

RTD ASSEMBLY CONSTRUCTION STYLES

Low Range - Thin Film Construction (L) (-40 °C to 204) °C [-40 °F to 400] °F

The element is welded to teflon insulated silver plated copper leads, and then placed inside a specially cleaned stainless steel sheath. The space surrounding the element and leads is filled and loosely packed with alumina oxide powder to provide good heat transfer times and to provide a damping cushion against vibration and mechanical shock. The filled sheath is then sealed with low temperature epoxies to prevent moisture penetration.

Standard Low Range (L) (-200 °C to 204) °C [-328 °F to 400] °F

The element is welded to teflon insulated silver plated copper leads, and then placed inside a specially cleaned stainless steel sheath. The space surrounding the element and leads is filled and loosely packed with alumina oxide powder to provide good heat transfer times and to provide a damping cushion against vibration and mechanical shock. The filled sheath is then sealed with low temperature epoxies to prevent moisture penetration.

Standard High Range (H) (-200 °C to 600) °C [-328 °F to 1112] °F

The element is welded to nickel leads that are insulated with compacted magnesium oxide (MgO) powder inside the stainless steel sheath. The void surrounding the element is packed with MgO powder and the sheath tip is welded closed with a stainless steel cap. The leads and sheath are sealed with low temperature epoxies to prevent moisture penetration.

MECHANICAL SPECIFICATIONS

The following specifications are those found on standard construction RTD sensor assemblies.

Sheath Materials

MATERIAL	CODE	APPLICATION DATA	NOTES
316 SS	8	Superior Corrosion Resistance	Used as standard sheath material on all but 1/16" OD sheaths
Inconel 600	3	Excellent Corrosion and Oxidation Resistance at High Temperatures	

Sheath Mounting Fitting Dimensions

CODE	STYLE	SHEATH OD (inches)	NPT SIZE (inches)	LENGTH (inches)
01A	303 SS one-time adjustable	1/16, 1/8, 3/16, 1/4	1/8	1 5/16
05A	316 SS one-time adjustable	1/16, 1/8, 3/16, 1/4	1/8	1 1/4
05B	316 SS one-time adjustable	1/8, 3/16, 1/4, 3/8	1/4	1 7/8
05C	316 SS one-time adjustable	1/8, 1/4, 3/8	1/2	1 13/16
15A	Brass one-time adjustable	1/8, 3/16, 1/4	1/8	1 1/4
15B	Brass one-time adjustable	3/16, 1/4, 3/8	1/4	1 3/8
15C	Brass one-time adjustable	1/4, 3/8	1/2	1 1/2
10A	303 SS re-adjustable	1/16, 1/8, 3/16	1/8	1 1/4
10B	303 SS re-adjustable	1/4, 3/8	1/4	2 7/16
10C	303 SS re-adjustable	1/4, 3/8	1/2	2 7/16
12A	316 SS re-adjustable	1/16, 1/8, 3/16, 1/4	1/8	1 1/4
12B	316 SS re-adjustable	1/8, 3/16, 1/4, 3/8	1/4	1 1/2
12C	316 SS re-adjustable	1/8, 1/4, 3/8	1/2	1 3/4
11A	Brass re-adjustable	1/16, 1/8, 3/16, 1/4	1/8	1 19/64
11B	Brass re-adjustable	1/8, 3/16, 1/4, 3/8	1/4	1 9/16
11C	Brass re-adjustable	1/4, 3/8	1/2	1 13/16
19C	303 SS spring-loaded well ftg.	3/16, 1/4	1/2	2 1/4
8A	316 SS fixed bushing	All sizes	1/8	5/8
8B	316 SS fixed bushing	All sizes	1/4	11/16
8C	316 SS fixed bushing	All sizes	1/2	15/16
8D	316 SS fixed bushing	All sizes	3/4	1
6HN	Steel hex fitting	1/8, 3/16, 1/4, 3/8	1/2	2
8HN	316 SS hex fitting	1/8, 3/16, 1/4, 3/8	1/2	2
8RNDC	316 SS reducing hex fitting	1/8, 3/16, 1/4, 3/8	1/2 x 3/4	2
9HNB	303 SS hex fitting	1/8, 3/16, 1/4, 3/8	1/4	1 3/16
13A	Fixed bayonet fitting	1/8, 3/16	N/A	1 5/8
14	Adjustable flange	1/8, 3/16, 1/4, 3/8	N/A	1 1/2
16A	Adjustable bayonet fitting	1/8	N/A	1 5/8

Compression Fitting Pressure Rating Table

CODE	05A	05A, 05B 05C	05A, 05B	05A, 05B 05C	05B, 05C
Sheath O.D. & Wall Thickness	1/6" O.D. x 0.0077"	1/8" O.D. x 0.012"	3/16" O.D. x 0.020"	1/4" O.D. x 0.028"	3/8" O.D. x 0.049"
TEMPERATURE	MAXIMUM ALLOWANCE WORKING PRESSURE (PSIG)				
(-29 to 149) °C [-20 TO 300] °F	3300	2850	3150	3350	3900
204 °C [400 °F]	3200	2750	3050	3250	3800
260 °C [500 °F]	3000	2550	2850	3000	3500
316 °C [600 °F]	2800	2400	2700	2850	3300
371 °C [700 °F]	2700	2350	2600	2750	3200
427 °C [800 °F]	2650	2300	2550	2650	3100
482 °C [900 °F]	2600	2200	2450	2600	3050
538 °C [1000 °F]	2400	2100	2300	2450	2850

Calculations are based on the following criteria: 316 stainless steel sheath, ultimate tensile stress of 75000 PSI for seamless tube, Conservative Barlow Formula and safety factor of 4.0.