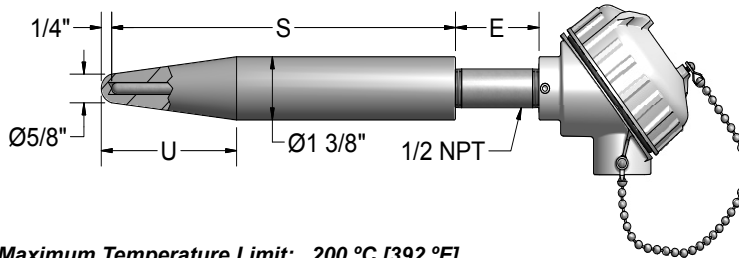The Weld-In RTD temperature sensor assemblies listed below are commonly used in the food, dairy, beverage, pharmaceutical, and chemical processing industries. The complete assemblies are provided with a 3-wire platinum RTD element sealed inside a 1/4" O.D., spring-loaded, stainless steel sheath, and with a heavy wall sanitary protection well. Thermowells are supplied with a surface finish that meets or exceeds 32μin R_a. Surface finishes of 15μin R_a or better are available upon request. The well is to be welded into a tank or vat with a full crevice-free fillet-weld to prevent corrosion, bacteria growth, and product contamination. Assemblies are provided with a white FDA compliant polypropylene connection head. The complete assembly provides excellent washdown protection.

Maximum Temperature Limit: 200 ºC [392 ºF]

ORDER CODES

	1-0	1-1	2	3	4	5
Example Order Number:	R1T185L48	3	- W81-18	- SL	- 8PN4	- 63

1-0   Pt100 (α = 0.003 85 ºC⁻¹) RTD Assemblies

CODE	TOLERANCE[1]	NORMAL SHEATH DIAMETER O.D. (inches)
SINGLE		
R1T185L48	Grade B	1/4
R3T185L48	Class AA	1/4
R5T185L48	(1/5) Class B	1/4
RAF185L48	Class A	1/4
DUPLEX		
R1T285L48	Grade B	1/4
R3T285L48	Class AA	1/4
R5T285L48	(1/5) Class B	1/4
RAF285L48	Class A	1/4

[1] Refer to RTD tolerance information in the General Information section for calculations to determine specific tolerance at temperature.

1-1   Element Connection

CODE	DESCRIPTION
3	3-Wire Element
4 [1]	4-Wire Element
[1] Not Available in Duplex	

Example Order Number: **W81-18**

PART NUMBER	S LENGTH (inches)	U LENGTH (inches)
W81-18	8 (1/4)	3 (1/4)
W81-28	9 (7/8)	3 (1/4)
W81-38	11 (5/8)	5
W81-48	12 (7/8)	3 (3/4)

2   Weld - In Wells

CODE	WELL DIMENSIONS (inches)	
316SS	**S**	**U**
W81-18	8 (1/4)	3 (1/4)
W81-28	9 (7/8)	3 (1/4)
W81-38	11 (5/8)	5
W81-48	12 (7/8)	3 (3/4)

3   Element Style

CODE	DESCRIPTION
SL[1]	Spring-loaded element
SC	Self-contained spring-loaded element

[1] Not available with 35, 36, or 37 Series Transmitters

4   Head Extensions

CODE	DESCRIPTION
8HN	316SS 1/2" NPT hex fitting
8PN(E)	316SS pipe nipple (specify length in inches)

5   Terminations

CODE	DESCRIPTION
91	316L stainless steel screw-cover head
63	White polypropylene screw-cover head
31,W	Aluminum screw-cover head with white epoxy coating
35T-642A	(4 to 20) mA HART® Field Transmitter with aluminum general-purpose housing
36T82-D10	(4 to 20) mA dual input HART® transmitter with digital display and general-purpose aluminum housing with glass lid
37T-662A	(4 to 20) mA HART® Field Transmitter with general-purpose aluminum housing
Head Options	
T-440	(4 to 20) mA head-mounted RTD transmitter
T-441	(4 to 20) mA isolated head-mounted transmitter
T-442	(4 to 20) mA isolated HART® head-mounted transmitter
T82-00	(4 to 20) mA dual input HART® head-mounted transmitter
I	Stainless steel tag

HART® is a registered trademark of HART Communication Foundation.