

Conax **wirewound platinum RTD assemblies** feature a wirewound element encased in either a stainless steel or Inconel 600 sheath. The RTD's nickel leadwires are supported and insulated throughout the sheath with densely compacted high-purity magnesium oxide. This allows the sensor to be bent like a thermocouple except in the tip portion that contains the element.

M-style construction uses a powder-filled tubewell construction with bare leadwire strung through pre-formed MgO insulators and attached directly to the element. This assembly is inserted into a closed-end tubewell, which is then filled with Alumina Oxide (Al₂O₃) powder and capped with potting compound. **E-style construction** features a similar tubewell construction, with Teflon®-insulated leadwires brazed to the element. The tubewell is then filled with Alumina Oxide (Al₂O₃) powder and capped with potting compound. In both cases, the minimum active length is 3" and the assemblies should not be bent.

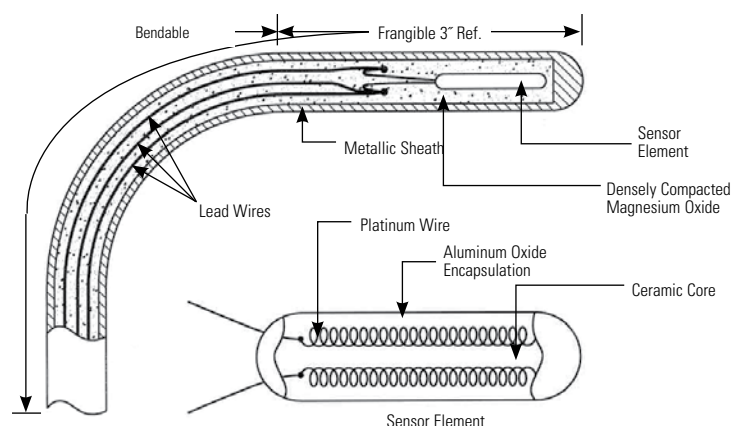
RTD assemblies can be provided with a wide variety of termination styles and mounting fittings to meet the needs of your application. Conax also offers numerous sensor tolerances, sheath diameters and sheath materials. This section outlines the key choices needed to specify the correct Conax part description for your needs.

In each case, you will be asked to select the:

- sensor element to meet your operating conditions and specifications
- sensor tolerance
- lead configuration corresponding to the number of leads your application requires
- sheath material and size
- termination style
- optional mounting configuration
- sheath length

 **For Assistance**

Wirewound Platinum Element Assembly



Sensor Element Descriptions

Catalog Code	Description	Operating Range
ERTD41	Wirewound Copper, 10Ω (9.05Ω actual) @ 0° C, 0.00426 Ω/Ω/°C	-70° C to +150° C -94° F to +300° F
ERTD42	Wirewound Nickel, 120Ω @ 0° C, 0.00672 Ω/Ω/°C	-40° C to +180° C -40° F to +350° F
RTD43	Wirewound Platinum, 100Ω @ 0° C, 0.00385 Ω/Ω/°C	-200° C to +600° C -328° F to +1112° F
MRTDF43	Thin Film Platinum, 100Ω @ 0° C, 0.00385 Ω/Ω/°C	-50° C to +550° C -58° F to +1022° F
RTD44	Wirewound Platinum, 100Ω @ 0° C, 0.00385 Ω/Ω/°C	-200° C to +800° C -328° F to +1472° F
ARTD44	Wirewound Platinum, 100Ω @ 0° C, 0.00385 Ω/Ω/°C	-196° C to +600° C -321° F to +1112° F
RTD45	Wirewound Platinum, 100Ω @ 0° C, 0.003916 Ω/Ω/°C	-200° C to +600° C -328° F to +1112° F
RTD86	Wirewound Platinum, 200Ω @ 0° C, 0.00385 Ω/Ω/°C	-200° C to +600° C -328° F to +1112° F
MRTDF430	Thin Film Platinum, 1000Ω @ 0° C, 0.00385 Ω/Ω/°C	-50° C to +550° C -58° F to +1022° F

Note: Operating temperatures apply to element only. Assembly operating temperature depends on materials and construction. When the RTD must fit into an existing network, the ice point resistance and temperature coefficient should match that of the readout equipment – usually found on the equipment nameplate. Wirewound platinum elements consist of a filament encapsulated within longitudinal holes in a ceramic body. Thin-film elements (designated by "F") consist of a platinum film deposited onto a ceramic substrate and are available only in powder-filled construction. ASTM E1137 specifications are met by ARTD44. These sensor types are also available: RTD48, Wirewound Platinum, 10 Ω @ 0° C, 0.00385 Ω/Ω/°C; MRTDF215, Thin Film Platinum, 500 Ω @ 0° C, 0.00385 Ω/Ω/°C. Consult factory. Wirewound platinum element assemblies are also available in E-style and M-style construction, W tolerance, for certain applications. Consult factory.

Sensor Tolerances

Class (Catalog Code)	Tolerance at 0°C (°C)										
	ERTD41		ERTD42		MRTDF43	RTD43 & RTD44		RTD45		RTD86	MRTDF430
	Single	Single	Dual	Single	Single	Dual	Single	Dual	Single	Single	
Class B (W)*	–	–	–	±0.3	±0.3	±0.3	±0.3	±0.3	±0.3	±0.3	±0.3
1/3 Class B (V)	–	–	–	–	±0.1	–	±0.1	–	–	–	–
X	±0.4	±0.8	±1.4	–	–	–	–	–	–	–	–
Class A (S)**	–	–	–	–	±0.15	–	±0.15	–	–	–	–

Notes: - This table represents tolerance values for 3-wire and 4-wire RTDs. Caution must be exercised with 2-wire RTDs and 3-wire RTDs with longer than standard termination leads because possible error can be introduced by leadwire resistance. - Class A and Class B tolerances are based on EN 60751:1996 for platinum elements. - For ASTM E1137 assemblies, ARTD44, W tolerance applies, 4-wire lead configuration. * Type W tolerance sensors are the most widely used in the industry. ** Type S should be 4 four-wire to ensure accuracy.

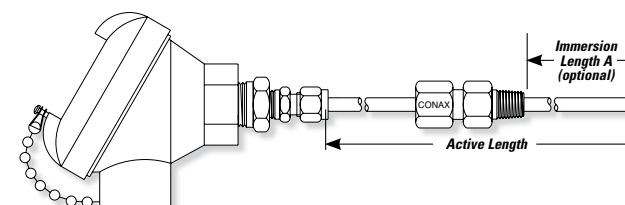
Sheath Diameter and Material Availabilities

Catalog Code		Sheath OD (inches)	Wall Thickness (nominal)	Sensor Element	Single				Dual	
316 Stainless Steel	INCONEL 600				W	V	X	S	W	X
316SS12 316SS118 (3mm)	INC12	0.125	0.020	RTD43	•	•		•	•	
				MRTDF43	•					
				RTD44	•	•		•		
316SS18	INC18	0.187	0.028	RTD45	•	•		•		
				RTD43	•	•		•	•	
				MRTDF43	•					
316SS25 316SS236 (6mm)	INC25	0.250	0.033	ERTD41				•		
				ERTD42						•
				RTD43	•	•		•	•	
				MRTDF43	•					
				RTD44	•	•		•	•	
				ARTD44	•					
				RTD45	•	•		•	•	
				RTD86	•					
MRTDF430	•									

Notes: - Per ASTM E1137, stainless steel is recommended for service temperatures not exceeding 900° F (480° C). Inconel 600 is recommended for service temperatures not exceeding 1202° F (650° C). Conax endorses these recommendations. Above 1202° F (650° C), high purity alumina sheathing is suggested. - All 0.125" sheath diameters can be supplied containing up to four wires. All 0.187 and 0.250" sheath diameters can be supplied containing up to eight wires. - Maximum continuous standard probe length is 20 feet. For longer lengths, please consult the factory.

Active Length

The active length must be specified as the last portion of the catalog description. The active length is the distance in inches from the termination to the sensor tip, as shown in the drawing. Note that you must order the active length, not the immersion. The active length is available in 1/16" increments.



With adjustable fittings and spring-load assemblies, the immersion length is measured from the end of the fitting to the tip of the probe. In cases where this length must be called out in the catalog description, it is added at the end of the catalog number as follows:

Example: RTD-SS12-U-T5AL-SL-12.50", A=3.50"
(A indicates the immersion length)

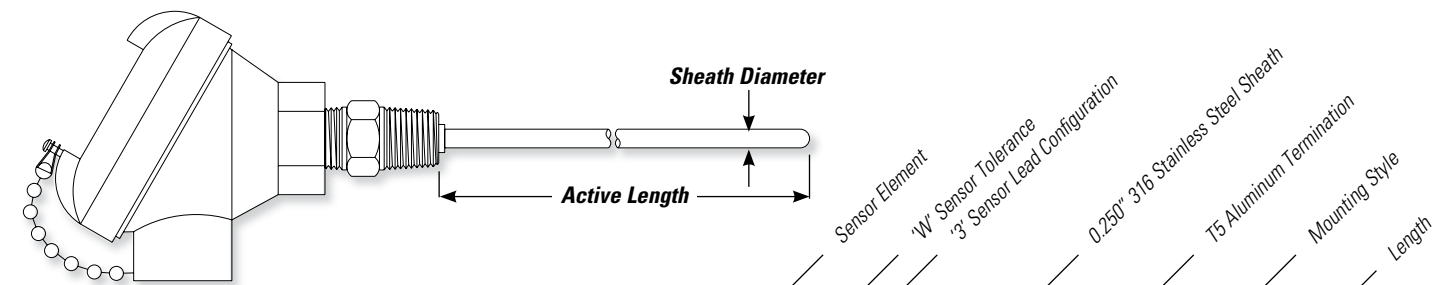
Conax RTD assemblies offer a wide variety of terminal head styles to meet application needs. In direct mount models, the sheath is attached to the terminal head using either a W8 fitting or a Conax manufactured "soft seal" compression fitting. Compression seal models are provided in different sizes and with various sealant materials to ensure proper function in a wide range of environments. All provided direct mount fittings serve as mounting devices and environmental seals.

Specify Sensor Element	Specify Sensor Tolerance	Specify Sensor Lead Configuration	Specify Sheath Material & Size
RTD43 Platinum <ul style="list-style-type: none"> 100Ω @ 0° C α = 0.00385 Ω/Ω/°C -200° C to +600° C -328° F to +1112° F 	W (Class B) <ul style="list-style-type: none"> Available for RTD43, 44 and 45, single and dual; and RTD86, MRTDF43 and MRTDF430, single only Tolerance at 0° C is ±0.3° C 	2 2-WIRE SINGLE 3 3-WIRE SINGLE 4 4-WIRE SINGLE 6 2-WIRE DUAL 7 3-WIRE DUAL 8 4-WIRE DUAL	316 Stainless Steel 316SS118 <ul style="list-style-type: none"> 3 mm
MRTDF43 Platinum <ul style="list-style-type: none"> 100Ω @ 0° C α = 0.00385 Ω/Ω/°C -50° C to +550° C -58° F to +1022° F 			V (1/3 Class B) <ul style="list-style-type: none"> Available for RTD43, 44 and 45 single only Tolerance at 0° C is ±0.1° C
RTD44 Platinum <ul style="list-style-type: none"> 100Ω @ 0° C α = 0.00385 Ω/Ω/°C -200° C to +800° C -328° F to +1472° F Inconel 600 sheath standard 	S (Class A) <ul style="list-style-type: none"> Available for RTD43, 44 and 45 single only Tolerance at 0° C is ±0.15° C 	316SS18 <ul style="list-style-type: none"> 0.187" diameter 	
RTD45 Platinum <ul style="list-style-type: none"> 100Ω @ 0° C α = 0.003916 Ω/Ω/°C -200° C to +600° C -328° F to +1112° F 		X <ul style="list-style-type: none"> Available for ERTD41, single only; tolerance at 0° C is ±0.4° C Available for ERTD42, single; tolerance at 0° C is ±0.8° C Available for ERTD42, dual; tolerance at 0° C is ±1.4° C 	316SS236 <ul style="list-style-type: none"> 6 mm
RTD86 Platinum <ul style="list-style-type: none"> 200Ω @ 0° C α = 0.00385 Ω/Ω/°C -200° C to +600° C -328° F to +1112° F 	ERTD41 Copper <ul style="list-style-type: none"> 10Ω (9.05Ω actual) @ 0° C α = 0.00426 Ω/Ω/°C -70° C to +150° C -94° F to +300° F Available with 0.250" sheath diameter or larger 		316SS25 <ul style="list-style-type: none"> 0.250" diameter
MRTDF430 Platinum <ul style="list-style-type: none"> 1000Ω @ 0° C α = 0.00385 Ω/Ω/°C -50° C to +550° C -58° F to +1022° F Available with 0.250" sheath diameter or larger 		ERTD42 Nickel <ul style="list-style-type: none"> 120Ω @ 0° C α = 0.00672 Ω/Ω/°C -40° C to +180° C -40° F to +350° F Available with 0.250" sheath diameter or larger 	Inconel 600 INC12 <ul style="list-style-type: none"> 0.125" diameter Standard sheath material for RTD44
			INC18 <ul style="list-style-type: none"> 0.187" diameter Standard sheath material for RTD44
			INC25 <ul style="list-style-type: none"> 0.250" diameter Standard sheath material for RTD44

Note: For 0.125" and 0.187" diameter sheaths can contain up to 4 wires; 0.250" diameter sheaths can contain up to 8 wires.

Note: For additional diameters and other sheath materials, see pages 7.

Note: For ASTM E1137 assemblies, use ordering prefix ARTD44W4-SS25 or ARTD44W4-INC25.



Progressive Description Example: **RTD43W3-316SS25-T5AL(W8)-12.00"**

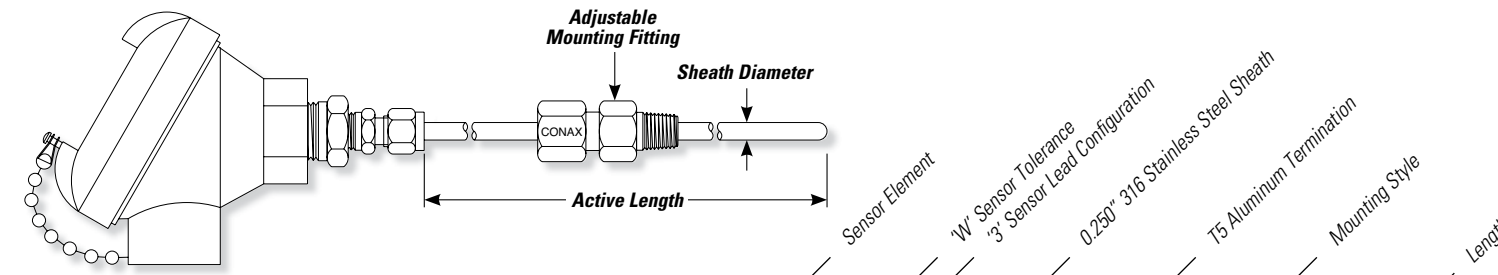
Specify Termination Style	Specify Mounting Style	Specify Length in Inches (required)
T5AL - Aluminum T5CI - Cast Iron <ul style="list-style-type: none"> NEMA 4 rated Conduit port 3/4 NPT 	T11 <ul style="list-style-type: none"> Weather proof Aluminum construction Conduit port 1/2 NPT 	PG2 <ul style="list-style-type: none"> For 0.125", 0.187" and 0.250" diameter sheath Stainless steel construction Mounting thread 1/4 NPT
T5SS <ul style="list-style-type: none"> NEMA 4X rated 316 stainless steel construction Conduit port 3/4 NPT 		
T7 <ul style="list-style-type: none"> Weather proof Aluminum conduit box accommodates up to 8 terminals Conduit port 3/4 NPT 	T12 <ul style="list-style-type: none"> Weather proof Aluminum construction Flip-top head Conduit port 1/2 NPT 	PG2BL - Lava sealant PG2BT - Teflon sealant PG2BN - Neoprene sealant PG2BV - Viton sealant PG2BG - Grafoil sealant
T8E <ul style="list-style-type: none"> Explosion proof rating Class I, Group B, C & D Class II, Group E, F & G Class III Gray iron body with aluminum screw cover NEMA 4 rated Conduit port 1/2 NPT 	T13 <ul style="list-style-type: none"> FDA compliant, NEMA 4 rated White, unpigmented polypropylene construction Conduit port 3/4 NPT 	PG4 <ul style="list-style-type: none"> For 0.250" diameter sheath Stainless steel construction Mounting thread 1/2 NPT
	T13F <ul style="list-style-type: none"> FDA compliant, NEMA 4X rated White, unpigmented polypropylene construction Flip-top head Conduit port 3/4 NPT 	PG4BL - Lava sealant PG4BT - Teflon sealant PG4BN - Neoprene sealant PG4BV - Viton sealant PG4BG - Grafoil sealant
		W4 <ul style="list-style-type: none"> For 0.125", 0.187" and 0.250" diameter sheath 316 stainless steel construction Mounting thread 1/4 NPT Sheath welded to fitting
		W8 <ul style="list-style-type: none"> For 0.125", 0.187" and 0.250" diameter sheath 316 stainless steel construction Mounting thread 1/2 NPT Sheath welded to fitting

Note: For additional terminal head types and detailed descriptions, see page 43-47.

Note: For sealant material details, see page 37.

Note: For sealant material details, see page 37.

Conax RTD assemblies can be supplied with a wide variety of terminal head styles to meet application needs. Adjustable mounting fittings using Conax "soft seal" compression fittings allow the immersion depth of the sheath to be easily adjusted in the field and provide pressure or vacuum sealing against gases or liquids. (Compression fittings are shipped untorqued.) Compression fitting models are offered in different sizes and with various sealant materials to ensure proper function in a wide range of environments. Additional information on sealing options, as well as sealant temperature and pressure ratings, can be found in our Conax Compression Seal Feedthroughs and Fittings Catalog #5001 or at www.conaxtechnologies.com.



Progressive Description Example: **RTD43W3-316SS25-T5AL-PG4AL-12.00"**

Specify Sensor Element	Specify Sensor Tolerance	Specify Sensor Lead Configuration	Specify Sheath Material & Size
RTD43 Platinum <ul style="list-style-type: none"> • 100Ω @ 0° C • α = 0.00385 Ω/Ω/°C • -200° C to +600° C • -328° F to +1112° F 	W (Class B) <ul style="list-style-type: none"> • Available for RTD43, 44 and 45, single and dual; and RTD86, MRTDF43 and MRTDF430, single only • Tolerance at 0° C is ±0.3° C 	2 2-WIRE SINGLE 3 3-WIRE SINGLE 4 4-WIRE SINGLE 6 2-WIRE DUAL 7 3-WIRE DUAL 8 4-WIRE DUAL	316 Stainless Steel 316SS118 <ul style="list-style-type: none"> • 3 mm 316SS12 <ul style="list-style-type: none"> • 0.125" diameter 316SS18 <ul style="list-style-type: none"> • 0.187" diameter 316SS236 <ul style="list-style-type: none"> • 6 mm 316SS25 <ul style="list-style-type: none"> • 0.250" diameter
MRTDF43 Platinum <ul style="list-style-type: none"> • 100Ω @ 0° C • α = 0.00385 Ω/Ω/°C • -50° C to +550° C • -58° F to +1022° F 	V (1/3 Class B) <ul style="list-style-type: none"> • Available for RTD43, 44 and 45 single only • Tolerance at 0° C is ±0.1° C 		Inconel 600 INC12 <ul style="list-style-type: none"> • 0.125" diameter • Standard sheath material for RTD44 INC18 <ul style="list-style-type: none"> • 0.187" diameter • Standard sheath material for RTD44 INC25 <ul style="list-style-type: none"> • 0.250" diameter • Standard sheath material for RTD44
RTD44 Platinum <ul style="list-style-type: none"> • 100Ω @ 0° C • α = 0.00385 Ω/Ω/°C • -200° C to +800° C • -328° F to +1472° F • Inconel 600 sheath standard 	S (Class A) <ul style="list-style-type: none"> • Available for RTD43, 44 and 45 single only • Tolerance at 0° C is ±0.15° C 		
RTD45 Platinum <ul style="list-style-type: none"> • 100Ω @ 0° C • α = 0.003916 Ω/Ω/°C • -200° C to +600° C • -328° F to +1112° F 	X <ul style="list-style-type: none"> • Available for ERTD41, single only; tolerance at 0° C is ±0.4° C • Available for ERTD42, single; tolerance at 0° C is ±0.8° C • Available for ERTD42, dual; tolerance at 0° C is ±1.4° C 		
RTD86 Platinum <ul style="list-style-type: none"> • 200Ω @ 0° C • α = 0.00385 Ω/Ω/°C • -200° C to +600° C • -328° F to +1112° F 	ERTD41 Copper <ul style="list-style-type: none"> • 10Ω (9.05Ω actual) @ 0° C • α = 0.00426 Ω/Ω/°C • -70° C to +150° C • -94° F to +300° F • Available with 0.250" sheath diameter or larger 		
MRTDF430 Platinum <ul style="list-style-type: none"> • 1000Ω @ 0° C • α = 0.00385 Ω/Ω/°C • -50° C to +550° C • -58° F to +1022° F • Available with 0.250" sheath diameter or larger 	ERTD42 Nickel <ul style="list-style-type: none"> • 120Ω @ 0° C • α = 0.00672 Ω/Ω/°C • -40° C to +180° C • -40° F to +350° F • Available with 0.250" sheath diameter or larger 		

Note: 0.125" and 0.187" diameter sheaths can contain up to 4 wires; 0.250" diameter sheaths can contain up to 8 wires.

Note: For additional diameters and other sheath materials, see page 7.

Note: For ASTM E1137 assemblies, use ordering prefix ARTD44W4-SS25 or ARTD44W4-INC25.

Specify Termination Style	Specify Mounting Style	Specify Length in Inches (required)
T5AL- Aluminum T5CI- Cast Iron <ul style="list-style-type: none"> • NEMA 4 rated • Conduit port 3/4 NPT 	T11 <ul style="list-style-type: none"> • Weather proof • Aluminum construction • Conduit port 1/2 NPT 	Packing Gland MPG <ul style="list-style-type: none"> • For 0.125" and 0.187" diameter sheath • Stainless steel construction • Mounting thread 1/8 NPT
T5SS <ul style="list-style-type: none"> • NEMA 4X rated • 316 stainless steel construction • Conduit port 3/4 NPT 	T11PL <ul style="list-style-type: none"> • Weather proof • Plastic construction • Conduit port 1/2 NPSM 	MPGAL - Lava sealant MPGAT - Teflon sealant MPGAN - Neoprene sealant MPGAV - Viton sealant MPGAG - Grafoil sealant
T7 <ul style="list-style-type: none"> • Weather proof • Aluminum conduit box accommodates up to 8 terminals • Conduit port 3/4 NPT 	T12 <ul style="list-style-type: none"> • Weather proof • Aluminum construction • Flip-top head • Conduit port 1/2 NPT 	PG2 <ul style="list-style-type: none"> • For 0.125", 0.187" and 0.250" diameter sheath • Stainless steel construction • Mounting thread 1/4 NPT
T8E <ul style="list-style-type: none"> • Explosion proof rating Class I, Group B, C & D Class II, Group E, F & G Class III • Gray iron body with aluminum screw cover • NEMA 4 rated • Conduit port 1/2 NPT 	T13T <ul style="list-style-type: none"> • FDA compliant, NEMA 4X rated • White, unpigmented polypropylene construction • 4 terminal posts • Conduit port 3/4 NPT 	PG2AL - Lava sealant PG2AT - Teflon sealant PG2AN - Neoprene sealant PG2AV - Viton sealant PG2AG - Grafoil sealant
T15EAL- Aluminum T15ESS- Stainless Steel T15EAL(ATEX) <ul style="list-style-type: none"> • Explosion Proof rating Class 1, Division 1, Groups B, C and D and Dust Proof/Ignition Proof rating for Class II, Division 1, Group E, F & G • Ratings: T15EAL - NEMA 4, T15ESS - NEMA 4X • Conduit port 3/4 NPT 	PG4 <ul style="list-style-type: none"> • For 0.250" diameter sheath • Stainless steel construction • Mounting thread 1/2 NPT 	Midlock Gland MK125A <ul style="list-style-type: none"> • For 0.125" diameter sheath • Stainless steel construction • Stainless steel ferrule • Mounting thread 1/8 NPT
	PG4AL - Lava sealant PG4AT - Teflon sealant PG4AN - Neoprene sealant PG4AV - Viton sealant PG4AG - Grafoil sealant	MK187A <ul style="list-style-type: none"> • For 0.187" diameter sheath • Stainless steel construction • Stainless steel ferrule • Mounting thread 1/8 NPT
		MK250A <ul style="list-style-type: none"> • For 0.250" diameter sheath • Stainless steel construction • Stainless steel ferrule • Mounting thread 1/4 NPT

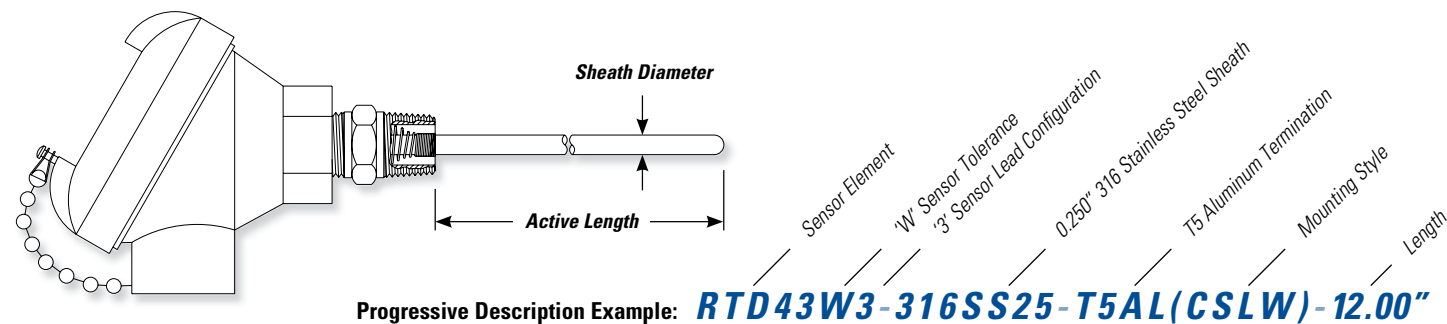
Note: For sealant material details, see page 37.

This assembly may be purchased without the mounting fitting. Omit the mounting style from the description. The catalog description in this case would be RTD43W3-316SS25-T5AL-12.00".

Note: For additional terminal head types and detailed descriptions, see pages 43-47.

Conax spring-loaded assemblies are used to maintain positive contact between the sensor tip and the surface to be monitored, typically used with thermowell assemblies. Conax supplies a number of styles of spring-loaded assemblies to meet application needs. Spring-loaded assemblies can be provided with all terminal heads. In addition, the T11SL model provides a spring-loaded assembly built into the T11 aluminum terminal head. This allows complete disassembly and removal of the sensor probe without dismantling the terminal head from the conduit or the vessel. For detailed information on these mounting styles, see pages 40-41.

<p>Specify Sensor Element</p> <p>RTD43 Platinum</p> <ul style="list-style-type: none"> • 100Ω @ 0° C • α = 0.00385 Ω/Ω/°C • -200° C to +600° C • -328° F to +1112° F <p>MRTDF43 Platinum</p> <ul style="list-style-type: none"> • 100Ω @ 0° C • α = 0.00385 Ω/Ω/°C • -50° C to +550° C • -58° F to +1022° F <p>RTD44 Platinum</p> <ul style="list-style-type: none"> • 100Ω @ 0° C • α = 0.00385 Ω/Ω/°C • -200° C to +800° C • -328° F to +1472° F • Inconel 600 sheath standard <p>RTD45 Platinum</p> <ul style="list-style-type: none"> • 100Ω @ 0° C • α = 0.003916 Ω/Ω/°C • -200° C to +600° C • -328° F to +1112° F <p>RTD86 Platinum</p> <ul style="list-style-type: none"> • 200Ω @ 0° C • α = 0.00385 Ω/Ω/°C • -200° C to +600° C • -328° F to +1112° F <p>MRTDF430 Platinum</p> <ul style="list-style-type: none"> • 1000Ω @ 0° C • α = 0.00385 Ω/Ω/°C • -50° C to +550° C • -58° F to +1022° F • Available with 0.250" sheath diameter or larger <p><i>Note: For ASTM E1137 assemblies, use ordering prefix ARTD44W4-SS25 or ARTD44W4-INC25.</i></p>	<p>Specify Sensor Tolerance</p> <p>W (Class B)</p> <ul style="list-style-type: none"> • Available for RTD43, 44 and 45, single and dual; and RTD86, MRTDF43 and MRTDF430, single only • Tolerance at 0° C is ±0.3° C <p>V (1/3 Class B)</p> <ul style="list-style-type: none"> • Available for RTD43, 44 and 45 single only • Tolerance at 0° C is ±0.1° C <p>S (Class A)</p> <ul style="list-style-type: none"> • Available for RTD43, 44 and 45 single only • Tolerance at 0° C is ±0.15° C <p>X</p> <ul style="list-style-type: none"> • Available for ERTD41, single only; tolerance at 0° C is ±0.4° C • Available for ERTD42, single; tolerance at 0° C is ±0.8° C • Available for ERTD42, dual; tolerance at 0° C is ±1.4° C <p>ERTD41 Copper</p> <ul style="list-style-type: none"> • 10Ω (9.05Ω actual) @ 0° C • α = 0.00426 Ω/Ω/°C • -70° C to +150° C • -94° F to +300° F • Available with 0.250" sheath diameter or larger <p>ERTD42 Nickel</p> <ul style="list-style-type: none"> • 120Ω @ 0° C • α = 0.00672 Ω/Ω/°C • -40° C to +180° C • -40° F to +350° F • Available with 0.250" sheath diameter or larger 	<p>Specify Sensor Lead Configuration</p> <p>2 RED WHITE 2-WIRE SINGLE</p> <p>3 RED RED WHITE 3-WIRE SINGLE</p> <p>4 RED RED WHITE WHITE 4-WIRE SINGLE</p> <p>6 RED RED WHITE WHITE 2-WIRE DUAL</p> <p>7 RED RED RED RED WHITE WHITE 3-WIRE DUAL</p> <p>8 RED RED RED RED WHITE WHITE WHITE WHITE 4-WIRE DUAL</p> <p><i>Note: 0.125" and 0.187" diameter sheaths can contain up to 4 wires; 0.250" diameter sheaths can contain up to 8 wires.</i></p>	<p>Specify Sheath Material & Size</p> <p>316 Stainless Steel</p> <p>316SS118</p> <ul style="list-style-type: none"> • 3 mm <p>316SS12</p> <ul style="list-style-type: none"> • 0.125" diameter <p>316SS18</p> <ul style="list-style-type: none"> • 0.187" diameter <p>316SS236</p> <ul style="list-style-type: none"> • 6 mm <p>316SS25</p> <ul style="list-style-type: none"> • 0.250" diameter <p>Inconel 600</p> <p>INC12</p> <ul style="list-style-type: none"> • 0.125" diameter • Standard sheath material for RTD44 <p>INC18</p> <ul style="list-style-type: none"> • 0.187" diameter • Standard sheath material for RTD44 <p>INC25</p> <ul style="list-style-type: none"> • 0.250" diameter • Standard sheath material for RTD44 <p><i>Note: For additional diameters and other sheath materials, see page 7.</i></p>
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<p>Specify Termination Style</p> <p>T5AL- Aluminum T5CI- Cast Iron</p> <ul style="list-style-type: none"> • NEMA 4 rated • Conduit port 3/4 NPT <p>T5SS</p> <ul style="list-style-type: none"> • NEMA 4X rated • 316 stainless steel construction • Conduit port 3/4 NPT <p>T7</p> <ul style="list-style-type: none"> • Weather proof • Aluminum conduit box accommodates up to 8 terminals • Conduit port 3/4 NPT <p>T8E</p> <ul style="list-style-type: none"> • Explosion proof rating Class I, Group B, C & D Class II, Group E, F & G Class III • Gray iron body with aluminum screw cover • NEMA 4 rated • Conduit port 1/2 NPT 	<p>T11</p> <ul style="list-style-type: none"> • Weather proof • Aluminum construction • Conduit port 1/2 NPT <p>T11PL</p> <ul style="list-style-type: none"> • Weather proof • Plastic construction • Conduit port 1/2 NPSM <p>T12</p> <ul style="list-style-type: none"> • Weather proof • Aluminum construction • Flip-top head • Conduit port 1/2 NPT <p>T13T</p> <ul style="list-style-type: none"> • FDA compliant, NEMA 4X rated • White, unpigmented polypropylene construction • 4 terminal posts • Conduit port 3/4 NPT <p>T15EAL- Aluminum T15ESS- Stainless Steel T15EAL(ATEX)</p> <ul style="list-style-type: none"> • Explosion Proof rating Class 1, Division 1, Groups B, C and D and Dust Proof/Ignition Proof rating for Class II, Division 1, Group E, F & G • Ratings: T15EAL – NEMA 4, T15ESS – NEMA 4X • Conduit port 3/4 NPT 	<p>Specify Mounting Style</p> <p>CSLW</p> <ul style="list-style-type: none"> • For 0.125", 0.187" and 0.250" diameter sheaths • Stainless steel construction • Mounting thread 1/2 NPT <p>SLAN</p> <ul style="list-style-type: none"> • For 0.125", 0.187" and 0.250" diameter sheaths • Stainless steel construction • Mounting thread 1/2 NPT • Probe position can be adjusted in the field <p>SLANS</p> <ul style="list-style-type: none"> • For 0.250" diameter sheath • Includes Viton O-ring • Stainless steel construction • Mounting thread 1/2 NPT • Probe position can be adjusted in the field 	<p>Specify Length in Inches (required)</p> <p>SLN</p> <ul style="list-style-type: none"> • For 0.125", 0.187" and 0.250" diameter sheath • Mounting thread 1/2 NPT • Most durable <p>SL</p> <ul style="list-style-type: none"> • Spring-loaded packing gland • Spring travel: 1/4" to 3/8" • 2-8 pounds spring pressure • Stainless steel construction, Teflon sealant • Available with B cap for direct mount • Additional dimensional data required, see page 40. <p>SL12</p> <ul style="list-style-type: none"> • For 0.125" diameter sheath • Mounting thread 1/8 NPT <p>SL18</p> <ul style="list-style-type: none"> • For 0.187" diameter sheath • Mounting thread 1/4 NPT <p>SL25</p> <ul style="list-style-type: none"> • For 0.250" diameter sheath • Mounting thread 1/2 NPT • Optional 1/4 NPT mounting thread is available. Consult factory. <p><i>For additional information on spring-loaded mounting styles, see pages 40-41.</i></p>
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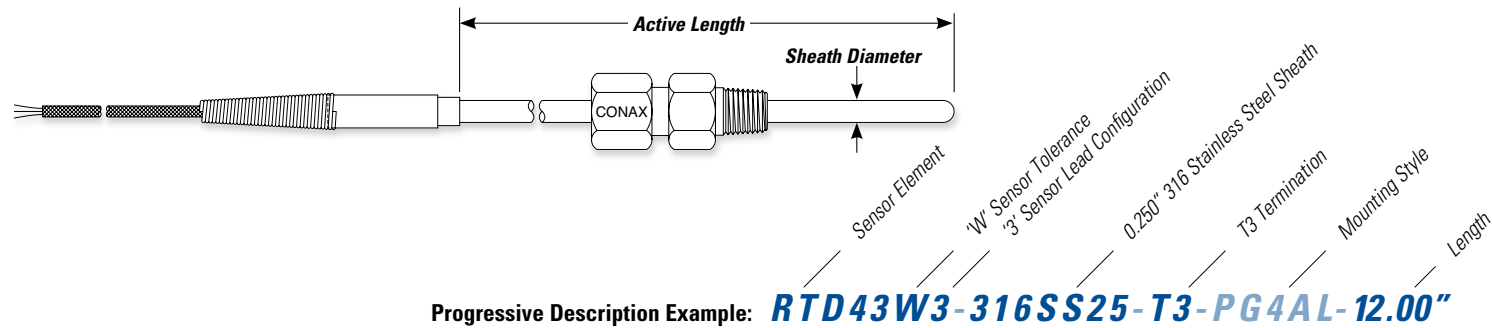
Note: For additional terminal head types and detailed descriptions, see pages 43-47.

This exclusive Conax design provides a practically unbreakable connection between the leadwire and the probe lead. The T3 epoxy-filled transition is supplied with 24 AWG stranded silver-plated copper Teflon-insulated wire with Teflon overall as standard. Silicone impregnated fiberglass insulation is also available.

T4 termination provides a stainless steel overbraid for maximum flexibility and abrasion resistance. The overbraid is embedded in the epoxy-filled material to ensure mechanical strength. Standard extension leads are 24" long. Longer leads are available on request.

Specify Sensor Element	Specify Sensor Tolerance	Specify Sensor Lead Configuration	Specify Sheath Material & Size
RTD43 Platinum <ul style="list-style-type: none"> 100Ω @ 0° C α = 0.00385 Ω/Ω/°C -200° C to +600° C -328° F to +1112° F 	W (Class B) <ul style="list-style-type: none"> Available for RTD43, 44 and 45, single and dual; and RTD86, MRTDF43 and MRTDF430, single only Tolerance at 0° C is ±0.3° C 		316 Stainless Steel 316SS118 <ul style="list-style-type: none"> 3 mm 316SS12 <ul style="list-style-type: none"> 0.125" diameter 316SS18 <ul style="list-style-type: none"> 0.187" diameter 316SS236 <ul style="list-style-type: none"> 6 mm 316SS25 <ul style="list-style-type: none"> 0.250" diameter
MRTDF43 Platinum <ul style="list-style-type: none"> 100Ω @ 0° C α = 0.00385 Ω/Ω/°C -50° C to +550° C -58° F to +1022° F 			
RTD44 Platinum <ul style="list-style-type: none"> 100Ω @ 0° C α = 0.00385 Ω/Ω/°C -200° C to +800° C -328° F to +1472° F Inconel 600 sheath standard 	V (1/3 Class B) <ul style="list-style-type: none"> Available for RTD43, 44 and 45 single only Tolerance at 0° C is ±0.1° C 	Inconel 600 INC12 <ul style="list-style-type: none"> 0.125" diameter Standard sheath material for RTD44 INC18 <ul style="list-style-type: none"> 0.187" diameter Standard sheath material for RTD44 INC25 <ul style="list-style-type: none"> 0.250" diameter Standard sheath material for RTD44 	
RTD45 Platinum <ul style="list-style-type: none"> 100Ω @ 0° C α = 0.003916 Ω/Ω/°C -200° C to +600° C -328° F to +1112° F 			
RTD86 Platinum <ul style="list-style-type: none"> 200Ω @ 0° C α = 0.00385 Ω/Ω/°C -200° C to +600° C -328° F to +1112° F 	S (Class A) <ul style="list-style-type: none"> Available for RTD43, 44 and 45 single only Tolerance at 0° C is ±0.15° C 	Note: 0.125" and 0.187" diameter sheaths can contain up to 4 wires; 0.250" diameter sheaths can contain up to 8 wires.	
MRTDF430 Platinum <ul style="list-style-type: none"> 1000Ω @ 0° C α = 0.00385 Ω/Ω/°C -50° C to +550° C -58° F to +1022° F Available with 0.250" sheath diameter or larger 			
ERTD41 Copper <ul style="list-style-type: none"> 10Ω (9.05Ω actual) @ 0° C α = 0.00426 Ω/Ω/°C -70° C to +150° C -94° F to +300° F Available with 0.250" sheath diameter or larger 	X <ul style="list-style-type: none"> Available for ERTD41, single only; tolerance at 0° C is ±0.4° C Available for ERTD42, single; tolerance at 0° C is ±0.8° C Available for ERTD42, dual; tolerance at 0° C is ±1.4° C 	Note: For additional diameters and other sheath materials, see page 7.	
MRTDF430 Platinum <ul style="list-style-type: none"> 1000Ω @ 0° C α = 0.00385 Ω/Ω/°C -50° C to +550° C -58° F to +1022° F Available with 0.250" sheath diameter or larger 			
ERTD42 Nickel <ul style="list-style-type: none"> 120Ω @ 0° C α = 0.00672 Ω/Ω/°C -40° C to +180° C -40° F to +350° F Available with 0.250" sheath diameter or larger 	ERTD42 Nickel <ul style="list-style-type: none"> 120Ω @ 0° C α = 0.00672 Ω/Ω/°C -40° C to +180° C -40° F to +350° F Available with 0.250" sheath diameter or larger 	<p>T3 with armored cable, see page 76 (Also available without armor.)</p>	

Note: For ASTM E1137 assemblies, use ordering prefix ARTD44W4-SS25 or ARTD44W4-INC25.



Specify Termination Style	Specify Mounting Style (optional)	Specify Length in Inches (required)
T3 <ul style="list-style-type: none"> Teflon insulated leadwire Service temperature: 300° F (150° C) 	Packing Gland <ul style="list-style-type: none"> For 0.125" and 0.187" diameter sheath Stainless steel construction Mounting thread 1/8 NPT MPGAL – Lava sealant MPGAT – Teflon sealant MPGAN – Neoprene sealant MPGAV – Viton sealant MPGAG – Grafoil sealant	Midlock Gland <ul style="list-style-type: none"> For 0.125" diameter sheath Stainless steel construction Stainless steel ferrule Mounting thread 1/8 NPT
T4 <ul style="list-style-type: none"> Teflon insulated leadwire Stainless steel overbraid Service temperature: 300° F (150° C) 		
T4(HT) <ul style="list-style-type: none"> Fiberglass/silicone impregnated leadwire insulation Stainless steel overbraid High temperature encapsulant Service temperature: 900° F (482° C) 	<ul style="list-style-type: none"> For 0.250" diameter sheath Stainless steel construction Mounting thread 1/2 NPT PG4AL – Lava sealant PG4AT – Teflon sealant PG4AN – Neoprene sealant PG4AV – Viton sealant PG4AG – Grafoil sealant	<ul style="list-style-type: none"> For 0.250" diameter sheath Stainless steel construction Stainless steel ferrule Mounting thread 1/4 NPT
<p>For longer lead length, specify in feet, rounded up to the nearest foot. Example: T3(3 FT)</p> <p>Optional leadwire insulation types are available. Example: PVC requested – T3(3 FT-PVC). Consult factory for availability.</p> <p>For detailed descriptions of termination styles, see pages 42-43.</p>		

Note: For sealant material details, see page 37.

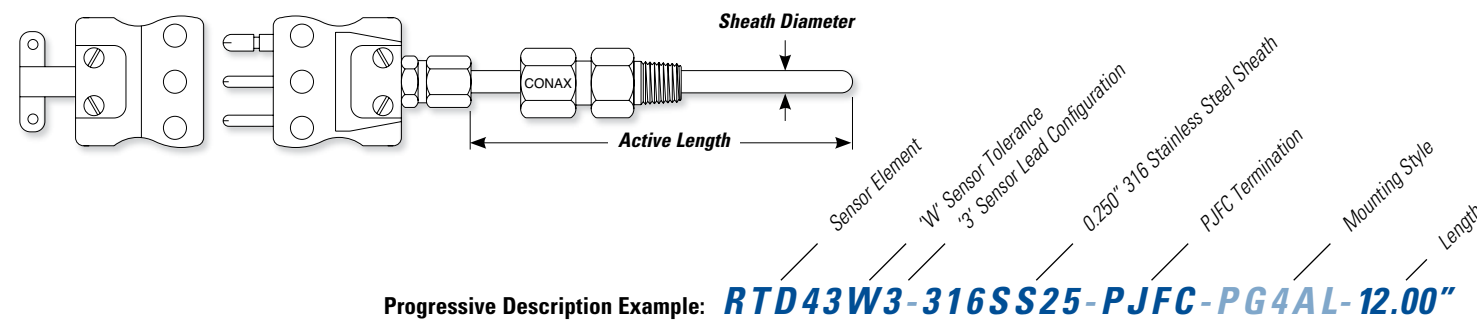
Conax polarized plug and jack assembly bodies are made from molded glass-filled thermoset compounds, with copper pin material. The connector is color-coded white. A metal ferrule tube adapter secures the probe in place, and a wire clamp is used to hold the wire. Standard assemblies are designed to operate in temperatures up to 300° F (150° C). High temperature assemblies operate up to 800° F (427° C) and are color-coded red. Polarity marks are molded in the bodies for installation assistance. Individual plugs, jacks, tube adapters and wire clamps are also available.

Specify Sensor Element	Specify Sensor Tolerance	Specify Sensor Lead Configuration	Specify Sheath Material & Size
RTD43 Platinum <ul style="list-style-type: none"> 100Ω @ 0° C α = 0.00385 Ω/Ω/°C -200° C to +600° C -328° F to +1112° F MRTDF43 Platinum <ul style="list-style-type: none"> 100Ω @ 0° C α = 0.00385 Ω/Ω/°C -50° C to +550° C -58° F to +1022° F RTD44 Platinum <ul style="list-style-type: none"> 100Ω @ 0° C α = 0.00385 Ω/Ω/°C -200° C to +800° C -328° F to +1472° F Inconel 600 sheath standard RTD45 Platinum <ul style="list-style-type: none"> 100Ω @ 0° C α = 0.003916 Ω/Ω/°C -200° C to +600° C -328° F to +1112° F RTD86 Platinum <ul style="list-style-type: none"> 200Ω @ 0° C α = 0.00385 Ω/Ω/°C -200° C to +600° C -328° F to +1112° F MRTDF430 Platinum <ul style="list-style-type: none"> 1000Ω @ 0° C α = 0.00385 Ω/Ω/°C -50° C to +550° C -58° F to +1022° F Available with 0.250" sheath diameter or larger 	W (Class B) <ul style="list-style-type: none"> Available for RTD43, 44 and 45, single and dual; and RTD86, MRTDF43 and MRTDF430, single only Tolerance at 0° C is ±0.3° C V (1/3 Class B) <ul style="list-style-type: none"> Available for RTD43, 44 and 45 single only Tolerance at 0° C is ±0.1° C S (Class A) <ul style="list-style-type: none"> Available for RTD43, 44 and 45 single only Tolerance at 0° C is ±0.15° C X <ul style="list-style-type: none"> Available for ERTD41, single only; tolerance at 0° C is ±0.4° C Available for ERTD42, single; tolerance at 0° C is ±0.8° C Available for ERTD42, dual; tolerance at 0° C is ±1.4° C ERTD41 Copper <ul style="list-style-type: none"> 10Ω (9.05Ω actual) @ 0° C α = 0.00426 Ω/Ω/°C -70° C to +150° C -94° F to +300° F Available with 0.250" sheath diameter or larger ERTD42 Nickel <ul style="list-style-type: none"> 120Ω @ 0° C α = 0.00672 Ω/Ω/°C -40° C to +180° C -40° F to +350° F Available with 0.250" sheath diameter or larger 	<p>2 + 2-WIRE SINGLE c</p> <p>3 + 3-WIRE SINGLE c</p> <p>4 + 4-WIRE SINGLE c</p> <p>6 + 2-WIRE DUAL c</p>	316 Stainless Steel <ul style="list-style-type: none"> 316SS118 <ul style="list-style-type: none"> 3 mm 316SS12 <ul style="list-style-type: none"> 0.125" diameter 316SS18 <ul style="list-style-type: none"> 0.187" diameter 316SS236 <ul style="list-style-type: none"> 6 mm 316SS25 <ul style="list-style-type: none"> 0.250" diameter Inconel 600 <ul style="list-style-type: none"> INC12 <ul style="list-style-type: none"> 0.125" diameter Standard sheath material for RTD44 INC18 <ul style="list-style-type: none"> 0.187" diameter Standard sheath material for RTD44 INC25 <ul style="list-style-type: none"> 0.250" diameter Standard sheath material for RTD44

Note: 0.125" and 0.187" diameter sheaths can contain up to 4 wires; 0.250" diameter sheaths can contain up to 6 wires.

Note: For additional diameters and other sheath materials, see page 7.

Note: For ASTM E1137 assemblies, use ordering prefix ARTD44W4-SS25 or ARTD44W4-INC25.



Specify Termination Style	Specify Mounting Style (optional)	Specify Length in Inches (required)
<p>PJ – Male plug only PJHT – Male plug only, high temperature</p> <p>PF – Female jack only PFHT – Female jack only, high temperature</p> <p>PJF – Male plug & female jack PJFHT – Male plug & female jack, high temperature</p> <p>PJFC – Plug, jack & wire clamp PJFCHT – Plug, jack & wire clamp, high temperature</p>	<p>MPJ – Miniature male plug only MPJHT – Miniature male plug only, high temperature</p> <p>MPF – Miniature female jack only MPFHT – Miniature female jack only, high temperature</p> <p>MPJF – Miniature male plug and female jack MPJFHT – Miniature male plug and female jack, high temperature</p> <p>MPJFC – Miniature plug, jack and wire clamp MPJFCHT – Miniature plug, jack and wire clamp, high temperature</p>	Packing Gland <ul style="list-style-type: none"> MPG <ul style="list-style-type: none"> For 0.125" and 0.187" diameter sheath Stainless steel construction Mounting thread 1/8 NPT MPGAL – Lava sealant MPGAT – Teflon sealant MPGAN – Neoprene sealant MPGAV – Viton sealant MPGAG – Grafoil sealant PG2 <ul style="list-style-type: none"> For 0.125", 0.187" and 0.250" diameter sheath Stainless steel construction Mounting thread 1/4 NPT PG2AL – Lava sealant PG2AT – Teflon sealant PG2AN – Neoprene sealant PG2AV – Viton sealant PG2AG – Grafoil sealant

Midlock Gland

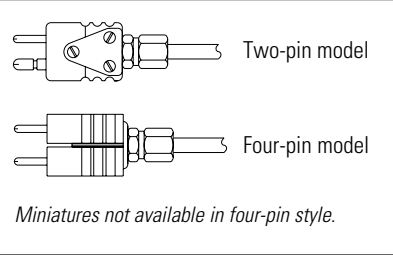
- MK125A**
 - For 0.125" diameter sheath
 - Stainless steel construction
 - Stainless steel ferrule
 - Mounting thread 1/8 NPT
- MK187A**
 - For 0.187" diameter sheath
 - Stainless steel construction
 - Stainless steel ferrule
 - Mounting thread 1/8 NPT
- MK250A**
 - For 0.250" diameter sheath
 - Stainless steel construction
 - Stainless steel ferrule
 - Mounting thread 1/4 NPT

Spring-Load

- CSLP**
 - For 0.125", 0.187" and 0.250" diameter sheaths
 - Stainless steel construction
 - Mounting thread 1/2 NPT

Note: For sealant material details, see page 37.

For detailed descriptions of termination styles, see page 46.



Conax B-Series heads are compact, lightweight terminal heads that provide convenient hook-up of customer extension wire. The cap and body are nickel-plated to resist corrosion. The ceramic terminal block contains zinc-plated brass terminal posts that accept up to 14 AWG wire. Bayonet-style cover allows easy access to the terminal posts. B-Series heads are provided in direct or adjustable mounting styles.

Specify Sensor Element

RTD43 Platinum

- 100Ω @ 0° C
- α = 0.00385 Ω/Ω/°C
- -200° C to +600° C
- -328° F to +1112° F

MRTDF43 Platinum

- 100Ω @ 0° C
- α = 0.00385 Ω/Ω/°C
- -50° C to +550° C
- -58° F to +1022° F

RTD44 Platinum

- 100Ω @ 0° C
- α = 0.00385 Ω/Ω/°C
- -200° C to +800° C
- -328° F to +1472° F
- Inconel 600 sheath standard

RTD45 Platinum

- 100Ω @ 0° C
- α = 0.003916 Ω/Ω/°C
- -200° C to +600° C
- -328° F to +1112° F

RTD86 Platinum

- 200Ω @ 0° C
- α = 0.00385 Ω/Ω/°C
- -200° C to +600° C
- -328° F to +1112° F

MRTDF430 Platinum

- 1000Ω @ 0° C
- α = 0.00385 Ω/Ω/°C
- -50° C to +550° C
- -58° F to +1022° F
- Available with 0.250" sheath diameter or larger

Specify Sensor Tolerance

W (Class B)

- Available for RTD43, 44 and 45, single and dual; and RTD86, MRTDF43 and MRTDF430, single only
- Tolerance at 0° C is ±0.3° C

V (1/3 Class B)

- Available for RTD43, 44 and 45 single only
- Tolerance at 0° C is ±0.1° C

S (Class A)

- Available for RTD43, 44 and 45 single only
- Tolerance at 0° C is ±0.15° C

X

- Available for ERTD41, single only; tolerance at 0° C is ±0.4° C
- Available for ERTD42, single; tolerance at 0° C is ±0.8° C
- Available for ERTD42, dual; tolerance at 0° C is ±1.4° C

ERTD41 Copper

- 10Ω (9.05Ω actual) @ 0° C
- α = 0.00426 Ω/Ω/°C
- -70° C to +150° C
- -94° F to +300° F
- Available with 0.250" sheath diameter or larger

ERTD42 Nickel

- 120Ω @ 0° C
- α = 0.00672 Ω/Ω/°C
- -40° C to +180° C
- -40° F to +350° F
- Available with 0.250" sheath diameter or larger

Specify Sensor Lead Configuration

2

3

4

6

Specify Sheath Material & Size

316 Stainless Steel

316SS118

- 3 mm

316SS12

- 0.125" diameter

316SS18

- 0.187" diameter

316SS236

- 6 mm

316SS25

- 0.250" diameter

Inconel 600

INC12

- 0.125" diameter
- Standard sheath material for RTD44

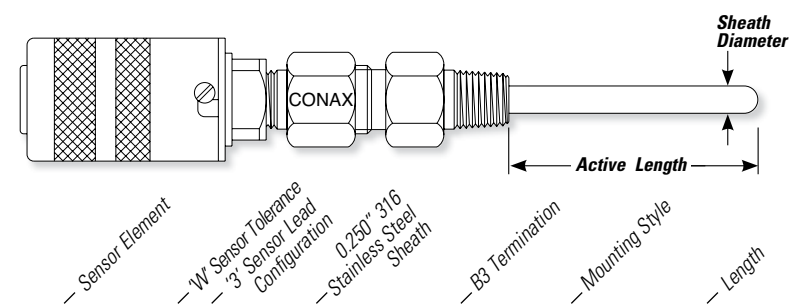
INC18

- 0.187" diameter
- Standard sheath material for RTD44

INC25

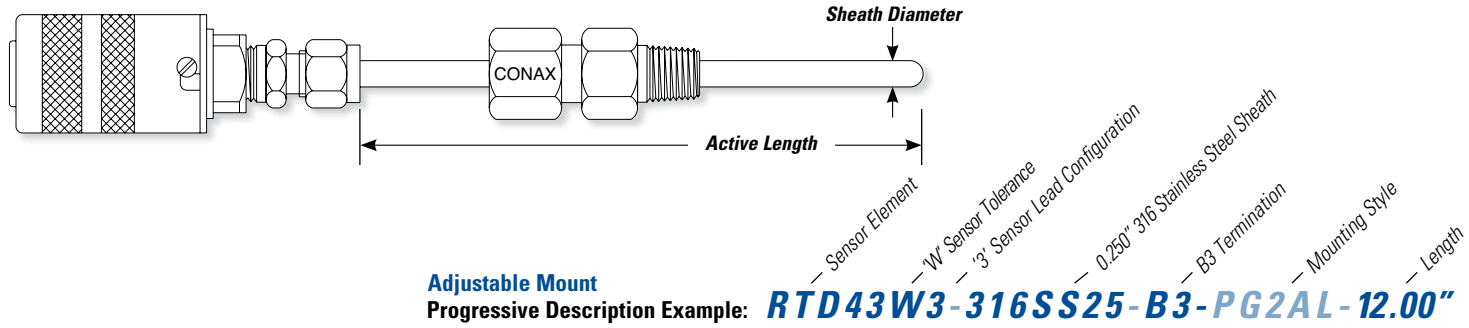
- 0.250" diameter
- Standard sheath material for RTD44

Note: For additional diameters and other sheath materials, see page 7.



Direct Mount
 Progressive Description Example: **RTD43W3-316SS25-B3(PG2BN)-12.00"**

Note: For ASTM E1137 assemblies, use ordering prefix ARTD44W4-SS25 or ARTD44W4-INC25.



Adjustable Mount
 Progressive Description Example: **RTD43W3-316SS25-B3-PG2AL-12.00"**

Specify Termination Style

B2

- Standard 2-wire
- Maximum service temperature is 200° F (93.3° C) with grommet and O-ring; 750° F (400° C) with grommet and O-ring removed.

B3

- Standard 3-wire
- Maximum service temperature is 200° F (93.3° C) with grommet and O-ring; 750° F (400° C) with grommet and O-ring removed

B4

- Standard 4-wire
- Maximum service temperature is 200° F (93.3° C) with grommet and O-ring; 750° F (400° C) with grommet and O-ring removed

Specify Mounting Style

DIRECT MOUNT Packing Gland

MPG

- For 0.125" and 0.187" diameter sheath
- Stainless steel construction
- Mounting thread 1/8 NPT

MPGBL – Lava sealant
MPGBT – Teflon sealant
MPGBN – Neoprene sealant
MPGBV – Viton sealant
MPGBG – Grafoil sealant

PG2

- For 0.125", 0.187" and 0.250" diameter sheath
- Stainless steel construction
- Mounting thread 1/4 NPT

PG2BL – Lava sealant
PG2BT – Teflon sealant
PG2BN – Neoprene sealant
PG2BV – Viton sealant
PG2BG – Grafoil sealant

W4

- For 0.125", 0.187" & 0.250" diameter sheath
- 316 stainless steel construction
- Mounting thread 1/4 NPT
- Sheath welded to fitting

ADJUSTABLE MOUNT (optional) Packing Gland

MPG

- For 0.125" and 0.187" diameter sheath
- Stainless steel construction
- Mounting thread 1/8 NPT

MPGAL – Lava sealant
MPGAN – Neoprene sealant
MPGAV – Viton sealant
MPGAG – Grafoil sealant

PG2

- For 0.125", 0.187" and 0.250" diameter sheath
- Stainless steel construction
- Mounting thread 1/4 NPT

PG2AL – Lava sealant
PG2AT – Teflon sealant
PG2AN – Neoprene sealant
PG2AV – Viton sealant
PG2AG – Grafoil sealant

PG4

- For 0.250" diameter sheath
- Stainless steel construction
- Mounting thread 1/2 NPT

PG4AL – Lava sealant
PG4AT – Teflon sealant
PG4AN – Neoprene sealant
PG4AV – Viton sealant
PG4AG – Grafoil sealant

Specify Length in Inches (required)

Midlock Gland

MK125A

- For 0.125" diameter sheath
- Stainless steel construction
- Stainless steel ferrule
- Mounting thread 1/8 NPT

MK187A

- For 0.187" diameter sheath
- Stainless steel construction
- Stainless steel ferrule
- Mounting thread 1/8 NPT

MK250A

- For 0.250" diameter sheath
- Stainless steel construction
- Stainless steel ferrule
- Mounting thread 1/4 NPT

Note: For sealant material details, see page 37.

For detailed descriptions of termination styles, see pages 46.