

# EXERGEN

C O R P O R A T I O N

## Infrared Temperature Sensors | DATASHEET

### IRt/c.2/15AFC Base Model

#### Product Overview

The IRt/c.2/15AFC features:

- Infrared Thermocouple IRt/c
- Non-contact
- Self Powered
- Intrinsically Safe
- Repeatability 0,01°C (0.02°F)
- Interchangeability ±1%
- Resolution approx. 0.0001°C
- Close Focus



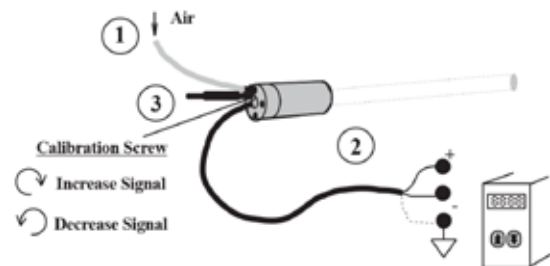
#### Technical Data

Target Surface Type	Hi E (non-metal)	Lo E (metal)
Sensing Range	-18 to 1370°C (0 to 2500°F)	260 to 1370°C (500 to 2500°F)
Optimum Range Selections	One model each J, K; adjustable over entire sensing range, output tables available	
Minimum Spot Size at dist. (with supplied apertures)	0.11 x 0.35" (2.9 x 8.7 mm) at 1.7" (43 mm) from sensor	
Field-of-View at > min. spot	approximately 30°	
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.), 0,9 m (3 ft) std length, Teflon sheathed, rated to 200°C (392°F) continuous service.	
Dimensions	105 x 35 mm Dia. (4.15" x 1.375")	
Weight	248g (8.7oz) with cable	
Housing	Stainless steel, hermetically sealed, exceeds NEMA 4,4x; IP65,67, intrinsically safe, cable shield grounded to housing and electrically isolated from signal	
Air Purge	Built-in; cooling capacity to 200°C (400°F) ambient; 0,9 m (3') 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.



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