

EIS16C Operating Manual

Introduction

Thank you for choosing **EIS16C** infrared thermometer. The infrared thermometer can figure out surface temperature of an object through measuring infrared intensity emitted from the measured object without contacting the object. Main advantage of non-contact infrared thermometer is that it can make users conveniently and rapidly measure the inaccessible or moving object.

**EIS16C** infrared thermometer is the integrated infrared thermometer with the sensor, optical system and electronic circuit integrated in a metallic shell; **EIS16C** is easy in installation. The standard thread on the metal shell can be rapidly connected with the installation region; **EIS16C** also has various options (such as protective sleeve for

blowing, 90° adjustable mount support, three-dimensional adjustable mount support, digital display meter and more) to satisfy requirement in various working condition.

Physical description

- **Basic performance**  
Protection: IP65 (NEMA-4)  
Ambient temperature: 0 ~ 60℃  
Storage temperature: -20~80℃  
Relative humidity: 10~95% (without moisture condensation)  
Casing material: Stainless steel  
Cable length: 1.0m (standard), 1.2m, 1.5m and special specification (made-to-order)
- **Electric parameter**  
Operational Power Supply: 24VDC  
Linear output signal: 4~20mA

- **Measure parameter**  
Spectral range: 8~14um  
Temperature range: 0~500℃  
Optical resolution: 16:1  
Response time 300ms (95%)  
Emission rate: fixed at 0.95  
Temperature measurement accuracy: ±1.5℃ or ±1% of the measured value, whichever is greater (ambient temperature: 23℃±5℃)  
Repeatable accuracy: ±1℃ or ±0.5% of the measured value; taking the maximal value (ambient temperature: 23℃±5℃)



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Operating principle and points for attention

- **Infrared temperature measurement principle**

Infrared thermometer can directly measure the objective temperature without contacting the object. The operating principle is to figure out surface temperature of an object through measuring infrared intensity emitted from the measured object. Non-contact temperature measurement is the main advantage of the infrared thermometer. Users can conveniently and rapidly measure the inaccessible or moving object.

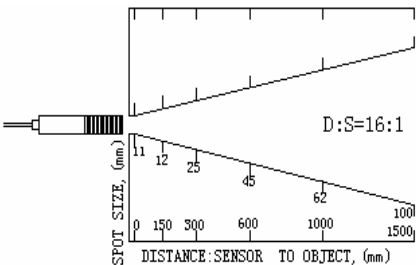
- **Installation distance and measurement dimension**

Precise optical lens and design of optical focus make diameter of the measured spot within 10mm when the thermometer is 160mm away. The spot size can increase with

the increase of distance, for example, spot diameter is 25mm when distance is 400mm. Ratio between the object distance and spot size is also known as optical resolution.

Optical resolution of **EIS16C** is 16:1; the related spot size can be approximatively figured out through 16:1 ratio between distance and spot size.

**For the detailed information, the attached optical pathway diagram can be referred.**



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- **Lens cleaning**

Lens of instrument must keep clean to avoid the measuring error and even damage of lens because of dust, smoke and other contaminants on lens. If there is dust on lens, clean the lens with the lens tissue dipped in absolute alcohol.

- **Electromagnetic interference**

In order to prevent the disturbance from electromagnetism, please guarantee the following measures:

Please try best to keep the infrared thermometer away from electromagnetic field source during installation (for example: electromotor, motor, high-power cable and more) add the metal sleeve if necessary.

Note: shield of sensing head must be properly earthed.

Installation

- **Mechanical installation**

**EIS16C** stainless steel shell with M18 \*1 screw thread can be directly installed and can also be installed through the mount support and adjustable mount support. The adjustable mount support can make regulation of the measuring head more convenient.

When the measured object and measuring head are being adjusted, make sure that the light path is not blocked.

- **Electrical installation wiring**

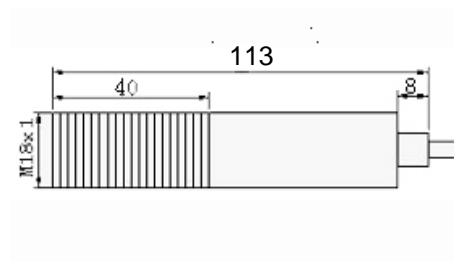
Red	24VDC Signal+
Blue	4~20mA Signal+

- **Output**

Output: 4~20mA linear signal, 0.032mA/°C

## External dimension and options

- **External dimension**



External dimensions of EIS16C

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## Maintenance

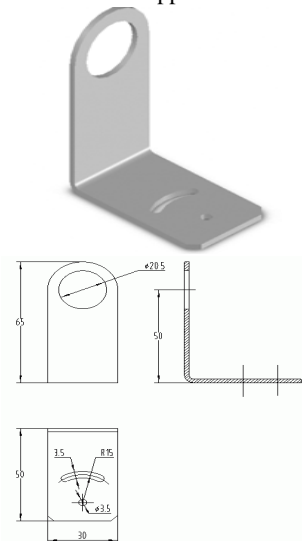
When you encounter any problem during operation of **EIS16C** infrared thermometer, please contact our service department. Our customer service personnel shall provide you with technical support on how to set infrared thermometer, calibration process as well as maintenance.

It is proved through experience that the aforesaid problems can be solved through telephone; please contact our customer service department before sending the instrument back.

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- **Option**

90°adjustable mount support



Dimension of 90° adjustable mount support

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## Warranty

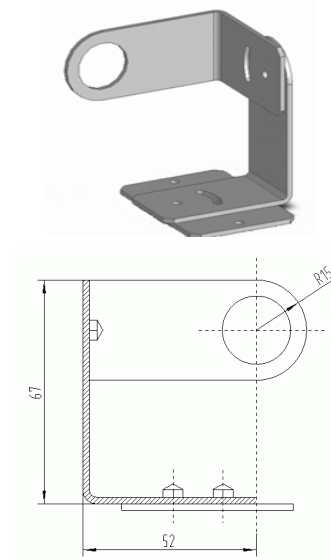
Each instrument has subjected to quality test process. Please contact service provider at once in case of any problem.

Warranty period is 12 months since the instrument left the factory. After expiry of warranty period, the manufacturer guarantees to maintain or replace component part within another 6 months. Disassembling the instrument at will or the damage caused by misoperation is not within the warranty range.

If there is problem on the instrument within warranty period, the instrument can be replaced, calibrated or repaired with the freight assumed by the shipper.

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Three-dimensional adjustable mount support



Dimension of three-dimensional adjustable mount support

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The manufacturer has a right to repair the instrument or replace the component parts. If fault of the instrument is caused by user's misoperation, the user must bear the maintenance cost. The user can enquire the maintenance cost in such a case.

### Remark

(Infrared thermometer here refers to online infrared temperature sensor.

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## Packing list

- **Standard fitting**

**EIS16C** infrared thermometer (including 1m cable), user manual.

Please check whether product package is damaged. Please notify the local agent at once in case of any damage. Please reserve the damaged package for inspection.

You can find the serial number on label of product. Please show the serial number when you contact the customer service department for maintaining and ordering fittings or maintenance.

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