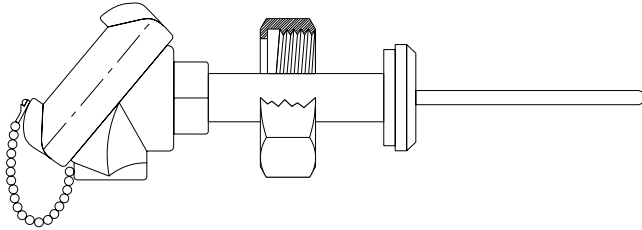


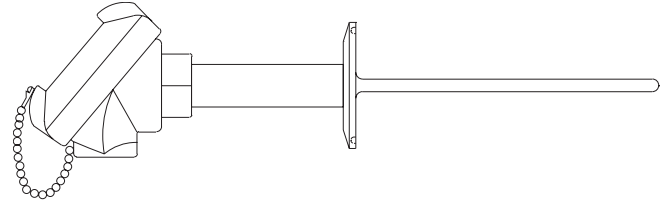
The CIP (clean in place) sanitary connections illustrated on this page are the most commonly used fittings in food, dairy, beverage, pharmaceutical, and chemical processes where contamination and cleanliness is of concern. Fittings other than those illustrated are available upon request. The illustrations are provided for reference purposes to aid in the selection of the correct fitting style for new or replacement sensor assemblies. Most CIP sensor assemblies manufactured by Pyromation are constructed in accordance to the **3-A Sanitary Council Standard 74-02** for instrument fittings and connections.

### BEVEL SEAT FITTING<sup>[1]</sup>



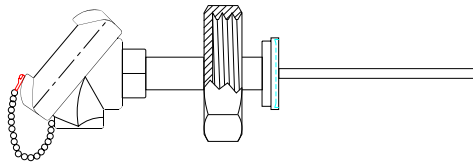
Cap Style 16A - Order Code 1 without Nut  
Cap Style 16A - Order Code 2 with 13-H Nut

### TRI-CLAMP® FITTING



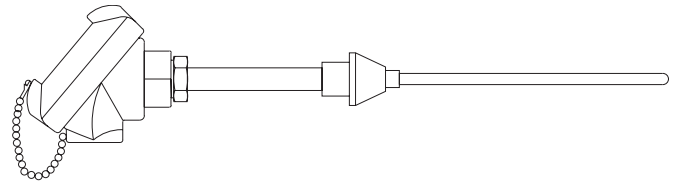
Cap Style 16AMP - Order Code 5

### PV GASKET TYPE



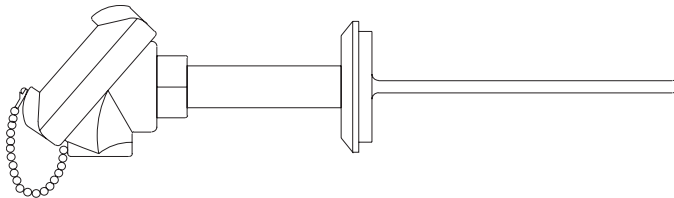
Cap Style 16APV - Order Code 3 without Nut  
Cap Style 16APV - Order Code 4 with 13-H Nut

### 3A4 ADAPTOR <sup>[1]</sup>



Cap Style 3A4 Adaptor - Order Code 6

### "I" CLAMP FITTING<sup>[2]</sup>



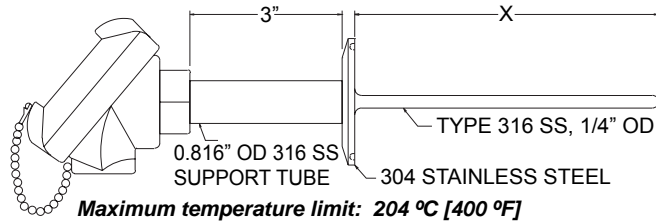
Cap Style 16AI-14I - Order Code 7

See back section for cap dimension.

[1] Must be manually cleaned.

[2] Not 3 A authorized.

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 of stainless steel, and then ground and polished to a finish that exceeds No. 4 minimum finish required by the **3-A Sanitary Standard 74 - 02**. Typical surface roughness average measurement is 15  $\mu\text{in}$   $R_a$  or better. The process contact surfaces are free of pits, crevices, and pockets thus preventing corrosion and bacteria growth. The three 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.



## ORDER CODES

Example Order Number: **R5T185L483** - **04** - **CIP** - **2** - **5** - **63, T**

1-1 Pt100 ( $\alpha = 0.00385 \text{ } ^\circ\text{C}^{-1}$ ) RTD Assemblies

CODE	INITIAL ELEMENT ACCURACY @ 0 °C (percentage)
<b>SINGLE</b>	
RAF185L483	$\pm 0.06$
R1T185L483	$\pm 0.1$
R3T185L483	$\pm 0.03$
R5T185L483	$\pm 0.01$
<b>DUPLEX</b>	
RAF285L483	$\pm 0.06$
R1T285L483	$\pm 0.1$
R3T285L483	$\pm 0.03$
R5T285L483	$\pm 0.01$
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 OD (inches)	CODE	TUBE OD (inches)
1	1(1/2)	4	3
2	2	5	Other (specify)
3	2 (1/2)	6	3A4 adapter only

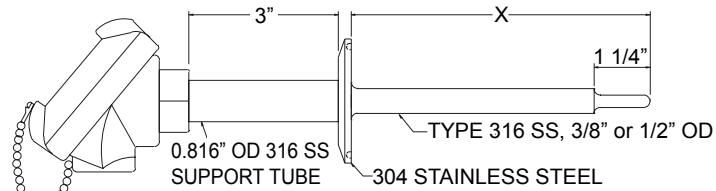
4 Terminations

CODE	DESCRIPTION
91	316L stainless steel head
63	White polypropylene head
62	White polypropylene head, DIN form B
31,W	Aluminum screw cover head with white epoxy coating
22 (06)	6" individual Teflon® leads with terminal pins
02	1/2" OD, 2 1/4" long extension leadwire transition (requires table 5 & 6 selections from RTD section)
Head Options	
T	Head mounted transmitter (see instrument section)
I	Stainless steel tags
HS	Wire seal security screws
CT	Ceramic Terminal Block

3 Sanitary Cap Style

CODE	DESCRIPTION
1	16A cap - Bevel Seat <sup>[1]</sup>
2	16A cap - Bevel Seat with 13-H Nut <sup>[1]</sup>
5	16 AMP cap - Tri-Clamp®
6	3A4 adaptor <sup>[1]</sup>
7	16AI-14I cap <sup>[2]</sup>
8	Other (describe)
[1] Must be manually cleaned [2] Not 3A authorized	

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 of stainless steel, and then ground and polished to a finish that exceeds No. 4 minimum finish required by the **3-A Sanitary Standard 74-02**. Typical surface roughness average measurement is 15  $\mu\text{in}$   $R_a$  or better. The process contact surfaces are free of pits, crevices, and pockets thus preventing corrosion and bacteria growth. The three 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. Sealant products are listed later in this section.



Maximum temperature limit: 204 °C [400 °F]

## ORDER CODES

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

1-1 Pt100 ( $\alpha = 0.00385 \text{ } ^\circ\text{C}^{-1}$ ) RTD Assemblies

CODE		INITIAL ELEMENT ACCURACY @ 0 °C (percentage)	NORMAL SHEATH DIA. OD (inches)	TIP DIAMETER OD (inches)
SINGLE	DUPLEX			
RAF185L88R483	RAF285L88R483	± 0.06	1/2	1/4
RAF185L68R383	RAF285L68R383	± 0.06	3/8	3/16
R1T185L88R483	R1T285L88R483	± 0.1	1/2	1/4
R1T185L68R383	R1T285L68R383	± 0.1	3/8	3/16
R3T185L88R483	R3T285L88R483	± 0.03	1/2	1/4
R3T185L68R383	R3T285L68R383	± 0.03	3/8	3/16
R5T185L88R483	R5T285L68R483	± 0.01	1/2	1/4
R5T185L68R383	R5T285L68R383	± 0.01	3/8	3/16
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 OD (inches)	CODE	TUBE OD (inches)
1	1(1/2)	4	3
2	2	5	Other (specify)
3	2 (1/2)	6	3A4 adaptor only

4 Terminations

CODE	DESCRIPTION
91	316L stainless steel head
63	White polypropylene head
62	White polypropylene head DIN, form B
31,W	Aluminum screw cover head with white epoxy coating
22 (06)	6" individual Teflon® leads with terminal pins
02	1/2" OD, 2 1/4" long extension leadwire transition (requires table 5 & 6 selections from RTD section)
Head Options	
T	Head-mounted transmitter (see instrument section)
I	Stainless steel tags
HS	Wire seal security screws
CT	Ceramic terminal block

3 Sanitary Cap Style

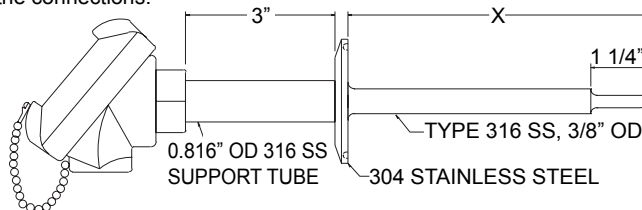
CODE	DESCRIPTION
1	16A cap - Bevel Seat <sup>[1]</sup>
2	16A cap - Bevel Seat with 13-H Nut <sup>[1]</sup>
5	16 AMP cap - Tri-Clamp®
6	3A4 adaptor <sup>[1]</sup>
7	16Al-14l cap <sup>[2]</sup>
8	Other (describe)

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

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-2001 Revision. The sensors listed on this page have response times below four seconds and come standard in accuracies at 100 °C [212 °F] ± 0.5 °C. 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 3A Sanitary Standards for Sensors and Sensor Fittings and Connections used on Milk and Milk Product Equipment Standard 74-02. Typical surface roughness average measurement is 15 µin R<sub>a</sub> or better. 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.



**AUTHORIZED**  
74-02



**Maximum temperature limit: 204 °C [400 °F]**  
**Pasteurization Test Response Time: 2 to 3 seconds typical**

### ORDER CODES

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

1-1 Pt100 ( $\alpha = 0.00385 \text{ } ^\circ\text{C}^{-1}$ ) RTD Assemblies

CODE		INITIAL ELEMENT ACCURACY @ 0 °C (percentage)
SINGLE	DUPLEX	
R3T185L68R383	R3T285L68R383	± 0.03
R5T185L88R383	R5T285L68R383	± 0.01

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 Style

CODE	TUBE OD (inches)	CODE	TUBE OD (inches)
1	1(1/2)	4	3
2	2	5	Other (specify)
3	2(1/2)	6	3A4 adaptor only

3 Sanitary Cap Style

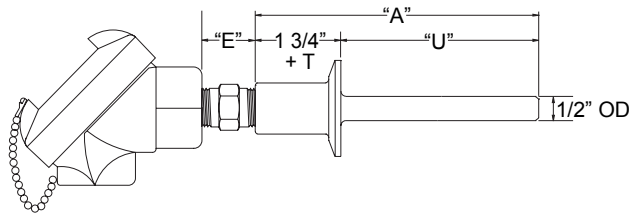
CODE	DESCRIPTION
1	16A cap - Bevel Seat <sup>[1]</sup>
2	16A cap - Bevel Seat with 13-H Nut <sup>[1]</sup>
5	16 AMP cap - Tri-Clamp <sup>®</sup>
6	3A4 adaptor <sup>[1]</sup>
7	16Al-14l cap <sup>[2]</sup>
8	Other (describe)

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

4 Terminations

CODE	DESCRIPTION
91	316L stainless steel head
63	White polypropylene head
62	White polypropylene head DIN, form B
31,W	Aluminum screw cover head with white epoxy coating
22 (06)	6" individual Teflon <sup>®</sup> leads with terminal pins
02	1/2" OD, 2 1/4" long extension leadwire transition (requires table 5 & 6 selections from RTD section)
Head Options	
T	Head-mounted transmitter (see instrument section)
I	Stainless steel tags
HS	Wire seal security screws
CT	Ceramic terminal block

The RTD sensors listed below are constructed with the CIP sanitary connected cap thermowell, which is then mounted into the process with a clamp and mating sanitary cap. A 3-wire spring loaded RTD element and sheath is then screwed into the back of the thermowell. This construction method allows for easy removal of both the well and/or the sensor assembly. The well and sanitary cap in contact with the process are all ground and polished to a finish that exceeds the **3-A Sanitary Standard 74-02**. Typical surface roughness average measurement is 15  $\mu\text{in } R_a$  or better. The complete assembly provides excellent washdown protection.



## ORDER CODES

Example Order Number: **R5T185L483** - **DW4** **25** **06** **09** - **SL** - **8HN** **63**

1 Pt100 ( $\alpha = 0.00385 \text{ } ^\circ\text{C}^{-1}$ ) RTD Assemblies

CODE	INITIAL ELEMENT ACCURACY @ 0 °C (percentage)
<b>SINGLE</b>	
R1T185L483	± 0.1
R3T185L483	± 0.03
R5T185L483	± 0.01
RAF185L483	± 0.06
<b>DUPLEX</b>	
R1T285L483	± 0.1
R3T285L483	± 0.03
R5T285L483	± 0.01
RAF285L483	± 0.06

2 Well Type

CODE	DESCRIPTION
DW4	0.260" bore sanitary well

2.1 Cap Size Style

CODE	DESCRIPTION
15	1", 1 1/2" Triclamp® 16 AMP
25	2" Triclamp® 16 AMP
35	2 1/2" Triclamp® 16 AMP
45	3" Triclamp® 16 AMP
Other styles - sizes available. Consult factory.	

2.2 "A" Length

CODE	DESCRIPTION
XX	Specify length in inches using two digits.

2.3 Well Material

CODE	DESCRIPTION
09	304SS
08	316SS

3 Element Style

CODE	DESCRIPTION
SL	Spring-loaded element

4 Extensions

CODE	DESCRIPTION
8HN	316SS hex fitting
8PN(E)	316SS pipe nipple specify E length

5 Terminations

CODE	DESCRIPTION
91	316L stainless steel head
63	White polypropylene head
62	White polypropylene head DIN form B
31,W	Aluminum screw cover head with white epoxy coating
CT	Ceramic terminal block
Head Options	
T	Head-mounted transmitter (see instrument section)
I	Stainless steel tags (specify tag #)