

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 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 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.**

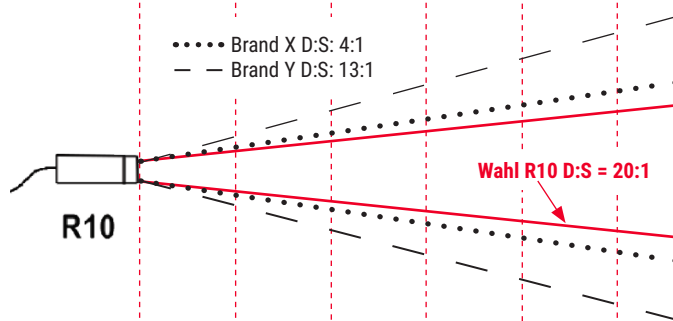
Best Optics and Accuracy on the Market!



R10A-10

R10 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 | |



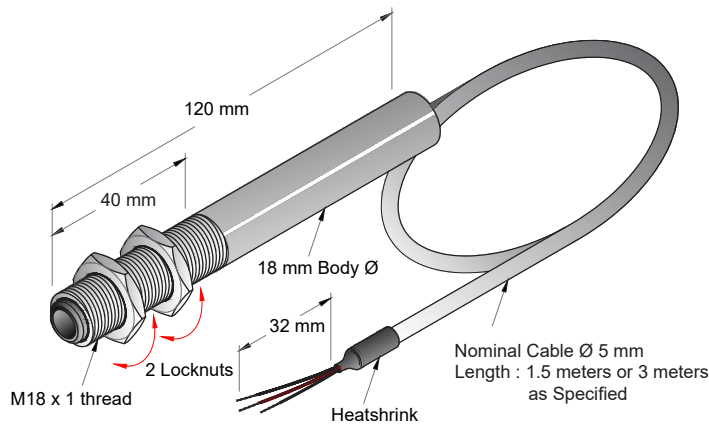
Specifications subject to change without notice.

October 2023

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



R10 Series Dimensional Drawings



R10 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 Order Guide

MODEL R10 Series Fixed Infrared

Step 1 - Select: Bimetal Size and Case Style

Code	Fixed Infrared Sensor, includes 1.5 m (5 ft) Cable, Certificate of Conformance and User Manual
R10	Compact Sensor, 8 to 14µm, 0° to 500°C (32° to 932°F), 20:1

Step 2 - Select: Signal Output

Code	Signal Output
A	4-20mA Analog Output

Step 3 - Select: Cable length (if applicable)

Code	Cable Length
-10	3 meter (10 feet) Cable
XM	Customer specified length in Meters. Specify exact length desired. Add for each additional meter over 3m.
	Specify exact length desired with Code: X = length up to 999 meters, M = meters. Call for other lengths.

Sensor	Signal Output	Cable Length
R10	A	

Insert Codes in boxes above to build part number

Accessories - List as separate line items

Code	Accessories
16116	Compact AC/DC Power Supply, 24V, 31W
16117	AC/DC Power Supply, 24V, 25 to 150W
16151	R10 Surface Mount Bracket, Fixed, 18.25mm Diameter
16153	R10 Surface Mount Bracket, Adjustable, 18.25mm Diameter
16171	Compact Air Purge Collar, M18 x 1 Threads, Outside Diameter: 30mm (1.18"), Width: 15mm, Height: 50mm
16173	Radial Air Purge Assembly, M18 x 1 Threads, Outside Diameter: 30mm (1.18"), Width: 15mm, Height: 50mm.
16180	Air/Water Cooling Jacket, 31.75 (1.25") Diameter by 114.3mm (4.50") Long with 2, 1/8" FNPT Fittings



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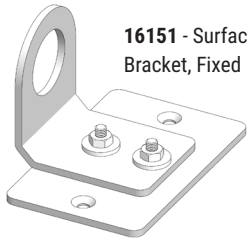
R10 Compact Infrared Accessories

SURFACE MOUNT

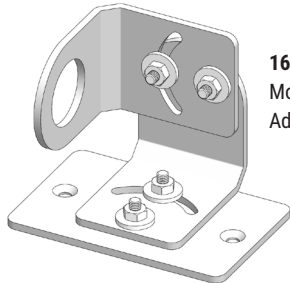
R10 Surface Mount Brackets:

16151 - R10 Surface Mount Bracket, Fixed, 18.25mm (0.7") Diameter

16153 - R10 Surface Mount Bracket, Adjustable, 18.25mm (0.7") Diameter



16151 - Surface Mount Bracket, Fixed

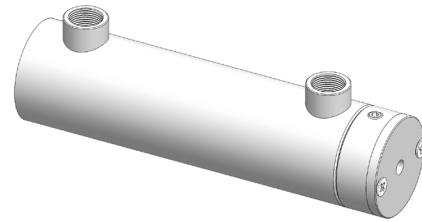


16153 - Surface Mount Bracket, Adjustable

AIR/WATER COOLING JACKET

R10 Air/Water Cooling Jacket:

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



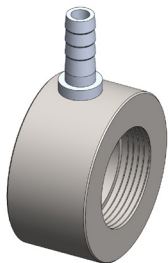
For a detector installed in a very hot environment a cooling jacket is used to cool the electronics.

AIR PURGE

R10 Compact Air Purge Collar:

16171 - R10 Air Purge Collar, M18x1 Threads, Outside Diameter: 1.18" (30mm), Width: 0.59" (15mm), Height: 2.15" (50mm).

Barb Fitting: 1/8 NPTF.

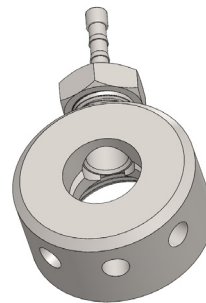


An Air Purge is used to eliminate dust, dirt, heat, fumes or vapors from the front of the optical head and to keep the lens clean.

R10 Radial Air Purge Assembly:

16173 - R10 Radial Air Purge Assembly. M18 x 1 Threads, Outside Diameter: 1.18" (30mm), Width: 0.59" (15mm), Height: 2.15" (50mm).

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.

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BEYOND THE SCALE