

HEAT SPY® MONITOR R60 SERIES FIBER OPTIC FIXED INFRARED SENSOR



. -5-digit backlit LCD display with 4-key keypad for convenient on-site viewing and adjustment without a computer.
. 12-pin connection cable for simultaneous analog / digital input and output.
. 0-20 or 4-20 mA linear current loop, programmable sub-range, user selectable.
. RS485 to network up to 32 sensors.
. Relay for alarm and PLC control, programmable by the user.
. External input for resetting and setting the parameters of AVG, PEAKHOLD and VALLEY HOLD.
. integrated laser to simplify alignment operations.
. Programmable for OEM applications via RS485 for remote configuration and monitoring.
. Optional non-contact thermocouple type IR tube with extremely long life is available as an alternative to traditional contact thermocouples

Description

Overview :

The new Wahl R60 fixed fiber optic infrared sensor maintains its accuracy at high ambient temperatures up to 200 ° C without cooling. Ideal for processes involving electromagnetic interference, limited installation space, or where a water source is impractical.
Choose from five optical options available to meet your installation requirements. Backed by our 2 year warranty, the R60 can be used in a wide range of applications, ensuring confidence in your process results.
A high-tech non-contact infrared sensor, designed to meet all application requirements by delivering high performance and advanced features. The rugged IP65 (NEMA 4) system gives the R60 the flexibility to handle almost any application. R60 is widely used in high ambient temperature applications up to 200 ° C without cooling, and in processes involving electromagnetic interference.
The R60 includes signal processing features including Peak Hold, Valley Hold and Averaging, all of which are field adjustable via the keypad or remotely controlled when interfaced with user software.

Characterization :

Measuring system Each R60 infrared thermometer consists of three distinct parts:
1. Single lens optical head to collect infrared radiation up to 200 ° C in harsh environments without cooling system!
2. The flexible fiber optic steel coated cable transmits IR radiation up to 100 meters from the "head" to the electronic module.
3. Microprocessor-based electronic module to convert IR radiation into an electrical signal and temperature reading.

Laser tracking system
A laser is installed in the electronic module and the spot is projected by the optical head for target alignment.
The laser can be operated remotely or with the user interface.

Micron spectral range to cover Application					
		Spectral Range	Temperature Range	Application	
1M	Molten Metal	1.0µm	400° to 3000°C (752° to 5432°F)	Molten Glass Molten Metal Molten Ceramics Hot Graphite Ferrous Metal	
2M	Hot Metal	1.6µm	300° to 2300°C, (572° to 4172°F)	Hot Metal Hot Ceramic Non-Ferrous Metal	

Specifications

Electronic Specifications	
LCD	5-Digit, 1° Resolution
Keyboard	4- Key
Analog Output	0-20mA, 4-20mA
Digital Output	RS485
Alarm	High or low
Signal Processing	AVG/PEAK HOLD/VALLEY HOLD
Relay	User programmable
Cable	12-pin connection Cable
Power Supply	24 V DC Nominal, (10-32 V DC)

Sensor Specifications	
Ambient Temperature	0° to 200°C (32° to 392°F)
Optical Head	0° to 200°C, (32° to 392°F)
Optical Cable	-20° to 60°C (-4° to 140°F)
Storage	-20° to 70°C (-4° to 158°F)
Relative Humidity	10% to 95% non-condensing
Protection Glass	IP65
Laser Sight	650mn<1mW, Class II
Shock & Vibration	MIL-STD-810D
Housing Material	ANSI 316 Stainless Steel
Optical Head Dimensions	16 x 52 mm (0.6 x 2.04 in) - Fast Lock 30 x 94 mm (1.148 x 3.7 in) - Threaded M30 x 1
Fiber Optic Cable diameter Electronic Module Diameter	8 mm (0.31 in) 45mm Dia. x 166mm (1.77 x 6.53 in)
Weight	0.85 kg (1.87 lbs)

Measuring Specifications	
	1ML/1MM/1MH/2ML/2MM/2MH
Accuracy	± 0.25% of reading

Repeatability	± 0.10% of reading
Lcd Resolution	1°C / 1°F
Response Time	5 mS
Emissivity	0.10 to 1.00

Models and accessories

Accessories

MOUNTING SYSTEM OPTIONS

R60 SURFACE BRACKET Surface mount brackets: 16651 - R60 surface mount bracket, fixed, diameter: 30.5mm (1.20 ") 16653 - R60 surface mount bracket, adjustable, diameter: 30.5mm (1.20 ")
16651 - Surface mount bracket, fixed
16653- Surface mount bracket, adjustable

WALL FIXATION

R40 / 60 series mounting flange:
16483 - R40 / 60 series wall mount flange - M30x1 male on fixed side IR / air purge, M30x1 female on sight tube / TC side
16483 - Wall mounting flange
Roof Mount R60 Series Roof Mount Assemblies for Glass Furnace:
16662 - Roof mounting R60 with flange
16663 - R60 roof mounting with gravity assembly
Wahl offers optional mounting kits for a glass furnace that allow the user to easily reach the sensor for cleaning and calibration.
16662 - Flange assembly includes a flange with 4 mounting holes to be attached to the roof or wall of the furnace,
16663 - Heavy-duty stainless steel features a heavy-duty stainless steel cover designed specifically for gravity-held roof mounting.

AIR PURGE

R60 air purge
16672 - Air purge R60, M30x1 to M30x1
16672 - Air purge
16672 - Air purge
An air purge is used to remove dust, dirt, heat, fumes or vapors from the front of the optical head and to keep the lens clean. Optional windows are not available for the R60.
Note: The R60 does not require an air / water cooling jacket.

SIGHT / IR TUBES

R40 / 60 series sight tube for use with R60 Code F900 optics (D to S: 75: 1). M30 x 1, length: 11.81 in (300 mm)

16491-1 - SS304, 1500 ° F (800 ° C)
16491-2 - Inconel, 2000 ° F (1100 ° C)
16491-3 - Silicon Carbide, 3000 ° F (1600 ° C)
16491-4 - High purity alumina, (99.8%), 3500 ° F (1900 ° C) 16491-5 - Glassy carbon, 5430 ° F (3000 ° C)
Use a sighting tube to avoid reflected energy in temperature measurement environments. Sighting tubes should be used when the target is blocked by smoke or flames. For use with an air purge system for a clean viewing path from the target to the thermometer.
R40 / 60 series IR thermocouple tube for use with R60 Code F300 optics (D to S: 37.5: 1). M30 x 1, length: 11.81 in (300 mm)
16492-1 - SS304, 1500 ° F (800 ° C)
16492-2 - Inconel, 2000 ° F (1100 ° C)
16492-3 - Silicon Carbide, 3000 ° F (1600 ° C)
16492-4 - High purity alumina, (99.8%), 3500 ° F (1900 ° C) 16492-5 - Glassy carbon, 5430 ° F (3000 ° C)