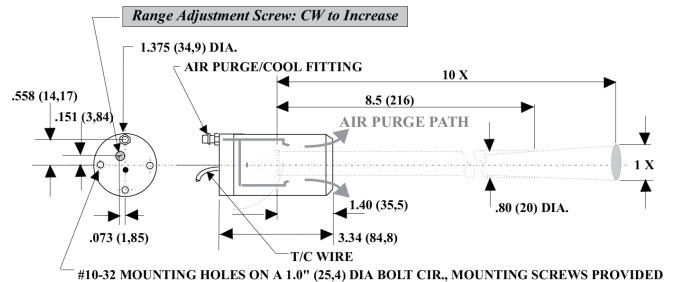## IRt/c.10A Base Model

Product Overview

The IRt/c.10A features:

- Infrared Thermocouple IRt/c
- Non-contact
- Self Powered
- Intrinsically Safe
- Repeatability 0.02°F (0.01°C)
- Interchangeability ±1%
- Resolution approx. 0.0001°C
- 10:1 Field of View

Range Adjustment Screw: CW to Increase

1.375 (34,9) DIA.

AIR PURGE/COOL FITTING

.558 (14,17)
.151 (3,84)

10 X
8.5 (216)
AIR PURGE PATH

1 X

.073 (1,85)
1.40 (35,5)
.80 (20) DIA.

3.34 (84,8)

T/C WIRE

#10-32 MOUNTING HOLES ON A 1.0" (25,4) DIA BOLT CIR., MOUNTING SCREWS PROVIDED

Technical Data

Target SurfaceType	Hi E (non-metal)	Lo E (metal)
Sensing Range	-50 to 2500°F (-45 to 1370°C)	500 to 2500°F (260 to 1370°C)
Optimum Range Selections	One model each J, K: adjustable over entire sensing range, output tables available	
Minimum Spot Size at dist. (with supplied apertures)	No Aperture: 0.8" (20 mm) at <7" (180 mm) ½" Aperture: 0.5" (13 mm) at <3.5" (90 mm) ¼" Aperture: 0.25" (6 mm) at <1" (25 mm)	
Field-of-View at > min. spot	10:1 (6°) approximately	
Spectral Response	2 to 20 µ	0.1 to 5 µ
Output Impedance	6 to 13 Kohms approx	9 to 18 Kohms approx
Cable	Twisted shielded pair of base thermocouple material (J,K,etc.), 3 ft (.9 m) std length, Teflon sheathed, rated to 392°F (200°C) continuous service.	
Dimensions	3.34" x 1.375" Dia. (85 x 35 mm)	
Weight	8.0 oz (230 g) with cable	
Housing	Stainless steel, hermetically sealed, exceeds NEMA 4,4x; IP65,67, intrinsically safe, cable shield grounded to housing and electrically isolated fromsignal	
Air Purge	Built-in; cooling capacity to 400°F (200°C) ambient; 3' (0.9 m) polyurethane tubing provided	

Set-up and calibration instructions

For all IRt/c Models with "A" in model designation (IRt/c.xxxA)

1. Connect air purge first if installing in process already at operating temperature. Provide minimum 5 psig (30 kPa) air pressure.
2. Install IRt/c and align to view the desired target. Bring target to operating temperature if not already there. Connect leads to readout device to be used (controller, PLC, etc.).
3. If the target temperature is not known, measure the target temperature with an accurate reference. Remove the setscrew to expose the calibration screw. Adjust the calibration screw to obtain reading desired. Replace the setscrew cover when complete. For final process adjustments, the ZERO or OFFSET adjustments available on readout devices can be conveniently used.

Air

①

③

②

Calibration Screw

↻ Increase Signal
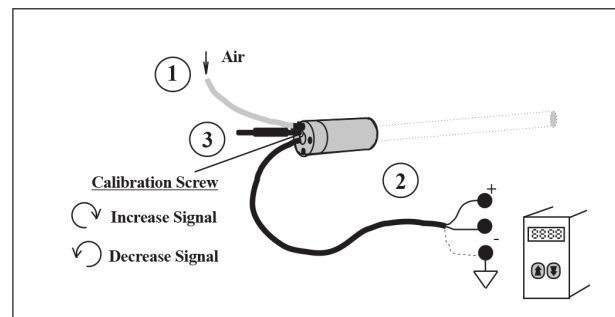
↺ Decrease Signal

- **Installation and calibration complete.**
- **To maximize the linear range, see Tech Note #70.**
- **Calibration screw operates like a radio volume control: clockwise increases signal.**