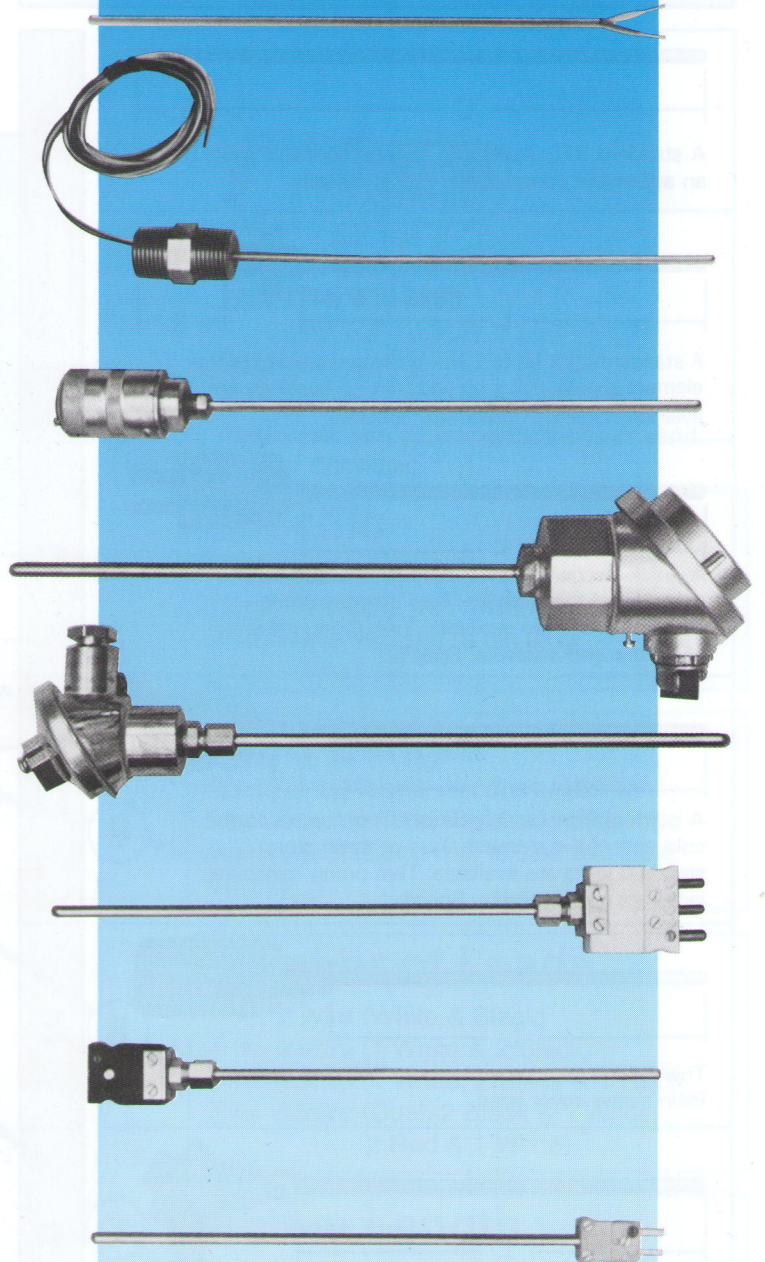
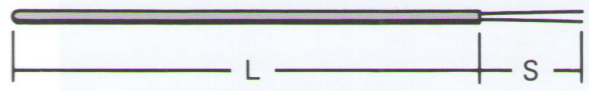


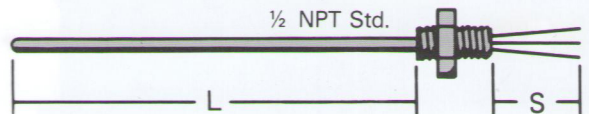
RESISTANCE TEMPERATURE DETECTORS



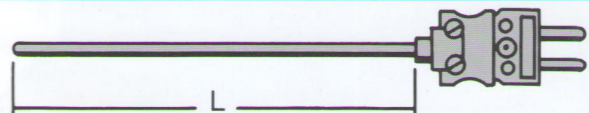
STYLE



A standard RTD Assembly may be supplied with an adjustable compression fitting. Specify.



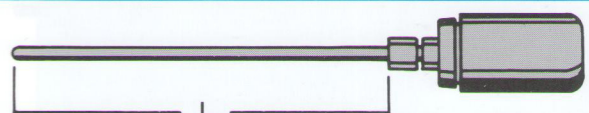
A standard 1/2 x 1/2 NPT hex bushing is welded to the element sheath. 1/4 x 1/4 and 3/4 x 3/4 bushings are available. Stainless Steel Std. Specify.



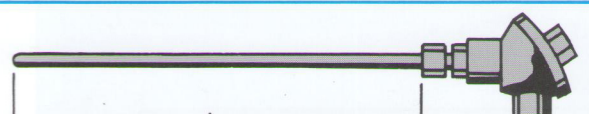
A quick-disconnect male plug is mounted on the cold end of the element. Two or three prong standard plugs are available. Two prong miniature plugs are also available. Specify.



A quick-disconnect female jack is mounted on the cold end of the element. Two or three prong standard jacks are available. Two prong miniature jacks are also available. Specify.



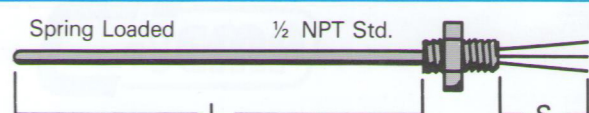
This RTD is terminated with an "O" ring seal. Plain screw cover head.



The element is terminated with a miniature aluminum screw cover head — for two, three or four wire RTD's.

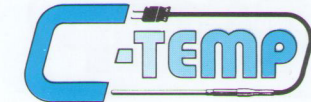


The element is terminated with a standard aluminum screw cover head — for up to six wire RTD's. Additional options see Thermowell Assemblies CAT.



A standard 1/2 x 1/2 NPT hex bushing allows the element to be spring-loaded up to 1/2".

Standard Resistance Temperature Sensor Assembly



Phone 1-800-28C-TEMP
FAX (714) 630-3560

Note:

Non-standard assemblies quoted promptly. Please call with your specifications or send us your drawings.

Specific Instructions

Example: Supply with matching jack, ground wire required, 3 pin plug, Teflon coated, etc.

Lead Length

Specify lead length in inches. Standard lead wires are Teflon insulated 26 gauge stranded. Shielded wire is also available. Specify.

Number of Leads

W = 2 Wire (White & Black)
X = 3 Wire (1 White & 2 Black)
Y = 4 Wire (1 White, 2 Black & 1 Red)
Z = 6 Wire (Dual, 2 Black & 1 White, 2 Red & 1 White)

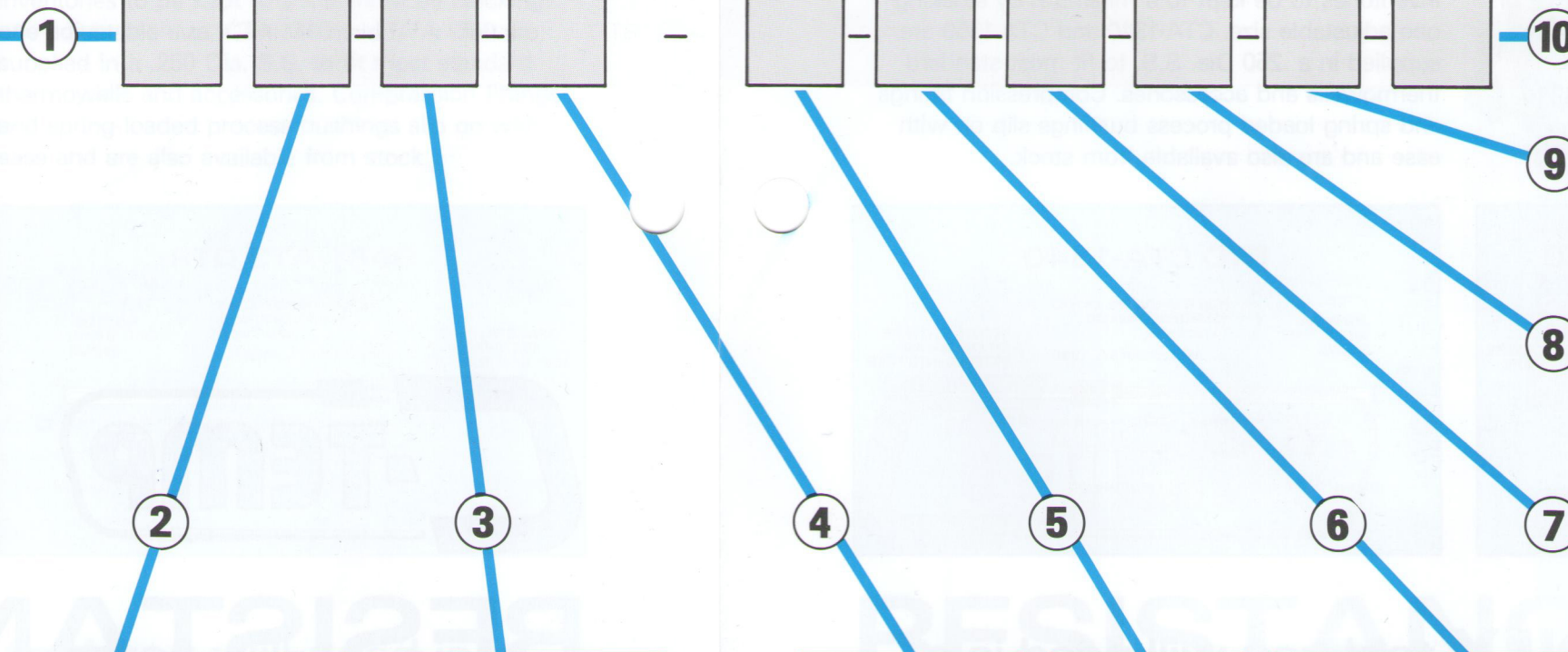
Active Length

Determine the required active length in inches and specify. This can be as short as one inch, or several feet as required.

TO CONSTRUCT A PART NUMBER

1. Choose the style that best suits your application.
2. Select sensor type.
3. Select temperature range.
4. Specify sheath diameter.
5. Specify sheath material.
6. Specify resistance required at 0°C. (100 OHMS standard for platinum RTD's.)
7. Determine active length "L" and specify in inches.
8. For RTD with extension wires, state number required.
9. Specify length of extension wires.
10. Following the part number, write in any specific instructions.

Step



Sensor Material

Px = Platinum
0.00385.Ω/Ω°C
P = Platinum
0.003920.Ω/Ω°C
PL = Platinum
0.00390.Ω/Ω°C
N = Nickel
0.06725.Ω/Ω°C
C = Copper
0.004210.Ω/Ω°C
BA = Balco
0.005176.Ω/Ω°C

Temperature

1. - 70 to 500°F
(- 55 to 260°C)
2. - 328 to 1200°F
(- 200 to 650°C)

Sheath Diameter

*06 = .062 dia.
12 = .125 dia.
18 = .188 dia.
25 = .250 dia.
37 = .375 dia.

* Platinum Elements
Only 100 OHMS
Metric Sizes
Available C/F

Sheath Material

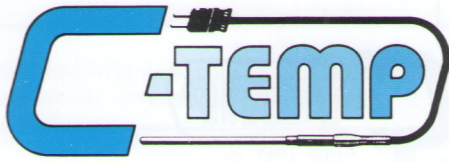
1 = 316 S.S.
2 = 310 S.S.
3 = 304 S.S.
5 = INC 600

Resistance

Ohm values @ 32°F (0°C) +/- .12% Std

PLATINUM	NICKEL	COPPER	BALCO
1 = 100 OHMS	7 = 120 OHMS	8 = 10 OHMS	9 = 604 OHMS
2 = 200 OHMS		4 = 10 OHMS	
5 = 500 OHMS		@77°F(25°C)	
10 = 1000 OHMS			

Resistance tolerance of .01% to .12% available. (specify)

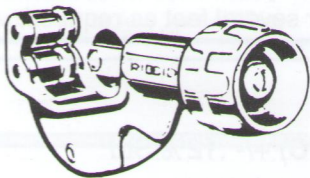
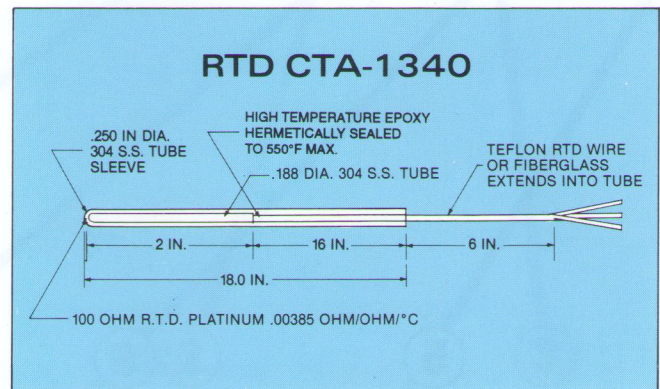
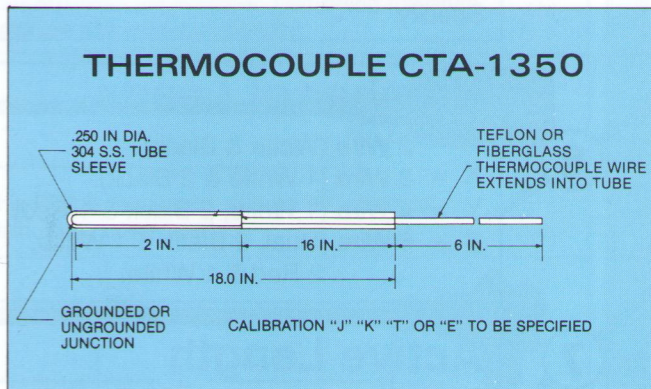


Flexibility Problems? Here's the solution!

ADJUSTABLE RTD'S AND THERMOCOUPLES

Not having the correct length THERMOCOUPLE or RTD is no longer a problem. With C-TEMP'S adjustable sensor part numbers CTA-1340 and CTA-1350, you can adjust the length from 18" to 2½". These sensors are ideal for distributors, OEM'S and users. Their flexibility allows

inventories to be kept to a minimum by stocking one adjustable size. CTA-1340 and CTA-1350 are supplied in a .250 Dia. S.S. to fit most standard thermowells and accessories. Compression fittings and spring loaded process bushings slip on with ease and are also available from stock.



The **ONLY** tool you will need is a tube cutter. Simply mark the required length and cut off the excess.

Because these sensors are manufactured in large quantities, their cost is considerably less than our already low price for a similar sensor made to order. Specify the complete part number when ordering: Resistance Temperature Detector Part No. CTA-1340 or Thermocouple Part No. CTA-1350-(ISA Type)-G or U (U = ungrounded, G = grounded)



1285 Jefferson Street • Anaheim, California 92807
(714) 630-8451 • 1-800-28C-TEMP • FAX (714) 630-3560

YOUR AREA REPRESENTATIVE:



RESISTANCE vs. TEMPERATURE TABLES

0.03923 Platinum
100 Ohms at 0°C

°F	Ohms	°C
-328	17.01	-200
-238	38.56	-150
-148	59.48	-100
-58	79.92	-50
32	100	0
50	103.96	10
68	107.93	20
86	111.88	30
104	115.82	40
122	119.75	50
140	123.67	60
158	127.58	70
176	131.48	80
194	135.36	90
212	139.23	100
302	158.41	150
392	177.3	200
482	195.9	250
572	214.21	300
662	232.22	350
752	249.94	400
842	267.36	450
932	284.49	500
1022	301.33	550
1112	317.88	600
1292	350.1	700
1472	381.14	800

0.0390 Platinum
100 Ohms at 0°C

°F	Ohms	°C
-328	17.69	-200
-238	38.83	-150
-148	59.71	-100
-58	80.04	-50
32	100	0
50	103.95	10
68	107.9	20
86	111.83	30
104	115.74	40
122	119.65	50
140	123.54	60
158	127.43	70
176	131.3	80
194	135.15	90
212	139	100
302	158.05	150
392	176.8	200
482	195.26	250
572	213.41	300
662	231.27	350
752	248.83	400
842	266.09	450
932	283.05	500
1022	299.71	550
1112	316.07	600
1292	347.9	700
1472	378.54	800

0.00385 Platinum
100 Ohms at 0°C

°F	Ohms	°C
-328	18.4	-200
-238	39.68	-150
-148	60.25	-100
-58	80.31	-50
32	100	0
50	103.9	10
68	107.79	20
86	111.67	30
104	115.54	40
122	119.39	50
140	123.24	60
158	127.07	70
176	130.89	80
194	134.7	90
212	138.5	100
302	157.32	150
392	175.84	200
482	194.08	250
572	212.03	300
662	229.69	350
752	247.06	400
842	264.14	450
932	280.93	500
1022	297.43	550
1112	313.65	600
1292	345.21	700
1472	375.61	800

The data above represents nominal values. To obtain exact alpha value, divide the calibrated resistance value at 100°C by the calibrated value at 0°C. Example: Resistance of a sensor is 99.97 ohms at 0°C and 138.98 ohms at 100°C. Therefore $138.98 \div 99.97 = 1.390217$, or an alpha of 0.00390217.

These tables can be used for interpolation to obtain resistances on a specific probe.
Ex: 500 ohm resistance will always be 5 times more in resistance at any temperature.

0.006725 Nickel
120 Ohms at 0°C

°F	Ohms	°C
-112	66.58	-80
-76	79.64	-60
-40	92.73	-40
-4	106.12	-20
32	120	0
50	127.2	10
68	134.56	20
86	142.1	30
104	149.84	40
122	157.8	50
140	165.95	60
158	174.31	70
176	182.89	80
194	191.7	90
212	200.7	100
248	219.4	120
284	238.97	140
320	259.37	160
356	280.99	180
392	303.56	200
428	327.64	220
464	353.19	240
500	380.47	260
536	409.37	280
572	439.57	300

0.005176 Balco
604 Ohms at 0°C

°F	Ohms	°C
-112	413.57	-200
-76	455.43	-150
-40	501.12	-100
-4	550.65	-50
32	604	0
50	632.35	10
68	661.34	20
86	690.99	30
104	721.28	40
122	752.22	50
140	783.81	60
158	816.04	70
176	849.92	80
194	882.46	90
212	916.63	100
248	986.82	120
284	1059.81	140
320	1135.29	160
356	1213.35	180
392	1294.01	200
428	1377.25	220
464	1463	240
500	1551.52	260

0.00421 Copper
10 Ohms at 0°C

°F	Ohms	°C
-76	7.43	-60
-40	8.29	-40
-4	9.57	-20
32	10	0
50	10.42	10
68	10.84	20
86	11.26	30
104	11.68	40
122	12.11	50
140	12.53	60
158	12.95	70
176	13.37	80
194	13.79	90
212	14.21	100
248	15.05	120

0.00421 Copper
10 Ohms at 25°C

°F	Ohms	°C
-76	6.72	-60
-40	7.5	-40
-4	8.66	-20
32	9.05	0
50	9.43	10
68	9.81	20
77	10	25
86	10.19	30
104	10.57	40
122	10.96	50
140	11.34	60
158	11.72	70
176	12.1	80
194	12.48	90
212	12.86	100
248	13.62	120

The temperature ranges shown in each table are recommended nominal spans. Consult the factory for specific temperature ranges, resistance curves, or data in smaller temperature increments.