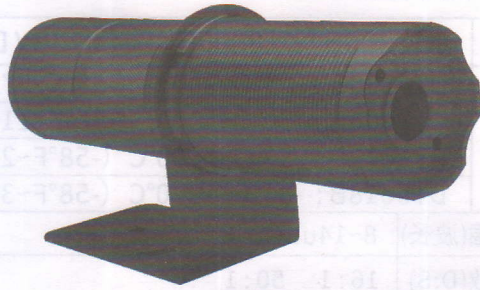


Infrared temperature transmitter

Operation manual



Description

As a Integrated transmitter infrared thermometer, DT8000B have the integration of the sensor, the optical system and the electronic circuit inside its stainless steel or aluminium alloy shell. It can be installed very conveniently by making the standard screw thread on the product be joined with the installation position.

The principle of temperature measurement by infrared

Any object transmits the infrared radiation, and the radiation intensity varies with temperature. Infrared temperature measurement uses thermal radiation within the range of wavelength 8-14um. The infrared thermometer is a kind of hot-electron sensor which can receive the infrared radiation and transform it to a measurable electric signal, and its main assemblies are as following:

- Lens
- Spectrum filter
- Detector
- Electronic circuit (Amplifier/ linearization/ signal processing)

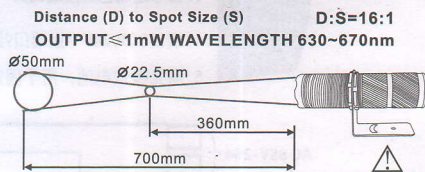
Light path of the infrared thermometer is determined by the specification of lens. The spectrum filter can choose the best spectral range for temperature measurement. The power of infrared radiation can be transformed to electric signal by detector and electronic circuit.

Main features

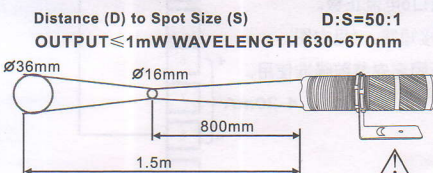
- High precision
- High optical resolution ratio
- Firm metal shell
- Large temperature range:
-50°C~1800°C (-58°F~3272°F) Temperature range is optional
- Output: 4-20mA
- Optimum test distance: 16cm
- Size: $\Phi 60\text{mm} \times 198.5\text{mm}$

The longest test distance to the target tested

The longest test distance between the product head and the target tested are decided by the size of the target and optical characteristics of the infrared thermometer. To avoid measurement errors, the size of the target should be larger or same size of the test spot of infrared.



CAUTION LASER RADIATION DO NOT STARE IN TO BEAM CLASS II LASER PRODUCT



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Specification

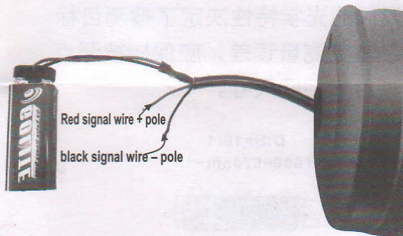
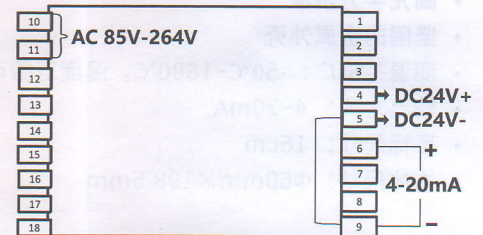
This product is perfect for petrochemical industry, power industry, light industry, textile industry, food industry, national defense industry sector and scientific research etc.

Model	DT8300B / DT8600B / DT8012B / DT8018B
Temperature Range	DT8300B: -50°C~300°C (-58°F~572°F)
	DT8600B: -50°C~600°C (-58°F~1112°F)
	DT8012B: -50°C~1200°C (-58°F~2192°F)
	DT8018B: -50°C~1800°C (-58°F~3272°F)
Spectral Response	8~14um
Distance Spot Ratio (D:S)	16 : 1 50 : 1
Response Time	500ms
Accuracy	$\geq 100^\circ\text{C} \pm 2\%$, $\leq 100^\circ\text{C} \pm 2^\circ\text{C}$
Repeatability	$\pm 1\%$ or $\pm 1^\circ\text{C}$
Emissivity	0.95 fixed
Power	DC 9~24V
The maximum current	50mA
Analog output	RT-A: 4~20mA
Isolation: Power, digital output and analog output are isolated and do not interfere with each other.	
Protection level	IP54
Environmental temperature	0~50°C
Storage temperature	-20~50°C
Relative Humidity	10~95%
Shell material: Aluminium alloy or stainless steel (Optional)	
Standard wire length: 4m (or can be 5m or 10m or other length you need).	
With CE approval and protection against electromagnetic disturbance for EU standard.	
Cautions:	
①. This instrument is not recommended for the measurement of bright or polished metal surfaces (non-ferrous metal objects such as stainless steel, aluminum, etc.); The reflections will affect the accuracy of the measurement.	
②. The temperature can not be measured through the glass, otherwise the temperature value will only be the surface temperature of the glass.	
③. The accuracy of the measurement will be affected by the steam, dust, smoke, etc.	

Instructions

signal wire + red
laser wire + blue

signal wire - black
laser wire - yellow



1. Alternating voltage 85-264V contact to the connection 10-11.
2. Signal wire red wire contact to the connection 4 (DC24V+).
3. Signal wire black wire contact to the connection 6.
4. Connection 5 (DC24V-) contact to connection 9.
Connected with the short circuit, please see the picture.
5. Use 9V battery power to contact laser to open laser and use laser to target before fix and install.

