RK310-03 Infrared Temperature Sensor

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The infrared temperature sensor can calculate the surface temperature of the object by measuring the intensity of the infrared radiation emitted by the target without contacting the target. Non-contact temperature measurement is the biggest advantage of infrared thermometers, allowing users to easily measure targets that are difficult to access or move.

The RK310-03 temperature sensor is an integrated integrated infrared temperature sensor. The sensor, optical system and electronic circuit are integrated in a stainless steel housing. The RK310-03 series is easy to install. The standard thread on the metal housing can be quickly connected to the mounting position.

FEATURES

- Infrared measurement, no -contact measured object
- Output stability, fast response
- Compact in size
- Easy installation
- Suitable for a variety of applications

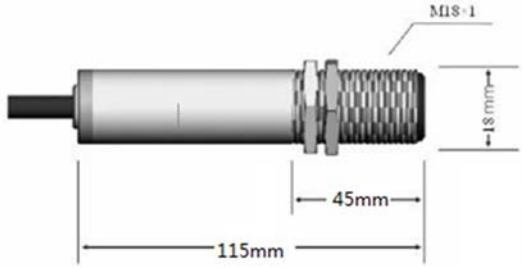
Parts:

1. Sensor:1
2. Easy mounting bracket:1

SPECIFICATIONS

Item	Technical Specification
Range	0-100℃
Optical resolution	16:1
Accuracy	±1.5℃
Emissivity	0.95
Response time	150ms（95%）
Supply	Mark on the label
Output Signal	4-20mA , RS485
Current Consumption	<50mA(current output)
Operating Temperature	0-+60℃
Ingress Protection	IP65
Storage	-20-80℃@10%-95%RH（No condensation）
Response wavelength	8-14μm
Shelter material	304SS

DESIGNSIZE



MOUNTING

The metal housing with M18×1 thread can be used for direct mounting or by mounting brackets. The adjustable mounting bracket makes adjustment of the measuring head more convenient.

When adjusting the target and the measuring head, you must ensure that the light path is unobstructed.

ELECTRICAL CONNECTIONS

Cable	RS485	Current
Red	V+	V+
Yellow	RS485A	
Black	V-	Signal+
Green	RS485B	

Note: This product has been tested and complies with European CE requirements for EMC directive.

WARRANTY

This product is warranted to be free of defects in materials and construction for a period of 12 months from date of lead time.

Liability is limited to repair or replacement of defective item.

PRECAUTIONS

1. The size of the target to be measured and the optical characteristics of the infrared thermometer determine the maximum distance between the target and the measuring head. In order to avoid measurement errors, the target to be measured should be as full as possible to fill the field of view of the probe. Therefore, the measured point should always be smaller than the measured object or at least the same size as the measured target.

2. The lens of the instrument must be kept clean to avoid measurement errors or even damage the lens due to dust, smoke and other contaminants. If the lens is dusty, wipe it with a mirror paper and alcohol.

3. Please keep the infrared temperature sensor away from the electromagnetic field source (such as motor, motor, high-power cable, etc.) during installation, and add metal sleeve if necessary.

4. The infrared temperature sensor can operate in the ambient temperature range of 0-60 °C. Otherwise, please use a cooling cover.

Communication Protocol

Transmission mode: MODBUS-Rumb**aed rate:** 9600bps,**Data bits:**8,**Stop bit:**1,**Check bit:**no

Slave address: the factory default is 03H (set according to the need,00H to FFH)

- **Read The Atmospheric Temperature,**

Host Scan Order(Slave addr:0x03):

01 03 00 00 00 02 C40B

Slave Response:

01 03 04 42 C8 00 00 6FB5

Temperature:(**42 C8 00 00**) =100(℃)

- **The 10H Function Code Example: Modify the slave address**

Host Scan Order (Changed 01H to 02H):
01 10 00 04 00 02 04 40 00 00 00 E79C
Slave Response:

01 10 00 04 00 02 0009

Note:

1. All underlined is fixed bit;

2. The last one bytes is CRC check command.

CE Complies with applicable CE directives.

Manual subject to change without notice. Version 2.0