



TEL-TRU MANUFACTURING COMPANY

SPAA3 SANITARY RTD PROBE ASSEMBLY

FEATURES:

- Configured to meet your exact needs, including compatability with Clean-in-Place (CIP) processes
- High accuracy, long term stability, consistent repeatability
- Fast response time
- All welded construction
- Options include various termination and transmitter selections
- NIST traceable calibration certificate available

Standard sanitary assemblies include a proven thin film PT100 platinum RTD sensing element, packaged in an all welded 316SS stainless steel probe. Configurations feature Tri-Clover® fittings and surface finishes that comply with 3A Standard Number 74-07 for food, dairy, beverage, pharmaceutical and chemical processing applications.

SPECIFICATIONS:

Environmental

Protection: IP67 (NEMA 6)
 Operating temp. range: -40°F to 176°F (-40°C to 80°C)

Mechanical

Probe lengths: 2.5" to 12" (6.35cm to 30.48cm)
 Probe diameters: 0.187" or 0.250" (0.47cm to 0.64cm)
 Probe and housing material: 316SS with Tri-Clamp CIP fitting
 Max operating pressure: 1500 PSIG max (probe only)
 Connection head: Polypropylene, 316SS, Anodized Aluminum

Electrical

Input: RTD, type Pt100 ($\alpha=0.00385$), 3-wire
 Sensor: Thin film Pt100 RTD
 TCR .00385
 Accuracy Class A +/- .06% at 0°C
 Conforms to IEC 751
 Lead wires: 3 wires, Teflon insulated
 Termination: Options include unterminated (bare wire), connection heads, M12 connector
[See configurator at teltru.com](http://www.teltru.com)
 Output (transmitter equipped) 4 to 20mA or HART
 See individual transmitter specification sheets for more details (below)
 Temperature ranges: See temperature chart for standard ranges
 Custom ranges available from -103 to 392°F (-75 to 200°C)
 Minimum span 45°F (25°C)
 Transmitter specifications: XTRC-1202 4-20mA output, RTD only
 XTRC-1220 4-20mA output, RTD and T/C
 XTRC-1330 4-20mA output, RTD, T/C, ohm and mV
 XTRC-1530 4-20mA/HART output, RTD, T/C, ohm and mV



Temperature Range Chart

Ranges available with no transmitter

Code	Range
01	-60/500°F (-50/260°C)

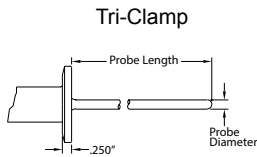
Ranges available with Universal and Hart programmable transmitters - Other ranges available, minimum span 18°F or 10°C, factory configured

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		

► DIMENSIONS:

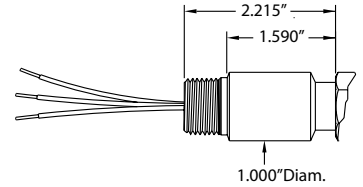
Process Connection

Minimum probe length 2.5"
Maximum probe length 12"

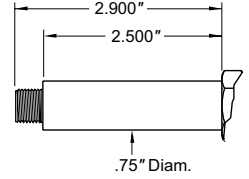


Termination

C06
1/2" NPT w/Leads

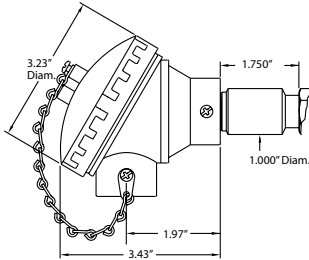


E00
M12 Connector w/o Mate

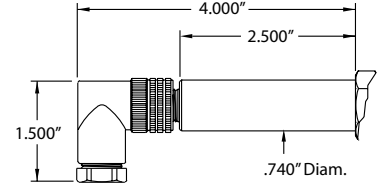


Connection Heads

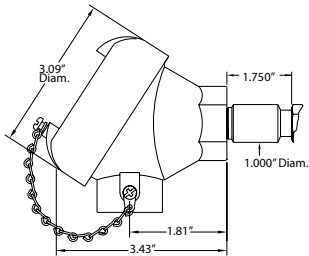
D01
White Polypropylene
Head (FDA Approved)
and **D03**
Cast Aluminum Head



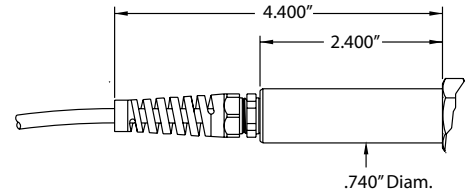
AXX
M12 w/Mating Connector



D02
316SS Head



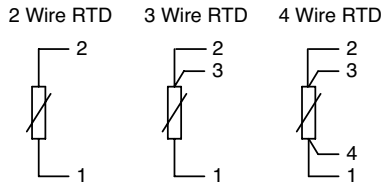
BXX
Strain Relief



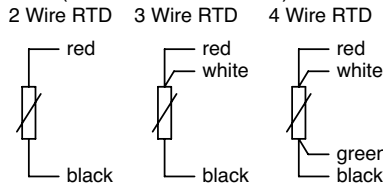
► ELECTRICAL CONNECTION AND WIRING (without built-in transmitter):

Termination Options

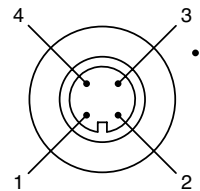
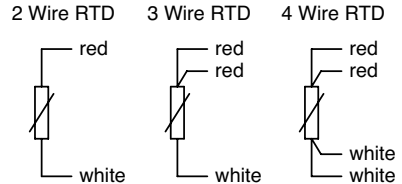
• **AXX** (M12 w/Mating Connector) and **E00** (M12)



• **BXX** (Strain Relief w/Cable)

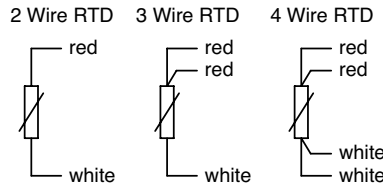


• **DXX** (Connection Head) w/Terminal Block A1

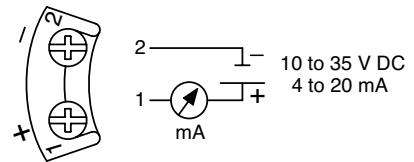


• **AXX** Wiring (w/o transmitter)
1 = black
2 = red
3 = white (3-&4-wire)
4 = green (4-wire)

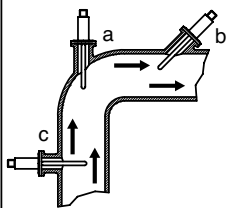
• **CXX** (1/2" NPT w/Leads)



• **DXX** (Connection Head) w/Transmitter B1 or B2



Installation Instructions



Mounting Location

- a. At angle sections, against the direction of flow.
- b. In smaller pipe, against the direction of flow.
- c. Perpendicular to the direction of flow.

Refer to www.teltru.com/rtd_trans.asp for temperature and pressure limits.