

### Overview

- The Remote Probe with Plenum-Rated Cable is a small stainless steel temperature sensor used for single point temperature measurement with PVC plenum rated cable. It is ideal for bracket mounting for chamber, duct, thermowell or L-bracket applications.  
 Part #s NSB-10K-2-RPP-6 (6' probe)  
       NSB-10K-2-RPP-5 (5' probe)  
       NSB-10K-2-RPP-10 (10' probe)  
       NSB-10K-2-RPP-15 (15' probe)  
       NSB-10K-2-RPP-25 (25' probe)
- The Remote Probe with FEP-Jacketed Cable is a small stainless steel temperature sensor used for single point temperature measurement with FEP plenum cable. It is ideal for bracket mounting in harsh environments for chamber, duct, thermowell or L-bracket applications.  
 Part #s NSB-10K-2-RPFEP-18 (18" probe)  
       NSB-10K-2-RPFEP-5 (5' probe)
- The Remote Probe with FEP-Jacketed Cable for submersion is a small stainless steel temperature sensor used for single point temperature measurement with submersion FEP plenum cable. It is ideal for bracket mounting in wet or water submersion environments for chamber, duct, immersion or L-bracket applications.  
 Part #s NSB-10K-2-RPFEP2-5 (5' probe)  
       NSB-10K-2-RPFEP2-25 (25' probe)

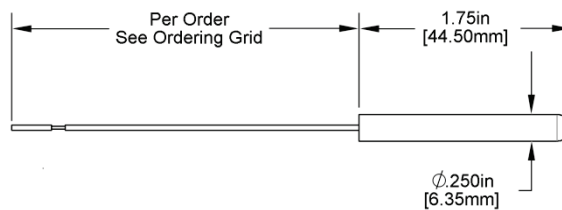


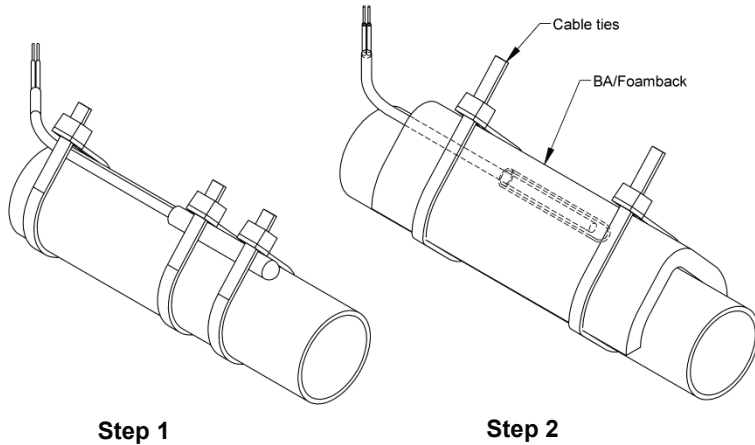
Figure 1: Remote Probe

### Specifications

<b>Sensor</b>	Passive, NTC, 2 wire	<b>Probe</b>	Rigid, 304 Stainless Steel, 0.25" OD
<b>Thermistor</b>	Thermal resistor	-RPP, RPFEP	
Temp. Output	Resistance, 10k Type 2	<b>Probe Length</b>	1.75" (44.5mm)
Accuracy (Std)	±0.36°F, (±0.2°C)	-RPP, RPFEP	
Stability	< 0.036°F/Year, (<0.02°C/Year) Heat	<b>Mounting</b>	External Probe Bracket required <b>Probe</b>
dissipation	2.7 mW/°C	Vented polycarbonate shield, ½" OD	
Temp. Drift	<0.02°C per year	<b>Probe Length</b>	1.2" with ½" NPT threads
Probe range	-40° to 221°F (-40° to 105°C)	<b>Agency</b>	RoHS, CE
<b>Lead wire</b>	22AWG stranded		
<b>Wire Insulation</b>			
-RPP	Flame Retardant PVC plenum cable		
-RPFEP	FEP jacketed plenum rated cable		
-RPFEP2	FEP jacketed plenum and submersion rated cable		

Specifications subject to change without notice.

### Mounting

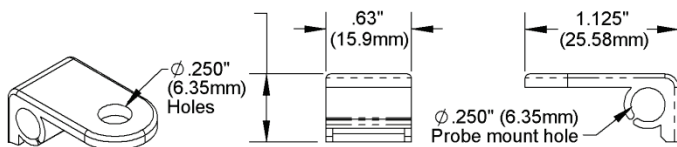


**Step 1** **Step 2**  
**Figure 2: Stainless Steel Remote Probe Strapped to Pipe**

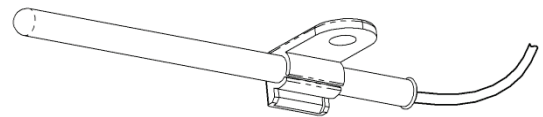
1. Strap sensor so that it has good contact with bare pipe.
2. To increase the accuracy of the sensor, use an insulating material to insulate the sensor and pipe from ambient temperature influences. Foamback insulation is available in 1/4" thickness (p/n NSB-Foamback-.250) and in 1/8" thickness (p/n NSB-Foamback-.125).

**NOTES**

- Insulation should be installed a minimum of 4 pipe diameters on each side of the strap-on sensor. Example: 1/2" pipe x 4 = 2".
- Insulation should be 2" on each side of the sensor wrapped all the way around the pipe.



**Figure 3A: Break-Off Tab from a Flexible Probe Bracket (P/N NSB-PB-50)**

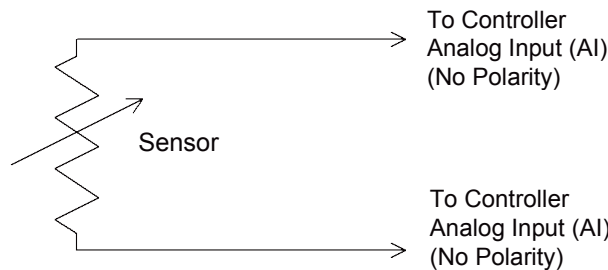


**Figure 3B: Break-Off Tab Used to Mount a Stainless Steel Remote Probe**

### Wiring and Termination

Carrier recommends using twisted pair of at least 22AWG for all wire connections. Larger gauge wire may be required for long runs. All wiring must comply with the National Electric Code (NEC) and local codes.

Do NOT run this device's wiring in the same conduit as high or low voltage AC power wiring. Tests show that inaccurate signal levels are possible when AC power wiring is present in the same conduit as the sensor wires.



**Figure 4: 2 Wire Lead Wire Termination for Thermistor**

### Diagnostics

**Possible Problem:** Controller reports higher or lower than actual temperature

**Possible Solutions:**

- Confirm the input is set up correctly in the front end software
- Check wiring for proper termination and continuity (shorted or open).
- Disconnect wires and measure sensor resistance and verify the "Sensor" output is correct.