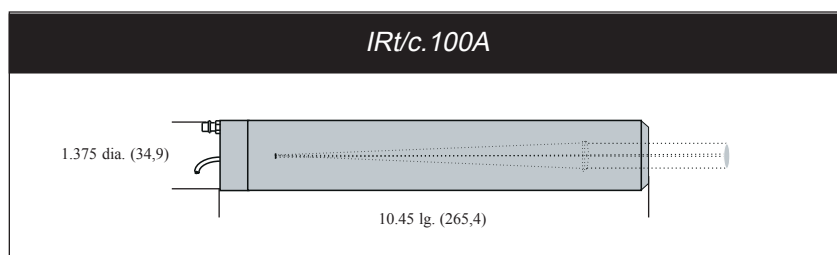
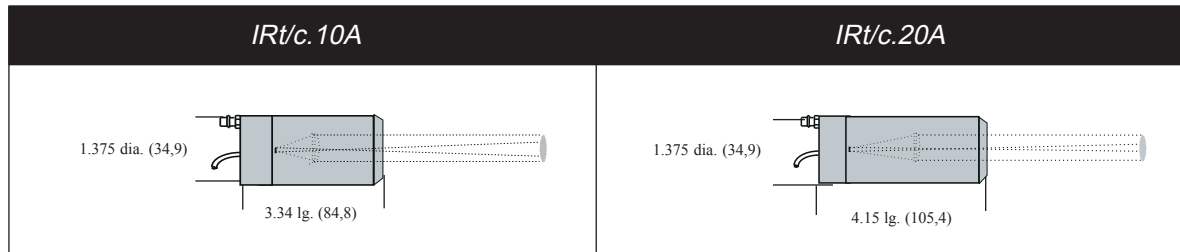
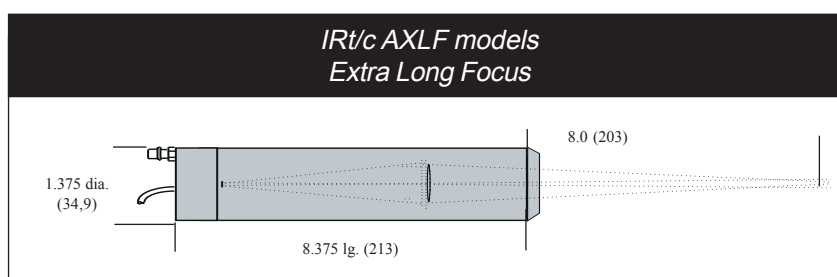
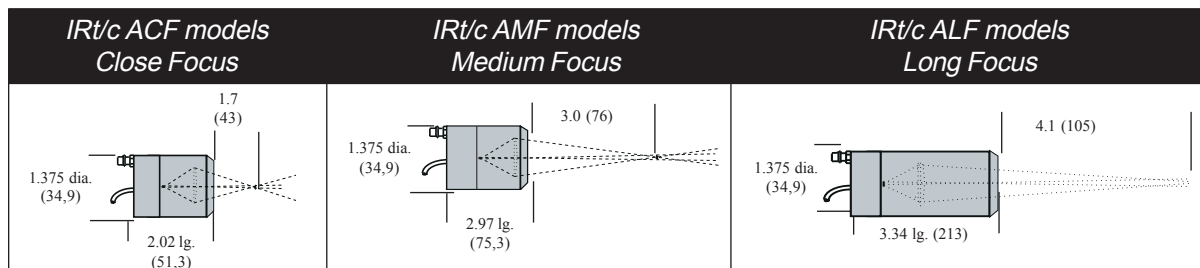


Adjustable IR-TC Sensors

These models allow users to calibrate the IRt/c sensors to match a thermocouple output in whatever temperature range desired. For example: if the requirement is to measure and control a non-metal target in the 1000 F to 1100 F (540 C to 590 C) range, an IRt/c.10A-K-HiE sensor can be selected. It is then installed and calibrated, in place, to generate a type K signal for that temperature range.



Approximate scale 1:5 dimensions in inches (mm).



Ordering information: (Model) - (Thermocouple Type) - (HiE or LoE)

Use the Selection Table. Select the model for (1) temperature range (2) spot size, and (3) target surface material (nonmetal or metal, uncoated). Then finally, (4) select the thermocouple type (J,K, R or S).

Example: **IRt/c.10A -K- HiE**

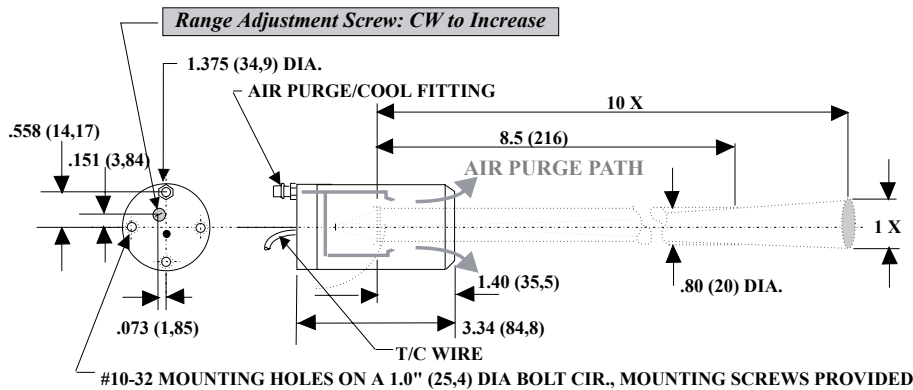
Adjustable IRt/c Options

Adjustable IRt/c models are also available, Pre-Calibrated, from Exergen with NIST traceability for quick multiple same sensor installations for factory automation and OEMs. Also, millivolt signal output curves and mv tables are available for all sensor models for special calibrations.

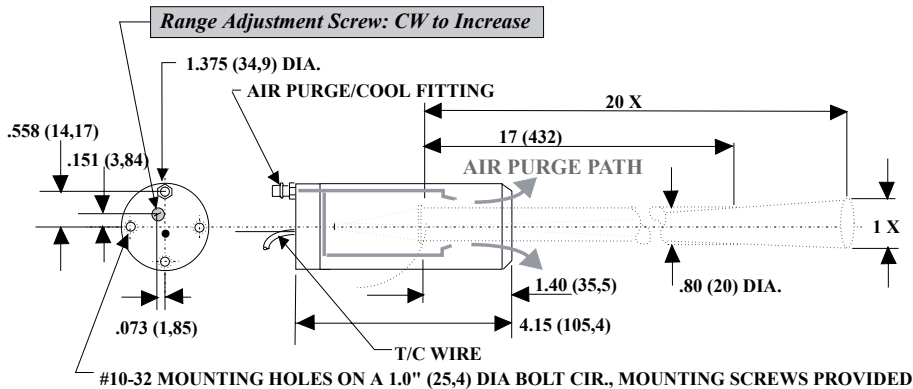
Adjustable Models selection table

Model	T/C Types	Temperature Range		Spot Size	Target Surface
		°F	°C		
.10A-HiE	J, K	-50 to 2500	-45 to 1370	Distance + 10	Nonmetal
.10A-LoE	J, K	500 to 2500	260 to 1370	Distance + 10	Metal
.20A-HiE	J, K	500 to 3000	260 to 1650	Distance + 20	Nonmetal
.20A-LoE	J, K	1000 to 3500	540 to 1930	Distance + 20	Metal
.100A-HiE	R, S	1000 to 5000	540 to 2760	Distance + 100	Nonmetal
.100A-LoE	R, S	1500 to 5000	820 to 2760	Distance + 100	Metal
.2ACF-HiE	J, K	500 to 2500	260 to 1370	2.9 mm	Nonmetal
.2ACF-LoE	J, K	1000 to 2500	540 to 1370	2.9 mm	Metal
.2/15ACF-HiE	J, K	0 to 2500	-18 to 1370	2.9 x 8.7 mm	Nonmetal
.2/15ACF-LoE	J, K	500 to 2500	260 to 1370	2.9 x 8.7 mm	Metal
.3AMF-Hi E	J, K	500 to 2500	260 to 1370	3.7 mm	Nonmetal
.3AMF-LoE	J, K	1100 to 2500	590 to 1370	3.7 mm	Metal
.4ACF-HiE	J, K	0 to 2500	-18 to 1370	5.0 mm	Nonmetal
.4ACF-LoE	J, K	600 to 2500	320 to 1370	5.0 mm	Metal
.8ACF-LoE	J, K	300 to 2500	150 to 1370	8.5 mm	Metal
.2/18AMF-HiE	J, K	0 to 2500	-18 to 1370	4.5 x 12.8 mm	Nonmetal
.2/18AMF-LoE	J, K	600 to 2500	320 to 1370	4.5 x 12.8 mm	Metal
.6AMF-HiE	J, K	0 to 2500	-18 to 1370	6.5 mm	Nonmetal
.6AMF-LoE	J, K	700 to 2500	370 to 1370	6.5 mm	Metal
.12AMF-LoE	J, K	400 to 2500	200 to 1370	11.1 mm	Metal
.2/15ALF-HiE	J, K	700 to 3000	370 to 1650	3.0 x 7.2 mm	Nonmetal
.2/15ALF-LoE	J, K	1200 to 3500	650 to 1930	3.0 x 7.2 mm	Metal
.4ALF-HiE	J, K	700 to 3000	370 to 1650	4 mm	Nonmetal
.4ALF-LoE	J, K	1300 to 3500	700 to 1930	4 mm	Metal
.7ALF-HiE	J, K	300 to 3000	150 to 1650	7.2 mm	Nonmetal
.7ALF-LoE	J, K	900 to 3500	480 to 1930	7.2 mm	Metal
.2AXLF-HiE	R, S	1100 to 3500	590 to 1930	1.8 mm	Nonmetal
.2AXLF-LoE	R, S	2200 to 3500	1200 to 1930	1.8 mm	Metal
.4AXLF-HiE	R, S	900 to 3500	480 to 1930	4.8 mm	Nonmetal
.4AXLF-LoE	R, S	1700 to 3500	930 to 1930	4.8 mm	Metal

Adjustable IR-TC Sensors



IRt/c.10A
10:1 Field-of-View



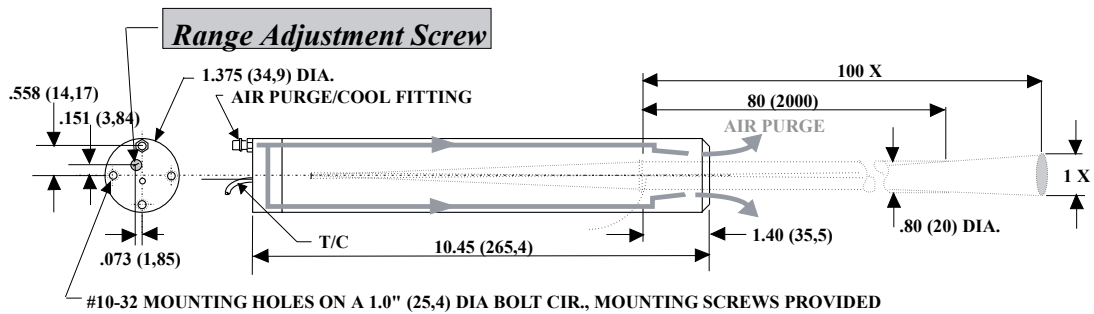
IRt/c.20A
20:1 Field-of-View

Target Surface Type	IRt/c.10A		IRt/c.20A	
	Hi E (non-metal)	Lo E (metal)	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)	500 to 3000°F (260 to 1650°C)	1000 to 3500°F (540 to 1930°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)		No Aperture: 0.8" (20 mm) at <16" (400 mm) ½" Aperture: 0.5" (13 mm) at <9" (230 mm) ¼" Aperture: 0.25" (6 mm) at <3.5" (90 mm)	
Field-of-View at > min. spot	10:1 (6°) approximately		20:1 (3°) approximately	
Spectral Response	2 to 20 μ	0.1 to 5 μ	2 to 20 μ	0.1 to 5 μ
Output Impedance	6 to 13 Kohms approx	9 to 18 Kohms approx	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)		4.15" x 1.375" Dia. (105 x 35 mm)	
Weight	8.0 oz (230 g) with cable		8.7 oz (248 g) 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 400°F (200°C) ambient; 3' (0.9 m) polyurethane tubing provided			

Adjustable IR-TC Sensors

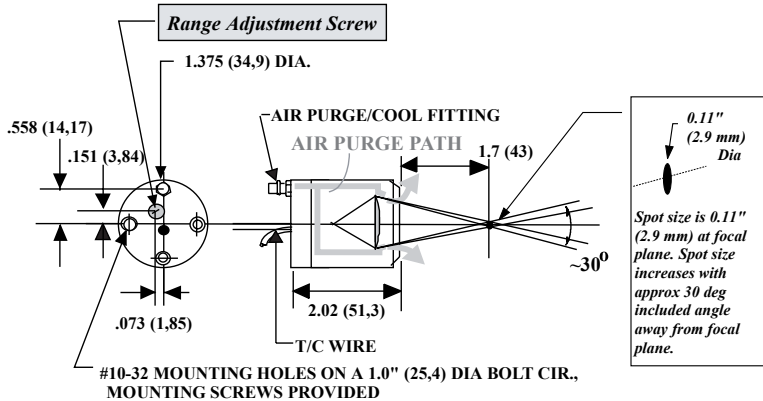
IRt/c.100A

100:1 Field-of-View



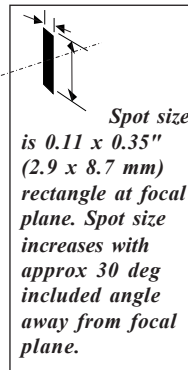
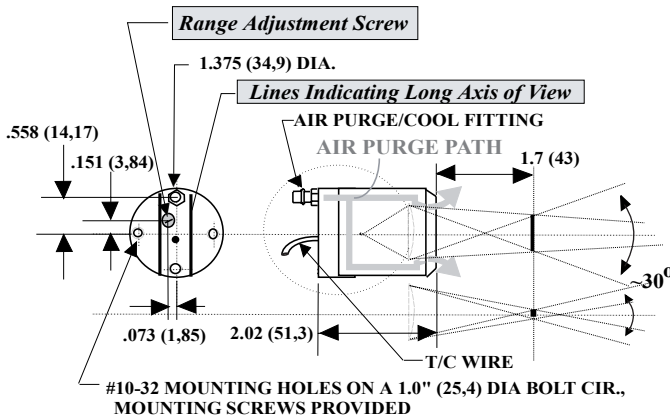
	IRt/c.100A	
Target Surface Type	Hi E (non-metal)	Lo E (metal)
Sensing Range	1000 to 5000°F (540 to 2760°C)	1500 to 5000°F (820 to 2760°C)
Optimum Range Selections	One model each R,S: adjustable over entire sensing range, output tables available	
Minimum Spot Size	At distance, with supplied apertures: No Aperture: 0.8" (20 mm) at <80" (2000 mm) ½" Aperture: 0.5" (13 mm) at <50" (1270 mm) ¼" Aperture: 0.25" (6 mm) at <25" (635 mm)	
Field-of-View	At > min. spot: 100:1 (0.6°) 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 (R,S,etc.), 3 ft (.9 m) std length, Teflon sheathed, rated to 392°F (200°C) continuous service.	
Dimensions	10.5" x 1.375" Dia. (265 x 35 mm)	
Weight	20 oz (570 g) 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 400°F (200°C) ambient; 3' (0.9 m) polyurethane tubing provided	

Adjustable IR-TC Sensors



IRT/c.2ACF

Close Focus, 0.11" (2.9 mm) Spot



IRT/c.2/15ACF

Close Focus "Slot Spot"

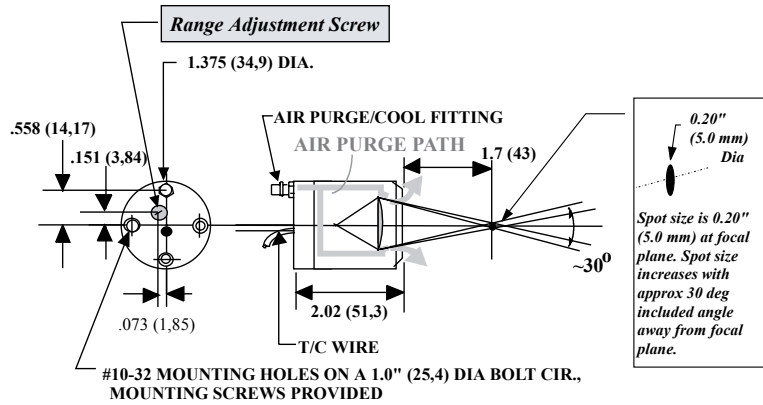


	IRT/c.2ACF		IRT/c.2/15ACF	
Target Surface Type	Hi E (non-metal)	Lo E (metal)	Hi E (non-metal)	Lo E (metal)
Sensing Range	500 to 2500°F (260 to 1370°C)	1000 to 2500°F (540 to 1370°C)	0 to 2500°F (-18 to 1370°C)	500 to 2500°F (260 to 1370°C)
Optimum Range Selections	One model each J, K: adjustable over entire sensing range, output tables available			
Minimum Spot Size	At focus: 0.11" (2.9 mm) at 1.7" (43 mm) from sensor		0.11 x 0.35" (2.9 x 8.7 mm) at 1.7" (43 mm) from sensor	
Field-of-View	Non-focus: 30° approximately		30° approximately	
Spectral Response	2 to 20 μ	0.1 to 5 μ	2 to 20 μ	0.1 to 5 μ
Output Impedance	4 to 8 Kohms (varies by model)		10 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	2.02" x 1.375" Dia. (51.3 x 35 mm)		2.02" x 1.375" Dia. (51.3 x 35 mm)	
Weight	6.8 oz (192 g) with cable		6.8 oz (192 g) 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 400°F (200°C) ambient; 3' (0.9 m) polyurethane tubing provided			

Adjustable IR-TC Sensors

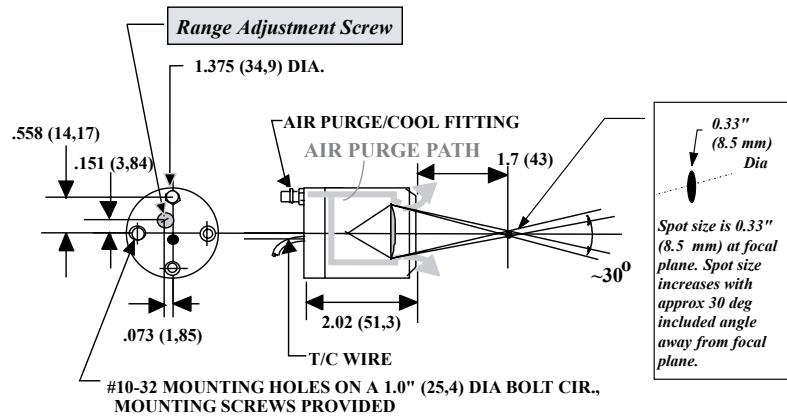
IRt/c.4ACF

Close Focus
0.20" (5.0 mm) Spot



IRt/c.8ACF

Close Focus
0.33" (8.5 mm) Spot

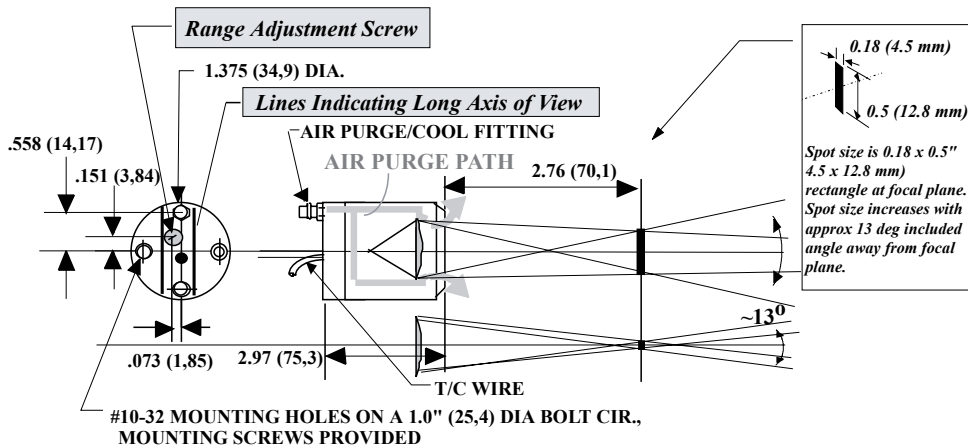


	IRt/c.4ACF		IRt/c.8ACF
Target Surface Type	Hi E (non-metal)	Lo E (metal)	Lo E (metal)
Sensing Range	0 to 2500°F (-18 to 1370°C)	600 to 2500°F (320 to 1370°C)	300 to 2500°F (150 to 1370°C)
Optimum Range Selections	One model each J, K: adjustable over entire sensing range, output tables available		
Minimum Spot Size at Focus	0.20" (5.0 mm) at 1.7" (43 mm) from sensor		0.33" (8.5 mm) at 1.7" (43 mm) from sensor
Field-of-View (non-focus)	30° approximately		30° approximately
Spectral Response	2 to 20 μ	0.1 to 5 μ	0.1 to 5 μ
Output Impedance	4 to 8 Kohms (varies by model)		10 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	2.02" x 1.375" Dia. (51.3 x 35 mm)		
Weight	6.8 oz (192 g) 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 400°F (200°C) ambient; 3' (0.9 m) polyurethane tubing provided		

Adjustable IR-TC Sensors

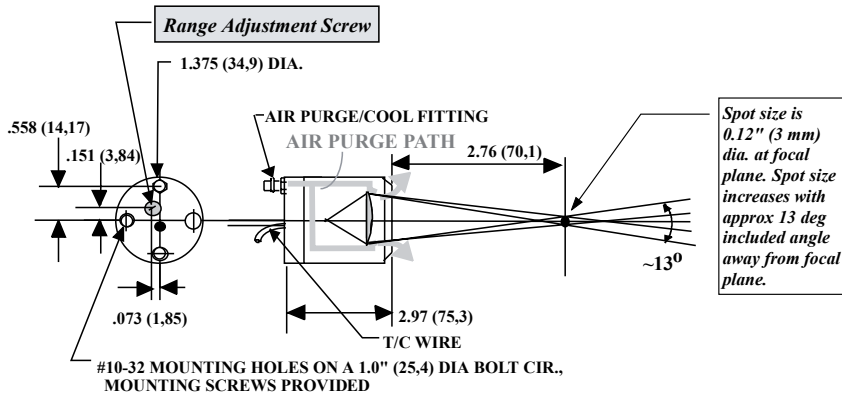
IRt/c.2/18AMF

Medium Focus
"Slot Spot"



IRt/c.3AMF

Medium Focus
0.12" (3 mm) Spot

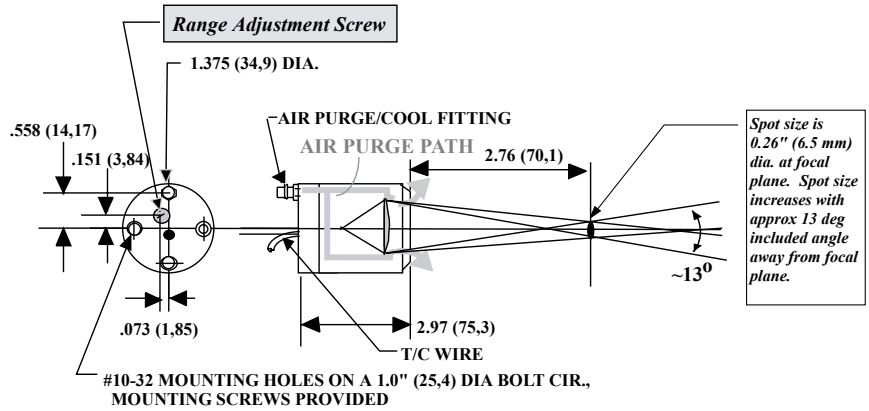


	IRt/c.2/18AMF		IRt/c.3AMF	
Target Surface Type	Hi E (non-metal)	Lo E (metal)	Hi E (non-metal)	Lo E (metal)
Sensing Range	0 to 2500°F (-18 to 1370°C)	600 to 2500°F (320 to 1370°C)	500 to 2500°F (260 to 1370°C)	1100 to 2500°F (590 to 1370°C)
Optimum Range Selections	One model each J, K; adjustable over entire sensing range, output tables available			
Minimum Spot Size at Focus	0.18 x 0.5" (4.5 x 12.8 mm) at 3" (76 mm) from sensor		0.15" (3.7 mm) at 3" (76 mm) from sensor	
Field-of-View (non-focus)	13° approximately			
Spectral Response	2 to 20 μ	0.1 to 5 μ	2 to 20 μ	0.1 to 5 μ
Output Impedance	10 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	2.97" x 1.375" Dia. (75.3 x 35 mm)			
Weight	6.8 oz (192 g) 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 400°F (200°C) ambient; 3' (0.9 m) polyurethane tubing provided			

Adjustable IR-TC Sensors

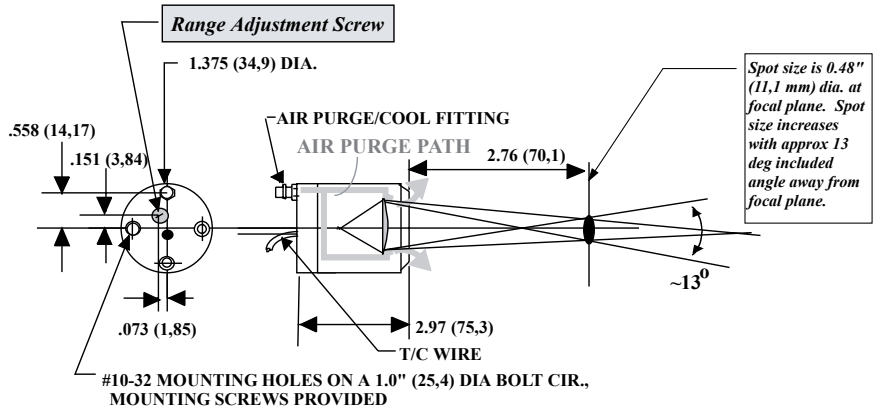
IRt/c.6AMF

Medium Focus
0.26" (6.5 mm) Spot



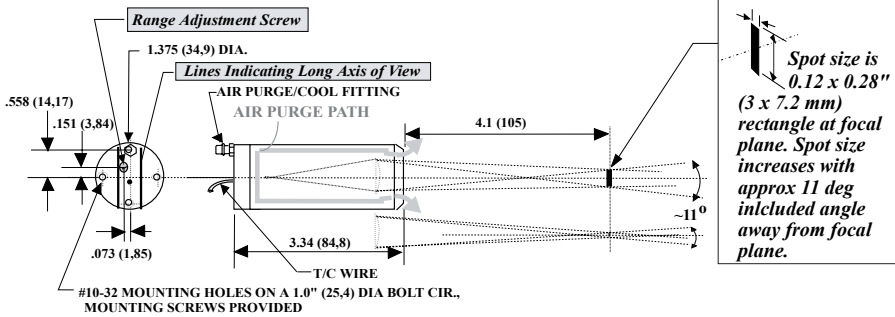
IRt/c.12AMF

Medium Focus
0.48" (11.1 mm) Spot



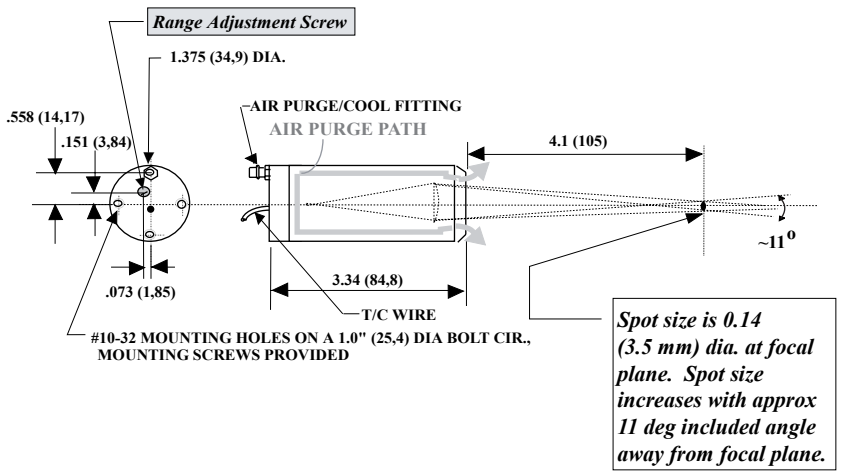
	IRt/c.6AMF		IRt/c.12AMF
Target Surface Type	Hi E (non-metal)	Lo E (metal)	Lo E (metal)
Sensing Range	0 to 2500°F (-18 to 1370°C)	700 to 2500°F (370 to 1370°C)	400 to 2500°F 200 to 1370°C)
Optimum Range Selections	One model each J, K; adjustable over entire sensing range, output tables available		
Minimum Spot Size at Focus	0.26" (6.5 mm) at 3" (76 mm) from sensor		0.48" (11.1 mm) at 3" (76 mm) from sensor
Field-of-View (non-focus)	13° approximately		
Spectral Response	2 to 20 μ	0.1 to 5 μ	0.1 to 5 μ
Output Impedance	10 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	2.97" x 1.375" Dia. (75,3 x 35 mm)		
Weight	6.8 oz (192 g) 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 400°F (200°C) ambient; 3' (0.9 m) polyurethane tubing provided		

Adjustable IR-TC Sensors



IRT/c.2/15ALF

**Long Focus
"Slot Spot"**



IRT/c.4ALF

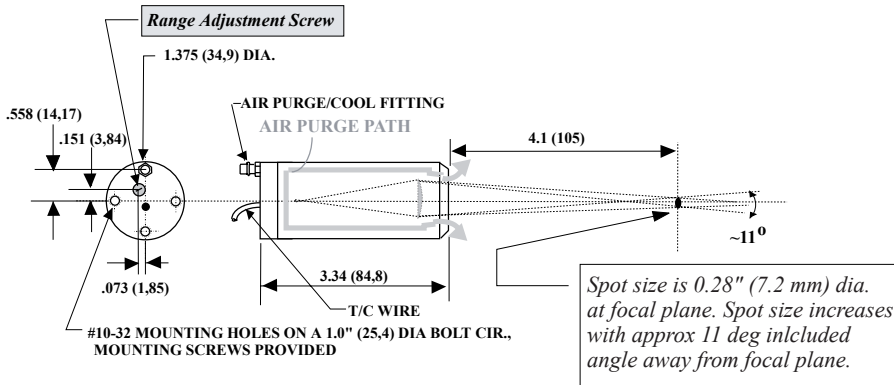
**Long Focus
0.14" (3.5 mm) Spot**

	IRT/c.2/15ALF		IRT/c.4ALF	
Target Surface Type	Hi E (non-metal)	Lo E (metal)	Hi E (non-metal)	Lo E (metal)
Sensing Range	700 to 3000°F (370 to 1650°C)	1200 to 3500°F (650 to 1930°C)	700 to 3000°F (370 to 1650°C)	1200 to 3500°F (700 to 1930°C)
Optimum Range Selections	One model each J, K: adjustable over entire sensing range, output tables available			
Minimum Spot Size at Focus	0.12 x 0.28" (3 x 7.2 mm) at 4.1" (105 mm) from sensor		0.14" (35 mm) at 4.1" (105 mm) from sensor	
Field-of-View (non-focus)	11° approximately			
Spectral Response	2 to 20 μ	0.1 to 5 μ	2 to 20 μ	0.1 to 5 μ
Output Impedance	10 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. (84.8 x 35 mm)			
Weight	8.7 oz (248 g) 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 400°F (200°C) ambient; 3' (0.9 m) polyurethane tubing provided			

Adjustable IR-TC Sensors

IRt/c.7ALF

Long Focus
0.3" (7 mm) Spot

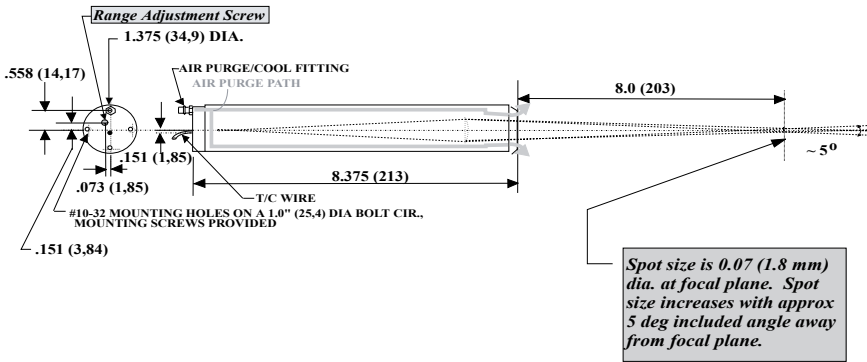


	IRt/c.7ALF	
Target Surface Type	Hi E (non-metal)	Lo E (metal)
Sensing Range	300 to 3000°F (150 to 1650°C)	900 to 3500°F (480 to 1930°C)
Optimum Range Selections	One model each J, K; adjustable over entire sensing range, output tables available	
Minimum Spot Size at Focus	0.28" (7.2 mm) at 4.1" (105 mm) from sensor	
Field-of-View (non-focus)	11° approximately	
Spectral Response	2 to 20 μ	0.1 to 5 μ
Output Impedance	10 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. (84.8 x 35 mm)	
Weight	8.7 oz (248 g) 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 400°F (200°C) ambient; 3' (0.9 m) polyurethane tubing provided	

Adjustable IR-TC Sensors

IRt/c.2AXLF

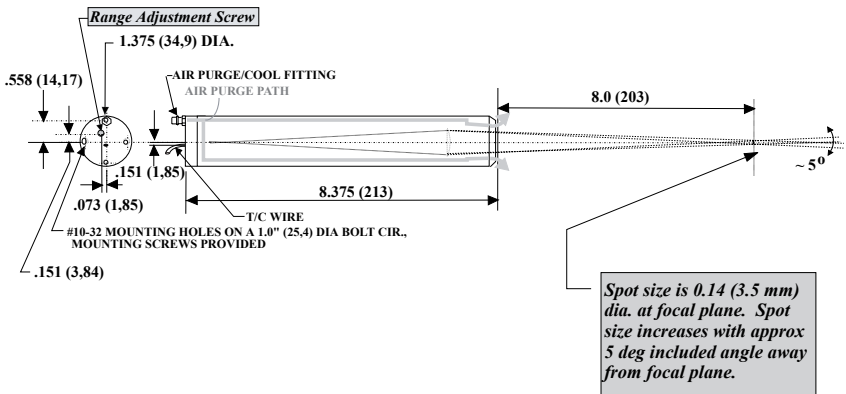
Extra Long Focus
0.07" (1.8 mm) Spot



Spot size is 0.07 (1.8 mm) dia. at focal plane. Spot size increases with approx 5 deg included angle away from focal plane.

IRt/c.4AXLF

Extra Long Focus
0.19" (4.8 mm) Spot



Spot size is 0.14 (3.5 mm) dia. at focal plane. Spot size increases with approx 5 deg included angle away from focal plane.

	IRt/c.2AXLF		IRt/c.4AXLF	
Target Surface Type	Hi E (non-metal)	Lo E (metal)	Hi E (non-metal)	Lo E (metal)
Sensing Range	1100 to 3500°F (590 to 1930°C)	2200 to 3500°F (1200 to 1930°C)	900 to 3500°F (480 to 1930°C)	1700 to 3500°F (930 to 1930°C)
Optimum Range Selections	One model each R, S; adjustable over entire sensing range, output tables available			
Minimum Spot Size at Focus	0.07" (1.8 mm) at 8" (200 mm) from sensor		0.19" (4.8 mm) at 8" (200 mm) from sensor	
Field-of-View (non-focus)	5° approximately			
Spectral Response	2 to 20 μ	0.1 to 5 μ	2 to 20 μ	0.1 to 5 μ
Output Impedance	10 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	8.375" x 1.375" Dia. (213 x 35 mm)			
Weight	20 oz (570 g) 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 400°F (200°C) ambient; 3' (0.9 m) polyurethane tubing provided			

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