



TEL-TRU Manufacturing Co.

RTD TEMPERATURE PROBES

Industrial and Sanitary



www.teltru.com

Temperature + Pressure

*Since
1916*

Industrial and Sanitary RTDs

Tel-Tru RTD probe assemblies are designed for the most demanding sanitary and industrial applications. They may be configured to meet the needs of the dairy, beverage, food, pharmaceutical, and general industrial processing markets.

Industrial RTD Series



NPAA3

Industrial RTD probe assembly with single element thin film Pt100 3-wire RTD, Accuracy Class A +/- .06% at 0°C (coefficient 0.00385)

Probe: 316SS with threaded fitting

Measurement Range: -60/500°F (-50/260°C)



Specifications

Sensor:	Thin film Pt 100 RTD, TCR .00385 Class A +/- .06% at 0°C, Conforms to IEC 751
Lead wires:	Teflon insulated, 3 lead wires
Termination:	Options available
Transmitter output:	4 to 20 mA, scaled to fixed/factory configured ranges
Probe lengths:	From 1.25" to 12"
Probe diameters:	.187" or .250"
Power Supply:	10 to 35Vdc
Transmitters:	www.teltru.com/t-rtd_trans.aspx www.teltru.com/images/catalogs/RTD/TTF.pdf

Temperature vs. Resistance Tables for PT100:
www.teltru.com/images/documents/rtdtable.pdf

Features and Options

- High accuracy, long term stability, consistent repeatability
- Fast response time
- All welded construction
- Models can be configured with connection heads and various transmitter modules
- Several connection heads available, including 316SS and White Polypropylene
- High-gloss polished finish to 2µin. available on Sanitary models

Sanitary RTD Series



SPAA3

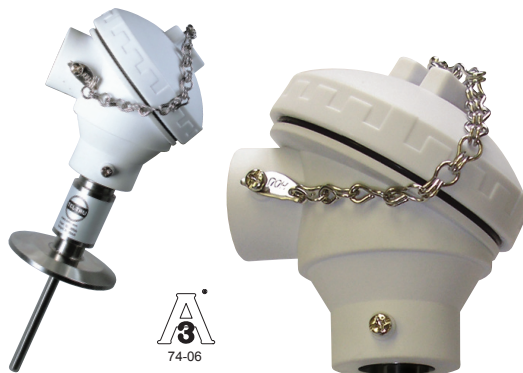
Sanitary RTD probe assembly with single element thin film Pt100 3-wire RTD, Accuracy Class A +/- .06% at 0°C (coefficient 0.00385)

Probe: 316L SS with Tri-Clamp® CIP fitting

Measurement Range: -60/500°F (-50/260°C)

Surface finish: Wetted parts <32µin.

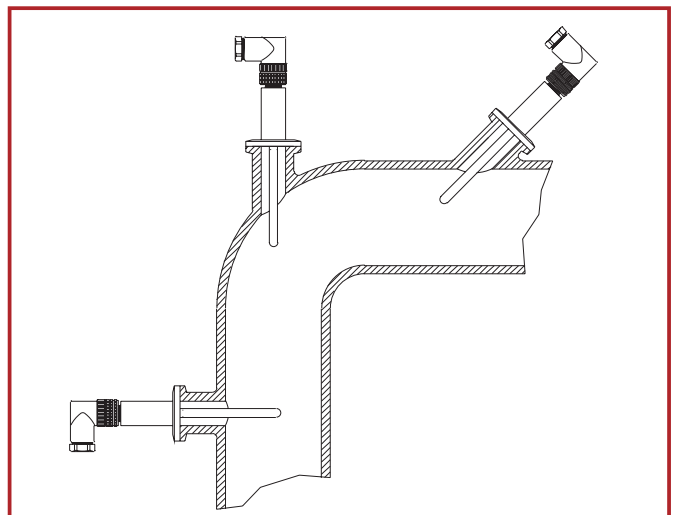
Sanitary Standard: Meets 3-A Sanitary Standard 74-06 requirements



RTD Installation

Shown below are examples of mounting locations for various pipe sizes and configurations.

Minimum recommended insertion length = 1"



Configuration Options

MODEL	NPAA3	SPAA3
NPAA3	X	-
SPAA3	-	X
PROBE DIAMETER		
0.187"	1	1
0.250"	2	2
PROBE LENGTH		
2-1/2"	02	02
4"	04	04
6"	06	06
9"	09	09
12"	12	12
Other as specified	XX	XX
PROCESS CONNECTION		
1/2" NPT	A1	-
1/4" NPT	A2	-
3/8" NPT	A3	-
Tri-Clamp 1/2" and 3/4"	-	05
Tri-Clamp 1" and 1-1/2"	-	10
Tri-Clamp 2"	-	20
Tri-Clamp 2-1/2"	-	25
TEMPERATURE RANGE		
See Range Chart		
TERMINATION		
1/2" NPT with 6" leads	C06	C06
M-12 conn. w/o mate	E00	E00
M-12 w/mating conn. and XX feet cable	AXX	AXX
Strain relief w/XX feet cable	BXX	BXX
Conn. Head - White	D01	D01
Polypropylene (FDA approved) IP65		
Conn. Head - 316 SS NEMA 4X	D02	D02
Conn. Head - Cast Aluminum IP68	D03	D03
TERM. BLOCK/TRANSMITTER		
None	00	00
Terminal block - ceramic, 3-pole w/center hole	A1	A1
Transmitter - Universal	B1	B1
Transmitter - HART®	B2	B2
Transmitter - Fixed Range TT11A	D1	D1

Range Chart

RANGES AVAILABLE WITH NO TRANSMITTERS 00, A1			
Code	Range		
01	-60/500°F (-50/260°C)		
RANGES AVAILABLE WITH B1, B2 TRANSMITTERS			
Code	Range °F	Code	Range °C
52	-50/120	71	-50/100
53	-40/160	72	-50/25
54	0/140	73	-50/50
55	0/180	84	-40/70
50	0/200	86	-20/120
56	0/220	74	-10/110
67	0/250	75	0/50
57	0/300	95	0/60
59	20/240	EI	0/80
60	25/125	76	0/100
61	50/250	77	0/150
62	50/300	78	0/200
58	0/500		
63	50/400		
Other ranges available, minimum span 18°F or 10°C, factory configured. For detailed specs go to: www.teltru.com/t-rtd_trans.aspx			
*RANGES AVAILABLE WITH D1 TT11A TRANSMITTER			
73	-50/50 (-58/122°F)		
75	0/50 (32/122°F)		
76	0/100 (32/212°F)		
78	0/200 (32/392°F)		
*Custom ranges available, 10 piece minimum per range, factory configured. For detailed specs go to: www.teltru.com/images/catalogs/RTD/TTF.pdf			



B1



B2



D1

HART® is a registered trademark of the HART Communication Foundation



Tel-Tru Thermowells

We recommend Thermowells for pressure, corrosive fluid, and high velocity applications.

Tel-Tru Thermowells are machined from solid bar stock for standard or high velocity requirements in a large selection of materials and coatings. They are designed and manufactured to assure perfect alignment with the sensor stem.

For complete dimensions, sizes, available materials, optional features and configurations, see the Thermowell catalog at www.teltru.com/catalogs.asp

Technical data on pressure and temperature ratings and maximum fluid velocity can also be found at www.teltru.com/t-ThermowellTech.aspx



ADDITIONAL PRODUCTS AVAILABLE FROM TEL-TRU

Bimetal Thermometers

Temperature Transmitters

Digi-Tel Thermometers

Gas Actuated Thermometers

Thermowells

Check-Set® Thermometer
Calibrators

Infrared Thermometers

Surface Thermometers

Pressure Transmitters

Pressure Gauges

HVAC Instruments



Transmitter Specifications

Specifications for the RTD transmitters can be found online at www.teltru.com/t-rtd_trans.aspx

Tel-Tru Product Warranty

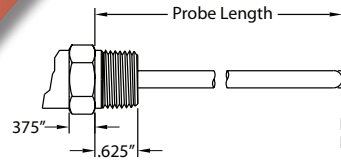
Please see our limited product warranty at www.teltru.com/t-warranty.aspx



Process Connection Options

Industrial

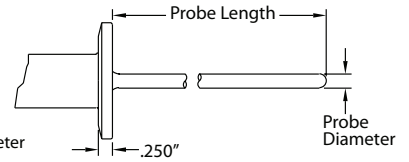
NPT Thread



Minimum probe length 1.625"
Maximum probe length 12"

Sanitary

Tri-Clamp

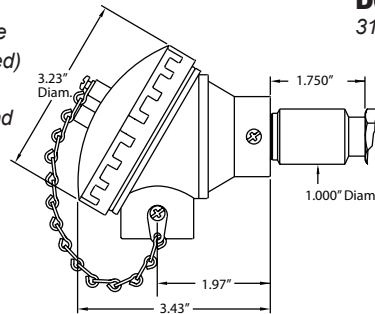


Minimum probe length 1.25"
Maximum probe length 12"

Termination Options

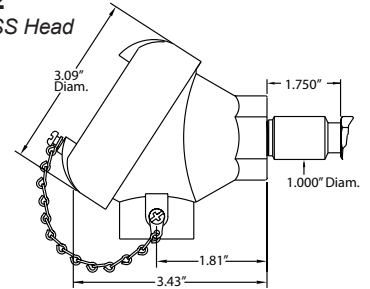
D01

White Polypropylene
Head (FDA Approved)
and D03
Cast Aluminum Head



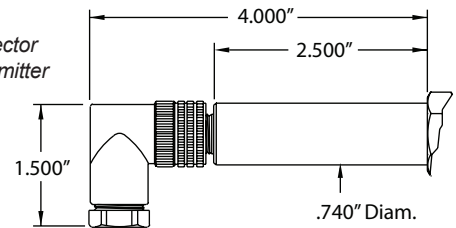
D02

316SS Head



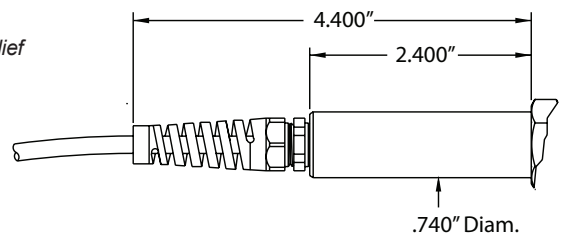
AXX

M12 w/Mating Connector
and Integrated Transmitter



BXX

Strain Relief



C06

1/2" NPT w/Leads

