

Wahl

HEAT SPY®

Heat Spy® Monitor R10 Series Compact Fixed Infrared Sensor

The Wahl Heat Spy R10 Series of Infrared Thermometers offers all the benefits of a fixed infrared system with 20:1 optics, the best on the market! Avoid damage or interference from flame, smoke, steam, etc. and get a more accurate measurement at a safer distance than the competitor!

The R10 also achieves a greater accuracy of 1% for better readings at a lower price than competitors.

The R10 is housed in compact, rugged IP65 (NEMA 4), 304 stainless steel body, designed for easy integration into many applications. With a wide measuring range of 0° to 500°C (32° to 932°F) and an ambient operating range of 0° to 70°C (32° to 158°F) without requiring cooling accessories, you can continuously monitor your process with confidence.

R10 Features:

- Measure smaller spot sizes at the same distance or measure the same spot size from further away!
- Silicon lens vs a plastic lens offers greater durability and protection from high heat or flame
- Accuracy of $\pm 1\%$ of reading or $\pm 2^\circ\text{C}$, whichever is greater
- Repeatability of 1% or $\pm 1^\circ\text{C}$ for consistent readings for a quality product
- 20:1 Optics at 95% Energy.
- Linear 4-20mA analog output only
- 24V DC Power

R10 Series Measuring Specifications

Temperature Range	0° to 500°C (32° to 932°F)
D:S Ratio	20:1
Accuracy	0° to 500°C: $\pm 1\%$ of reading or $\pm 2^\circ\text{C}$, whichever is greater
Spectral Range	8 – 14 μm
Repeatability	1% or $\pm 1^\circ\text{C}$
Response Time	500 ms
Emissivity	0.95 fixed

R10 Series Model Definition

Model	Output	Wiring	Connection Cable Length
R10A	4-20mA	24 AWG. Shielded 2 Conductor, PVC Insulated	5 feet (1.5m)
R10A-10			10 feet (3.0m)

**We build to order:
if your process requires
an option not shown here
please call
Customer Service.**

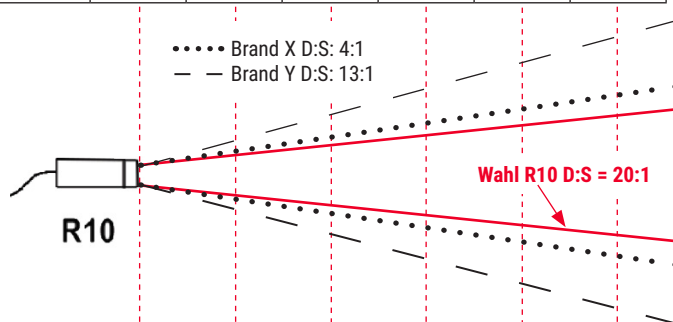
Best Optics and Accuracy on the Market!



R10A-10

R10 Series Optics

Distance (mm)	0	200	400	600	800	1000
Target (mm)	8.9	10	20	30	40	50



Distance (in)	0	8	16	24	32	40
Target (in)	0.35	0.4	0.8	1.2	1.6	2

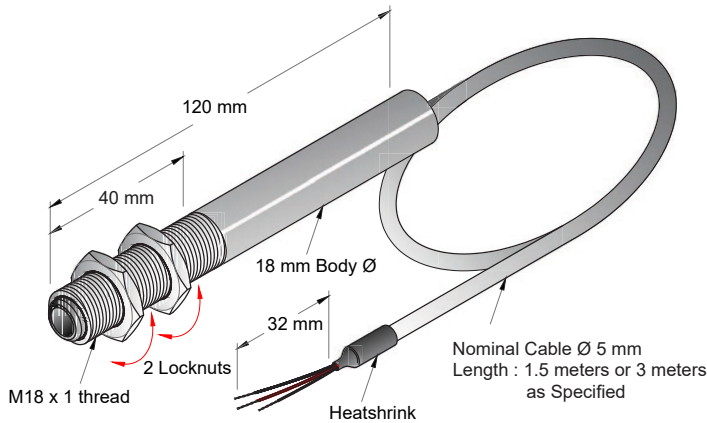
The Wahl R10 provides a 20:1 field of view which measures smaller spot sizes than the competitor at 13:1 or 4:1. The optics, including the silicone lens, provide more accurate readings without concern about personal safety, damage, or interference from heat and other environmental issues.

R10 Series Applications

Asphalt	Food	Plastics
Baking	Minerals	Printing and Laminating
Coatings	Paint	Research and Development
Chemicals	Paper	Textiles and Carpet
Drying/Curing	Pharmaceutical	



R10 Series Dimensional Drawings



R10 Series Sensor Specifications

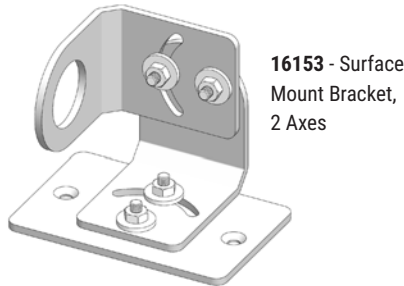
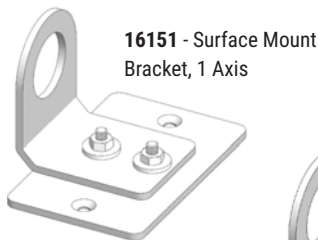
Ambient Temperature	0° to 70°C (32° to 158°F)
with Air Cooling	0° to 90°C (32° to 194°F)
with Water Cooling	0° to 200°C (32° to 392°F)
Storage Temperature	-20° to 70°C (-4° to 158°F)
Relative Humidity	10% - 95% non-condensing
Protection Class	IP65 (NEMA 4)
Shock	MIL-STD-810D
Vibration	MIL-STD-810D
Housing Material	304 Stainless Steel
Dimensions	18mm Dia. x 120mm (0.7 x 4.75 in) / Thread: M18 x 1
Weight	270 g (9.52 oz)

R10 Series Compact Infrared Accessories

SURFACE MOUNT

R10 Surface Mount Brackets:

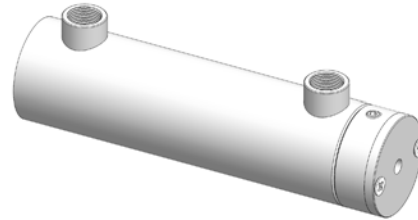
- 16151** - R10 Surface Mount Bracket, 1 Axis, Diameter: 18.25mm (0.7 in.)
16153 - R10 Surface Mount Bracket, 2 Axes, Diameter: 18.25mm (0.7 in.)



AIR/WATER COOLING JACKET

R10 Air/Water Cooling Jacket:

- 16180** - R10 Air/Water Cooling Jacket - Diameter: 31.75mm (1.25 in.)
 Length: 114.3mm (4.50 in.) with 2, 1/8" FNPT Fittings.

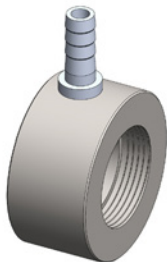


For a detector installed in a very hot environment a cooling jacket is used to cool the electronics.

AIR PURGE

R10 Compact Air Purge Collar:

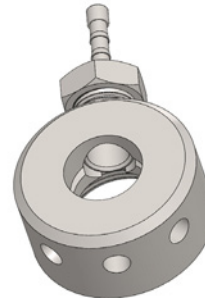
- 16171** - R10 Air Purge Collar, M18x1 Threads.
 Outside Diameter: 30mm (1.18 in.), Width: 15mm (0.59 in.), Height: 50mm (1.96 in.). Barb Fitting: 1/8 NPTF.



An Air Purge is used to eliminate dust, dirt, heat, fumes or vapors from the front of the optical head and to keep the lens clean.

R10 Radial Air Purge Assembly:

- 16173** - R10 Radial Air Purge Assembly. M18 x 1 Threads.
 Outside Diameter: 30mm (1.18 in.), Width: 15mm (0.59 in.), Height: 50mm (1.96 in.). Barb Fitting: 1/8 NPTF.



The Radial Air Purge Assembly directs air 90° from Measuring Surface. It is used in sanitary applications to prevent pressurized air from contaminating food. In baking applications it prevents cold air from cooling down the process.



R10 Series Order Guide

R10 Heat Spy Monitor Fixed Infrared - THERMOPILE MODELS - Order Guide

Thermopile Models Step 1 - Select: Series

R10	Compact Sensor, 8 to 14µm, 0° to 500°C (32° to 932°F), 20:1		
	Code	Step 2 - Select: Signal Output	
	A	3.9µm	4-20mA Analog Output, 1.5 meter Cable (5 feet) (Standard)
		Stop here for standard model with 1.5 meter, (5 feet) of cable. If longer cable is desired, continue below.	
	Code	Step 3 - Select: Additional Connection Cable Length if desired	
	-XXXM	Specify exact length desired with Code: XXX = Exact Length, M = meters. Maximum Length - 304 meters.	
		Example: 4 meter total cable length = 004M, 5 meter total cable length = 005M, etc.	

R10			
Series	Signal Output	Cable Length	
Includes: Certificate of Conformance and User Manual			

R10 Accessories

Step 4 - Select: Accessories. List as separate line items.

Part Number	Surface Mount Brackets
16151	R10 Surface Mount Bracket, 1 Axis, Diameter: 18.2 mm (0.7 in.)
16153	R10 Surface Mount Bracket, 2 Axes, Diameter: 18.25mm (0.7 in.)
	Air Purge - Barb Fitting: 1/8 NPTF.
16171	R10 Compact Air Purge Collar, M18 X 1 Threads, Outside Diameter: 30mm (1.18 in.), Width: 15mm (0.59 in.), Height: 50mm (1.96 in.).
16173	R10 Radial Air Purge Assembly, M18 x 1 Threads, Outside Diameter: 30mm (1.18 in.), Width: 15mm (0.59 in.), Height: 50mm (1.96 in.).
	Air/Water Cooling Jacket
16180	R10 Air/Water Cooling Jacket, Diameter: 31.75 (1.25 in.) Length: 114.3mm (4.50 in.) with 2, 1/8 in. FNPT Fittings
	Power Supply
16116	R10/R40/60 Series Compact AC/DC Power Supply, 24V, 31W
16117	R10/R40/60 Series AC/DC Power Supply, 24V, 25 to 150W

Specifications subject to change without notice.

April
2025

Palmer Wahl Instruments, Inc. • Toll Free: 800-421-2853 • Phone: 828-658-3131 • www.palmerwahl.com



Palmer Wahl
BEYOND THE SCALE