles are available: bare wire thermocouples and ceramic insulated thermocouples. The bare wire style contains no insulation of any kind on the bare thermocouple wires. The insulated style contains a 2 hole by 6" length of ceramic insulating tube. This insulates the thermocouple leads and prevents their shorting out. If desired, the ceramic tubes can be cut or broken to shorter lengths.

Wire diameter	Response Time
.005"	1 sec.
.010"	5 sec.
.020"	20sec.
.032"	40 sec.



In addition to the iron-constantan thermocouples, S.I.S.™ can supply other types and configurations of thermocouples. Call or write with your requirements.

► Tech Tip *S.I.S. has made a variety of different styles and types of thermocouples.*

Part No	Description	Wire diameter	Ceramic diameter	Price each
TH-1	Iron-constantan thermocouple, bare	.032"	-	
TH-2	Iron-constantan thermocouple, bare	.020"	-	
TH-3	Iron-constantan thermocouple, bare	.015"	-	
TH-4	Iron-constantan thermocouple, bars	.010"	-	
TH-5	Iron-constantan thermocouple, bare	.005"	-	
TH-1C	Iron-constantan thermocouple, insulated	.032"	.125"	
TH-2C	Iron-constantan thermocouple, insulated	.020"	.125"	
TH-3C	Iron-constantan thermocouple, insulated	.015"	.125"	
TH-4C	Iron-constantan thermocouple, insulated	.010"	.125"	
TH-5C	Iron-constantan thermocouple, insulated	.005"	.062"	

Other types and styles available on special request

Chromel-Alumel Thermocouples (Type K)

In addition to the J thermocouples listed above, we also supply the K type thermocouples. K thermocouples are normally used in the temperature range of -200°C to 1250°C.

Part No	Description	Wire diameter	Ceramic diameter	Price each
THK-1	Type K thermocouple, bare	.020"	-	
THK-2	Type K thermocouple, bare	.010"	-	
THK-3	Type K thermocouple, bare	.005"	-	
THK-1C	Type K thermocouple, insulated	.020"	.125"	
THK-2C	Type K thermocouple, insulated	.010"	.125"	
THK-3C	Type K thermocouple, insulated	.005"	.062"	

Wire Diameters to Gage Size Cross Reference Table

Gage Size	Wire diameter	Gage Size	Wire diameter	Gage Size	Wire Diameter	Gage Size	Wire Diameter
50	0.00099"	39	0.00353"	28	0.0126"	17	0.0453"
49	0.00111"	38	0.00396"	27	0.0142"	16	0.0508"
48	0.00124"	37	0.00445"	26	0.0159"	15	0.0571"
47	0.00140"	36	0.00500"	25	0.0179"	14	0.0641"
46	0.00157"	35	0.00561"	24	0.0201"	13	0.0720"
45	0.00176"	34	0.00630"	23	0.0226"	12	0.0808"
44	0.00198"	33	0.00708"	22	0.0253"	11	0.0907"
43	0.00222"	32	0.00795"	21	0.0285"	10	0.1019"
42	0.00249"	31	0.00893"	20	0.0320"		
41	0.00280"	30	0.01000"	19	0.0359"		
40	0.00314"	29	0.01113"	18	0.0403"		