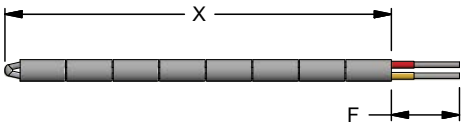
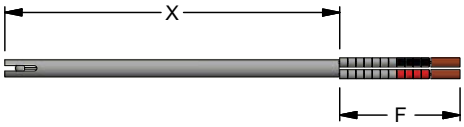
THERMOCOUPLE REPLACEMENT ELEMENT

Reotemp Thermocouple Replacement Elements are supplied for use in ceramic and metal protection tube assemblies.

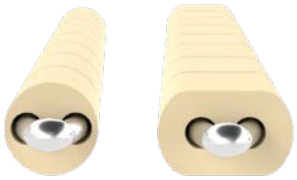
Made in USA



Base Metal



Noble Metal



Round Shaped **Oval Shaped**

THERMOCOUPLE REPLACEMENT ELEMENT

BUILD YOUR THERMOCOUPLE REPLACEMENT: Choose options to build a part number. For example: REK14R18P1.5

RE	K	14	R	18	P
SERIES	THERMOCOUPLE TYPE	WIRE GAUGE	INSULATOR	LENGTH "X"	HOT JUNCTION STYLE

RE = Replacement Element Thermocouple

Base Metal
J = Type J
K = Type K
JJ = Dual Type J
KK = Dual Type K

Noble Metal
R = Pt - Pt/13% Rh
S = Pt - Pt/10% Rh
B = Pt/6% Rh - Pt/30% Rh
RR = Duplex R
SS = Duplex S
BB = Duplex B

For thermocouple accuracy information see page 5.

For thermocouple temperature operating ranges see page 6.

Base Metal
8 = 8 AWG
14 = 14 AWG
18 = 18 AWG
20 = 20 AWG

Noble Metal
24 = 24 AWG

B = Bare (No Insulator)

Base Metal Only
C = Oval Shaped Ceramic, (Not Available in 20 AWG)
R = Round Shaped Ceramic

12 = 12"
18 = 18"
24 = 24"
?? = Length in Inches

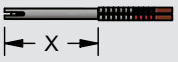
Base Metal

P — Plain

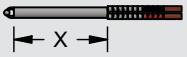
I — Insulated

Noble Metal

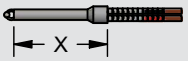
R — Recessed in Slot (Standard)



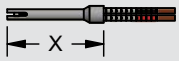
P — Plain Exposed Junction



C — Plain with Collar



D — Recessed with Collar



Oval	Wire Gauge	Dimensions
C	8	0.500 x 0.286
C	14,18	0.313 x 0.288

Round	Wire Gauge	OD Dimension	
		Single	Dual
R	8	0.465	0.500
R	14, 18	0.313	0.313
R	20	0.188	0.188
R	24	0.188	0.188

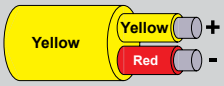
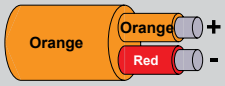
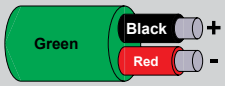
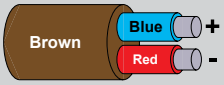
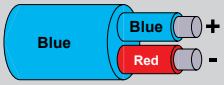
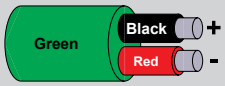
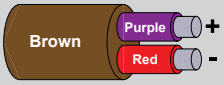
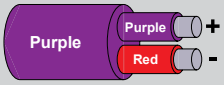
1.5
LEADS "F"

Base Metal
L1.5 = 1.5" Standard
L4 = 4"
L? = Length in Inches

Noble Metal
F2 = " with Fish Spine Insulator and Copper Crimp Standard
F? = Length in Inches with Fish Spine Insulator and Copper Crimp
(See diagram page 40.)

REFERENCE INFORMATION

THERMOCOUPLE WIRE COLOR CODES (U.S.A. ANSI)

	Thermocouple Grade	Extension Grade	Plug/Jack		Thermocouple Grade	Extension Grade	Plug/Jack
K			Yellow	N			Orange
J			Black	S	None Established		Green
T			Blue	R	None Established		Green
E			Purple	B	None Established		White

THERMOCOUPLE & RTD ACCURACIES

	Type K	Type J	Type T	Type E	Type N	Type S	Type R	Type B	RTD Class B	RTD Class A
-328°F	*	–	*	*	–	–	–	–	± 2.34°F	± 2.34°F
-148°F	*	–	*	*	–	–	–	–	± 1.44°F	± 1.44°F
32°F	± 3.96°F	± 3.96°F	± 1.8°F	± 3.06°F	± 3.96°F	± 2.7°F	± 2.7°F	–	± 0.54°F	± 0.27°F
392°F	± 3.96°F	± 3.96°F	± 2.7°F	± 3.06°F	± 3.96°F	± 2.7°F	± 2.7°F	–	± 2.34°F	± 0.99°F
752°F	± 5.4°F	± 5.4°F	–	± 3.6°F	± 5.4°F	± 2.7°F	± 2.7°F	–	± 4.14°F	± 4.14°F
1112°F	± 8.1°F	± 8.1°F	–	± 5.4°F	± 8.1°F	± 2.7°F	± 2.7°F	–	± 5.94°F	± 5.94°F
1472°F	± 10.8°F	–	–	± 7.2°F	± 10.8°F	± 3.6°F	± 3.6°F	–	–	–
1832°F	± 13.5°F	–	–	–	± 13.5°F	± 4.5°F	± 4.5°F	± 9°F	–	–
2192°F	± 16.2°F	–	–	–	± 16.2°F	± 5.4°F	± 5.4°F	± 10.8°F	–	–
2552°F	–	–	–	–	–	± 6.3°F	± 6.3°F	± 12.6°F	–	–
2912°F	–	–	–	–	–	–	–	± 14.4°F	–	–

Note: The accuracies in the above table are estimates given at fixed points, they do not apply to temperature ranges and are intended only as examples to give a general idea of what can be expected. Consult Reotemp if a specific accuracy is required or to confirm accuracies at any points not listed in the above table.
*Thermocouples are normally supplied to meet the tolerances specified in the table for temperatures above 32°F. The same materials, however, may not fall within the tolerances for temperatures below 32°F. If materials are required to meet the tolerances stated for temperatures below 32°F, contact Reotemp sales.

Looking for better accuracy?

Hi-Accuracy™

Reotemp offers **RTDs** up to 5x more accurate than Class B RTDs with the Hi-Accuracy™ option.

Thermocouples up to 2x more accurate with the Special Limits of Error option.

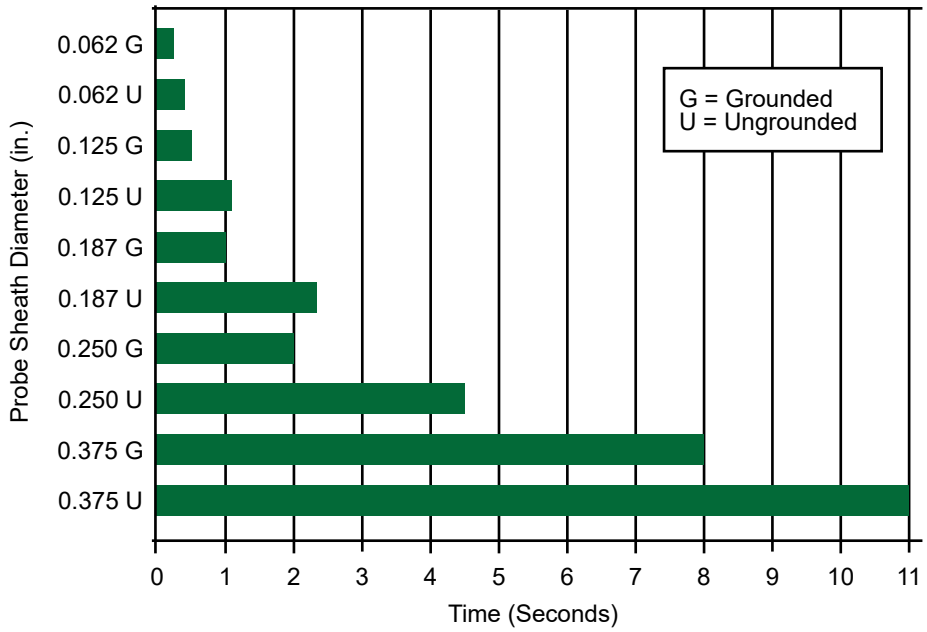
REFERENCE INFORMATION

THERMOCOUPLE TEMPERATURE OPERATING RANGES

Type	Minimum Temp. °F	Maximum Temp. °F
K	-328	2300
J	32	1400
T	-328	700
E	-328	1600
N	32	2300
S	32	2700
R	32	2700
B	1600	3100

THERMOCOUPLE TYPICAL RESPONSE TIMES

63.2% Temperature Change in an Agitated Water Bath



TEMP. LIMITS OF WIRE JACKETS

Jacket	Temp. Limit
PVC	221°F
Teflon	400°F
Std. Fiberglass	900°F
High Temp Fiberglass	1,300°F
Ceramic Fiberglass	2,200°F