



# TEL-TRU MANUFACTURING COMPANY

## NPAA3 INDUSTRIAL RTD PROBE ASSEMBLY

### FEATURES:

- Configured to meet your exact needs
- 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

Tel-Tru RTD probe assemblies are designed for the most demanding industrial applications. A wide range of configurations are available to meet the requirements of many markets including Chemical Processing, Oil and Gas, Construction, Cold Storage, Water / Wastewater, HVAC, and OEMs.

### 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 threaded 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)

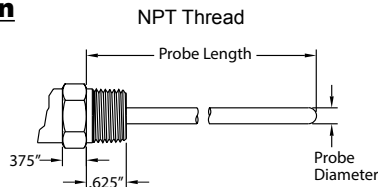
Ranges available with Universal and Hart programmable transmitters - Other ranges available, minimum span 18°F or 10°C, factory configured

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:**

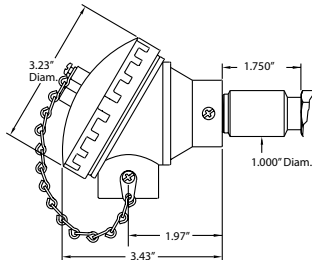
**Process Connection**

Minimum probe length 2.5"  
Maximum probe length 12"

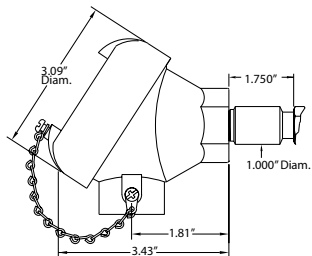


**Connection Heads**

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

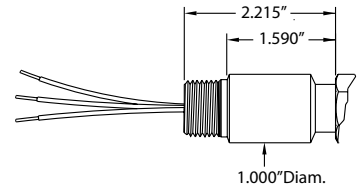


**D02**  
316SS Head

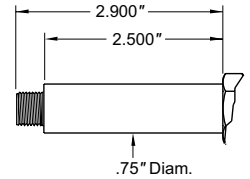


**Termination**

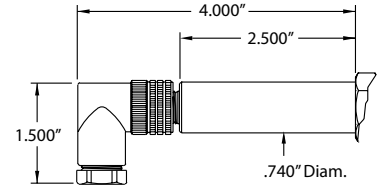
**C06**  
1/2" NPT w/Leads



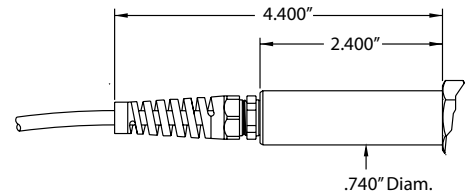
**E00**  
M12 Connector w/o Mate



**AXX**  
M12 w/Mating Connector



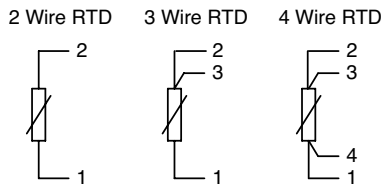
**BXX**  
Strain Relief



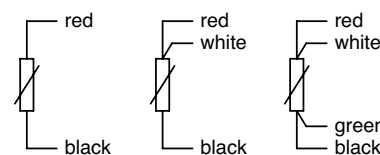
**► ELECTRICAL CONNECTION AND WIRING (without built-in transmitter):**

**Termination Options**

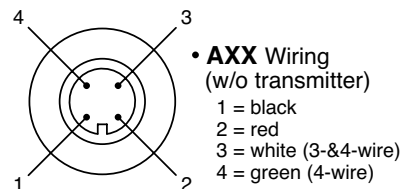
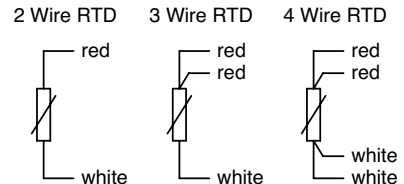
• **AXX** (M12 w/Mating Connector) and **E00** (M12)



• **BXX** (Strain Relief w/Cable)  
2 Wire RTD 3 Wire RTD 4 Wire RTD

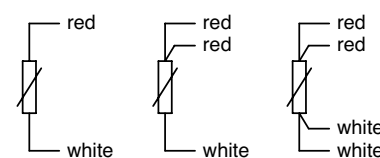


• **DXX** (Connection Head) w/Terminal Block A1

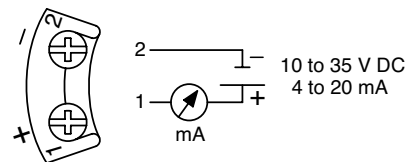


• **AXX** Wiring (w/o transmitter)  
1 = black  
2 = red  
3 = white (3-&4-wire)  
4 = green (4-wire)

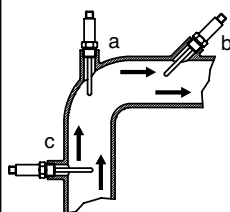
• **CXX** (1/2" NPT w/Leads)  
2 Wire RTD 3 Wire RTD 4 Wire RTD



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



**Installation Instructions**



• **Mounting Location**  
NP100

- 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](http://www.teltru.com/rtd_trans.asp) for temperature and pressure limits.