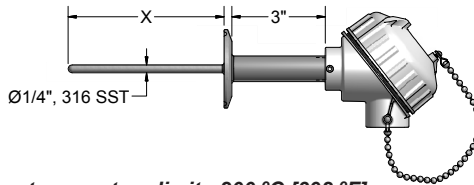General-purpose CIP sanitary-connected RTD temperature sensors are used in food, dairy, beverage, pharmaceutical, and chemical processing applications where sensor corrosion and product contamination are critical factors. The sanitary caps listed are those most commonly used in such processes. Sanitary caps are welded to the sheath and to a heavier support tube, all made of stainless steel, and then ground and polished to a finish that exceeds the No. 4 minimum finish required by the **3-A Sanitary Standard 74 -** . Assemblies 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 process contact surfaces are free of pits, crevices, and pockets thus preventing corrosion and bacteria growth. The 3-wire constructed sensor assembly consists of a high-accuracy platinum element sealed inside a 316 stainless steel sheath, and is provided with a FDA-compliant white thermoplastic gasketed connecting head. The complete assembly provides excellent washdown protection. It is recommended that once customer connections are made, the connecting terminals be further protected by applying a coating of moisture-proof sealant over the connections.

A3 74-

Ø1/4", 316 SST — X — 3"

Maximum temperature limit: 200 ºC [392 ºF]

ORDER CODES

Example Order Number:

1-1		1-2		2	3	4
R5T185L483	-	04	- CIP -	2	- 5 -	63, T

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

CODE	TOLERANCE[1]
SINGLE	
RAF185L483	Class A
R1T185L483	Grade B
R3T185L483	Class AA
R5T185L483	(1/5) Class B
DUPLEX	
RAF285L483	Class A
R1T285L483	Grade B
R3T285L483	Class AA
R5T285L483	(1/5) Class B

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

Thermocouple Assemblies

For CIP thermocouple assemblies use T/C types J, K, T, or E and options G for grounded junction or U for ungrounded junction as per example.
EXAMPLE: TP48G-04 - CIP - 2 - 5 - 63

1-2 Immersion Length "X"

Specify "X" length in inches using 2 digits, plus any fractional length desired
Examples: 04 = 4", 05(1/2) = 5.5"

2 Sanitary Cap Size

CODE	TUBE O.D. (inches)	CODE	TUBE O.D. (inches)
1	1(1/2)	4	3
2	2	5	Other (specify)
3	2 (1/2)		

4 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
22 (06)	6" individual Teflon® leads with terminal pins
02	1/2" O.D., 2 1/4" long extension leadwire transition (requires table 4 & 5 selections from RTD section)
Head Options	
T	Head-mounted transmitter (see Transmitter Section)
I	Stainless steel tags
HS	Wire seal security screws

3 Sanitary Cap Style

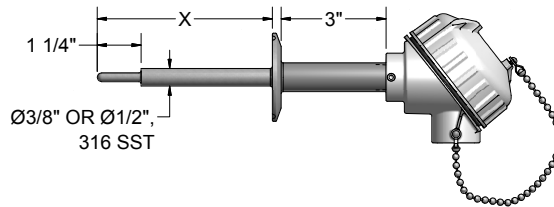| CODE	DESCRIPTION
2	16A cap - Bevel Seat with13-H Nut[1] 304SS
5	16 AMP cap - Tri-Clamp® 316SS
7	16AI-14I cap[2] 304SS
8	Other (describe)
[1] Must be manually cleaned	[2] Not 3-A authorized

Tri-Clamp® is a registered trademark of Alfa Laval, Inc.

Teflon® is a registered trademark of E.I. Dupont de Nemours and Company.

General-purpose reduced-tip CIP sanitary-connected RTD temperature sensors are used in food, dairy, beverage, pharmaceutical, and chemical processing applications where sensor corrosion and product contamination are critical factors. The reduced tip construction provides strength along the major sheath length, and faster temperature response times at the reduced tip. The reduced tip sizes listed below are the most common constructions. For other configurations please consult the factory. The sanitary caps listed are those most commonly used in such processes. The sanitary caps are welded to the sheath and to a heavier support tube, all made of stainless steel, and then ground and polished to a finish that exceeds the No. 4 minimum finish required by the **3-A Sanitary Standard 74 -** . Assemblies 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 process contact surfaces are free of pits, crevices, and pockets thus preventing corrosion and bacteria growth. The 3-wire constructed sensor assembly consists of a high-accuracy platinum element sealed inside a 316 stainless steel sheath, and is provided with a FDA compliant white thermoplastic gasketed connecting head. The complete assembly provides excellent washdown protection. It is recommended that once customer connections are made, the connecting terminals be further protected by applying a coating of moisture-proof sealant over the connections.

74-

X — 3"

1 1/4"

Ø3/8" OR Ø1/2", 316 SST

Maximum temperature limit: 200 °C [392 °F]

ORDER CODES

Example Order Number: **R5T185L68R383** - **04** - **CIP** - **2** - **5** - **63, I**

1-1   1-2   2   3   4

1-1 Pt100 (α = 0.003 85 °C^{-1}) RTD Assemblies

CODE		TOLERANCE[1]	NORMAL SHEATH DIA. O.D. (inches)	TIP DIAMETER OD (inches)
SINGLE	*DUPLEX*			
RAF185L88R483	RAF285L88R483	Class A	1/2	1/4
RAF185L68R383	RAF285L68R383	Class A	3/8	3/16
R1T185L88R483	R1T285L88R483	Grade B	1/2	1/4
R1T185L68R383	R1T285L68R383	Grade B	3/8	3/16
R3T185L88R483	R3T285L88R483	Class AA	1/2	1/4
R3T185L68R383	R3T285L68R383	Class AA	3/8	3/16
R5T185L88R483	R5T285L88R483	(1/5) Class B	1/2	1/4
R5T185L68R383	R5T285L68R383	(1/5) Class B	3/8	3/16

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

Thermocouple Assemblies

For CIP thermocouple assemblies use T/C types J, K, T, or E and options G for grounded junction or U for ungrounded junction as per example.
EXAMPLE: TP68R38G-04 - CIP - 2 - 5 - 63

1-2 Immersion Length "X"

Specify "X" length in inches using 2 digits, plus any fractional length desired. Examples: 04 = 4", 05(1/2) = 5.5"

2 Sanitary Cap Size

CODE	TUBE O.D. (inches)	CODE	TUBE O.D. (inches)
1	1(1/2)	4	3
2	2	5	Other (specify)
3	2 (1/2)		

4 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
22 (06)	6" individual Teflon® leads with terminal pins
02	1/2" O.D., 2 1/4" long extension leadwire transition (requires table 5 & 6 selections from RTD section)
Head Options	
T	Head-mounted transmitter (see Transmitter Section)
I	Stainless steel tags
HS	Wire seal security screws

3 Sanitary Cap Style

CODE	DESCRIPTION
2	16A cap - bevel seat with13-H nut[1] 304SS
5	16 AMP cap - Tri-Clamp® 316SS
7	16AI-14I cap[2] 304SS
8	Other (describe)

[1] Must be manually cleaned   [2] Not 3-A authorized

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Pyromation inc.

FOOD, DAIRY & PHARMACEUTICAL

The sensors listed below are sanitary-connected RTD temperature sensor assemblies designed to meet the stringent requirements of HTST pasteurization systems. HTST requirements are described in the Grade "A" Milk Pasteurization Ordinance. The sensors listed on this page have response times below four seconds and come standard in accuracies at 100 ºC [212 ºF] ± 0.5 ºC. The below listed assemblies are available in a variety of sanitary connections. All wetted parts are ground and polished to a finish that exceeds the No. 4 minimum finish required by the 3-A Sanitary Standards for Sensors and Sensor Fittings and Connections used on Milk and Milk Product Equipment Standard **74-** . Assemblies 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 three-wire constructed sensor assembly consists of a high accuracy platinum element sealed inside a 316 stainless steel sheath and a white FDA compliant polypropylene connecting head. The complete assembly provides excellent wash down protection. It is recommended that once customer connections are made, the connecting terminals be further protected by applying a coating of moisture-proof sealant over the connections.

$A^{®}_3$

74-

X — 3"

1 1/4"

Ø3/8", 316 SST
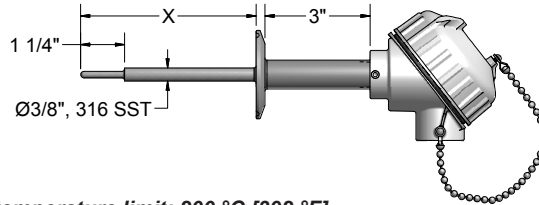
Maximum temperature limit: 200 °C [392 °F]
Pasteurization Test Response Time: 2 to 3 seconds typical

ORDER CODES

Example Order Number: R5T185L68R383 - 04 - HTST - 2 - 5 - 63

Positions: 1-1 | 1-2 | | 2 | 3 | 4

1-1   Pt100 (α = 0.003 85 ºC^{-1}) RTD Assemblies

CODE		TOLERANCE[1]
SINGLE	*DUPLEX*	
R3T185L68R383	R3T285L68R383	Class AA
R5T185L68R383	R5T285L68R383	(1/5) Class B
[1] Refer to RTD tolerance information in the General Information section for calculations to determine specific tolerance at temperature.		

1-2   Immersion Length "X"

Specify "X" length in inches using 2 digits, plus any fractional length desired.
Examples: 04 = 4", 05(1/2) = 5.5"

2   Sanitary Cap Size

CODE	TUBE O.D. (inches)	CODE	TUBE O.D. (inches)
1	1(1/2)	4	3
2	2	5	Other (specify)
3	2 (1/2)		

3   Sanitary Cap Style

CODE	DESCRIPTION
2	16A cap - bevel seat with13-H nut[1] 304SS
5	16 AMP cap - Tri-Clamp® 316SS
7	16AI-14I cap[2] 304SS
8	Other (describe)
[1] Must be manually cleaned [2] Not 3-A authorized	

4   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
22 (06)	6" individual Telflon® leads with terminal pins
02	1/2" O.D., 2 1/4" long extension leadwire transition (requires table 5 & 6 selections from RTD section)
Head Options	
T	Head-mounted transmitter (see Transmitter Section)
I	Stainless steel tags
HS	Wire seal security screws

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