Stationary-type non-contact thermometer
M18 cylindrical type

Measurement range
0 to 400°C (32 to 752°F)

THERMO-HUNTER®

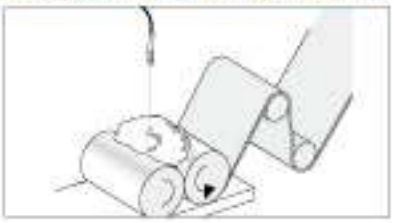
SA-80 series

<0 to 200°C (32 to 392°F)>
SA-80T-2A
<0 to 400°C (32 to 752°F)>
SA-80T-4A

Temperature control for painted surfaces of cars

Engine and drive component temperature control

Processing/molding temperature control



CE

High-speed response | IP67 | Resolution 0.1°C (0.18°F) | SUS body | Space-saving | Analog output

Features

High-speed response
Achieves a response time of 100 ms/90% for quick measurement.

Excellent environmental resistance
- The IP67-compatible waterproof function prevents dust and water from getting inside.
- The heat-resistant design can handle ambient temperatures up to 70°C (158°F).
- Adopting an SUS body and silicone lens allows for greater resistance to noise, more accurate temperature measurement, and more stable operability.

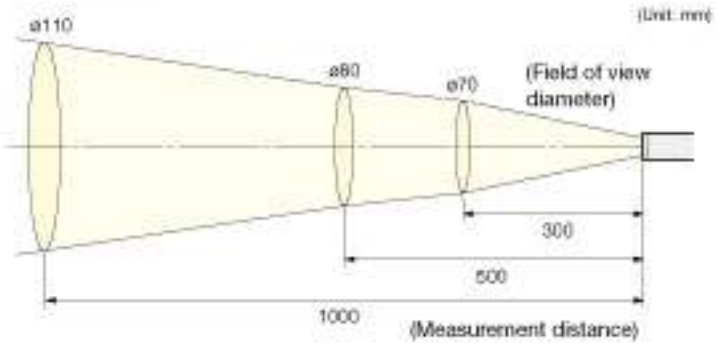
Analog output
Noise-resistant analog output: 4-20 mA.

Wide and long focusing
Settings can be configured for a wide focus with an area diameter of 80 mm at a distance of 500 mm.

Space-saving
By adopting a cylindrical shape, this product can be installed even in situations where space is limited.

Economical
Thanks to fewer complicated functions, this stationary-type product is available at an uncharacteristically low price.

Field of view



The field of view stated above are measurement diameters with an optical response of 90%.
The size of the measurement target must be sufficiently larger than the measurement diameters shown in the above diagram.

Specifications

Model	SA-80T	
	2 A	4 A
Measurement range	0 to 200°C (32 to 392°F)	0 to 400°C (32 to 752°F)
Field of view	ø80/500 mm	
Optics	Silicone lens	
Sensing element/ spectral response	Thermopile/8 to 14 µm	
Response time	100 ms/90% response	
Accuracy	0 to 200°C (32 to 392°F): ±2°C (3.6°F), 201 to 400°C (393.8 to 752°F): ±1%	
Repeatability	±1°C (1.8°F) of reading	
Analog output	4 to 20 mA	
Emissivity	0.95 (fixed)	
Supply voltage/ current consumption	12 to 24 VDC ±10%/70 mA or less	
Ambient temperature	0 to 70°C (32 to 158°F)	
Ambient humidity	35 to 85% RH (no condensation)	
Storage temperature	-20 to 70°C (-4 to 158°F)	
Vibration resistance	10 to 55 Hz; amplitude 1.5 mm; 2 hours in each of the X, Y, and Z directions	
Water resistance	IP67	
Material	SUS/Al	
Weight	Approx. 180 g	
Standard included accessories	Mounting nut ×2	

* Note that specifications are subject to change without prior notice for product improvement purposes.

Maintenance

Lens Dust, dirt, and scratches on the lens can cause measurement errors. If the lens becomes dirty, remove any dust on the lens using an air blower specifically designed for cleaning lenses. If dirt cannot be removed using the blower, wipe the lens with a cotton swab or lens cleaning cloth moistened with ethyl alcohol.

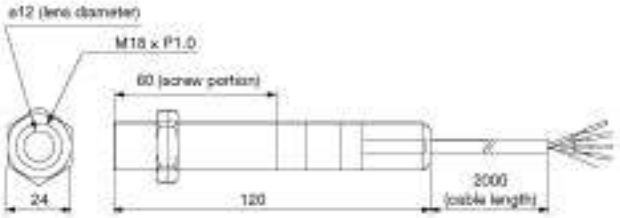
Main unit If the main unit becomes excessively dirty, wipe with a soft cloth moistened with ethyl alcohol.

Troubleshooting

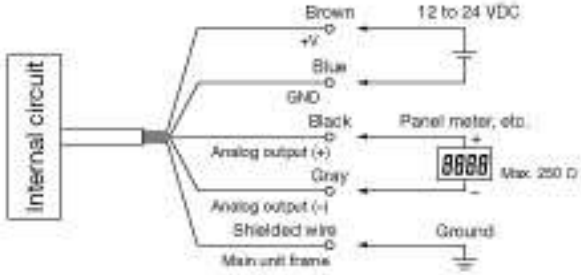
Symptom	Cause	Countermeasures
Cannot perform measurement	The power supply voltage is not being applied.	Check the connection of the lead wire, and retighten if necessary.
	Low power supply voltage	Check the power supply voltage. Make sure the voltage is between 12 and 24 VDC.
Incorrect measurement values	The lens is dirty.	Refer to lens maintenance to clean the lens.
	Misaligned measurement area	Adjust the mounting of the main unit while checking the output value.
	The temperature of a high-temperature object located nearby is affecting the measurement.	Use a shielding plate or the like to shield the heat source.
Unstable measurement values	The main unit is being affected by vibrations.	Enforce anti-vibration countermeasures.
	The product is being subject to sudden temperature changes.	Wait a moment until the temperature of the main unit stabilizes.

Dimensions

(Unit: mm)



Connection diagram



Options/Accessories

Black tape for glossy objects

HB-250

When attached to the surface of an object with unknown emissivity or a glossy object, this tape provides an emissivity of 0.95, enabling accurate non-contact temperature measurement. When using the tape, set the emissivity to ε = 0.95. The tape is built with material resistant to heat up to 250°C (482°F).

Total area: 60 mm × 2000 mm

Correct use

■ Situations where measurement may be difficult

- When measuring a mirror-like surface such as shiny metal.
  * (Measure after attaching optional accessory HB-250 or after creating a matte finish using paint or the like.)
- When measuring through glass.

■ Correct use

- Be sure to read the instruction manual thoroughly before using the product.
- Use and store away from direct sunlight, dust, and hot and humid surroundings. Failing to do so may cause the lens to become dirty or to deteriorate, which can lead to errors.
- This instrument is not a thermometer for taking body temperatures. It is not intended for use in medical practices.
- Sudden changes in ambient temperature can cause measurement errors. Please ensure the product is not subject to sudden temperature changes during use.
- Do not use the product near objects that generate strong electromagnetic waves, or in environments with corrosive gases or explosive gases.
- Use only the rated power supply with the product. Using the product outside of the 12 to 24 VDC range may cause malfunction, short-circuiting, fire, or injury.
- Do not touch the product to the measurement target. This product is a non-contact thermometer. Contact with a high-temperature surface may result in deformation, the need for repairs, and measurement errors.
- Do not touch the lens. Do not touch the lens with hard or sharp objects. Also, do not place foreign objects in the light-receiving part. Doing so may scratch the lens and cause errors.
- Do not allow the product to come near objects with an electrostatic charge. Doing so may cause irreparable damage or measurement errors.