RusAutomation

Dobeny

Produces Compilation

China·Dongben Measurement and Control Technology Co., Ltd.

Dobeny

Dongben Measurement and Control Technology Co.,LTD is committed to the infrared temperature measurement application technology development, promotion and development.

Our company manufactures and sells automation equipment, like Infrared temperature sensor , thermal imager, temperature-controlled meter ， pressure sensor...

At present our company specializes in managing infrared thermometers, which is widely used in modern industry, such as metallurgy, heat treatment, chemical industry, power,photovoltaic, cement, glass, refractory materials, crystal materials production and other industries.

Following the mission of "supplying our customers with the best"，we focus on the field of infrared temperature measurement and control and will wholeheartedly provide customers with high-quality products and professional services.

DOBENY

DOBENY

IRT-ST Series Infrared Temperature Sensor

IRT-ST500V

◆ **IRT-ST Series Infrared Temperature Sensor**

Product Brief

It is cost-effective, versatile, compact, easy to install, can adapt to a variety of working environments, and has excellent temperature measurement effects. It is an ideal choice for OEMs and end users.

Model number : IRT-ST500V

Measuring range : 0℃-500℃

D:S : 20:1

Measurement accuracy : ±1.5% or ±2.5℃

Spectrum range : 8-14μm

Repeated accuracy : ±1℃

Adapting time : 300ms (95%)

Emissivity : 0.95 or 1.0 fixed

◆ **Dimensions:**

M18×1

18MM

38MM

46MM

Protection class : IP64

Ambient temperature : 0℃-60℃

Storage temperature : -20℃-80℃

Relative humidity : 10%-95% (NO dews)

Operating power : 6-24V DC

Output signals : 0-5V

Parameters

Size : 46mm×Φ18mm (Length×Diameter)

Weight : 118g

Material : Stainless steel

Cable length : 2M and particular specifications (customized)

DOBENY

IRT-DT Series Infrared Temperature Sensor

◆ **IRT-DT Series Infrared Temperature Sensor**

IRT-DT

Product Brief

The IRT-DT series is specially designed for equip -ment with a temperature range of -20-800 ℃ (segmentable). There are special four-wire system, three-wire system and two-wire system integrated design, users can complete the switch without the help of any tools.

◆ **Dimensions**

Parameters

Model number : IRT-DT

Measuring range : -20℃-800℃

D:S : 20:1

Measurement accuracy : ±1.5% or ±2.5°C

Spectrum range : 8-14μm

Repeated accuracy : ±1°C

Adapting time : 300ms (95%)

Emissivity : 0.95 or 1.0 fixed
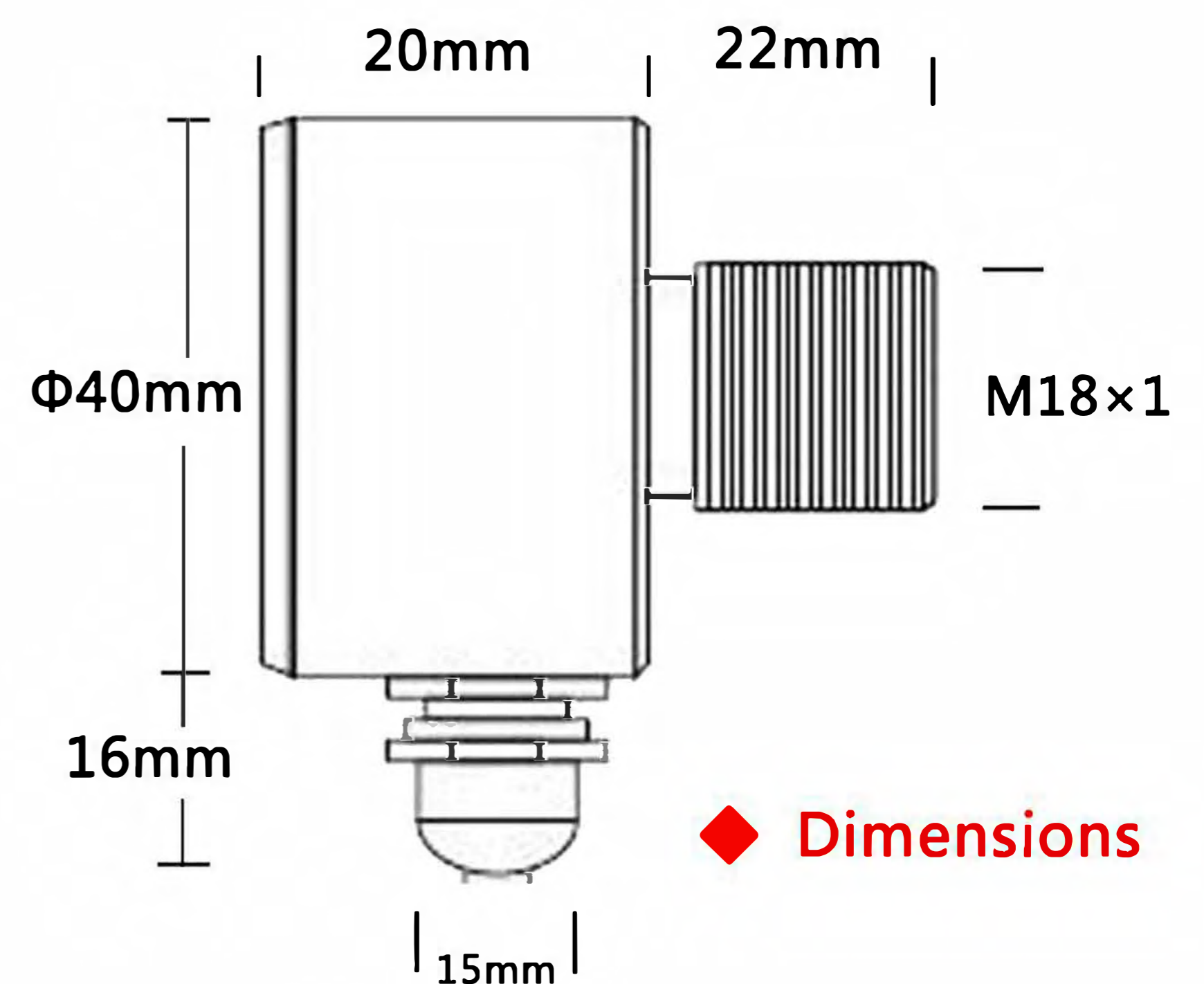
Protection class : IP64

Ambient temperature : 0℃-60℃

Storage temperature : -20℃-80℃

Relative humidity : 10%-95% (NO dews)

Operating power : 12-24V DC,20mA

Output signals : 4-20mA

Size : 42mm×Φ18mm (Length×Diameter)

Weight : 115g

Material : Aluminum alloy

Cable length : 2M and particular specifications (customized)

DOBENY

IRT-DTA Series Infrared Temperature Sensor

IRT-DTA
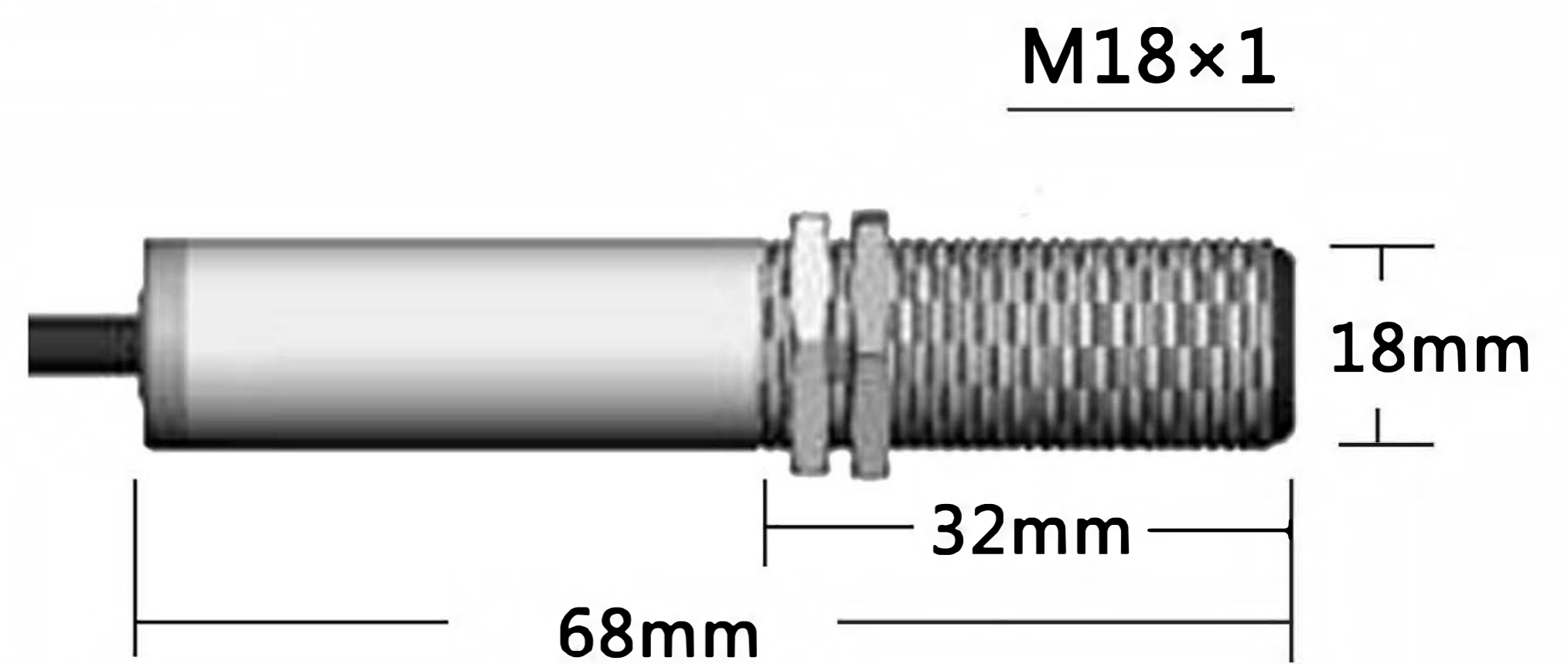
◆ **IRT-DTA Series Infrared Temperature Sensor**

Product Brief

The IRT-DTA series is specially designed for equip-ment with a temperature range of -20-1200 ℃ (segmentable). Adopt standard protective shell, resistant to dirt and durable.

◆ **Dimensions**

M18×1

18mm

32mm

68mm

Parameters

Model number : IRT-DTA

Measuring range : -20℃-1200℃

D:S : 20:1

Measurement accuracy : ±1.5% or ±2.5℃

Spectrum range : 8-14μm

Repeated accuracy : ±1℃

Adapting time : 300ms (95%)

Emissivity : 0.95 or 1.0 fixed

Protection class : IP64

Ambient temperature : 0℃-60℃

Storage temperature : -20℃-80℃

Relative humidity : 10%-95% (NO dews)

Operating power : 12-24V DC,20mA

Output signals : 4-20mA

Size : 68mm×Φ18mm (Length×Diameter)

Weight : 128g

Material : Stainless steel

Cable length : 2M and particular specifications (customized)

DOBENY

IRT-500RTU Infrared Temperature Sensor
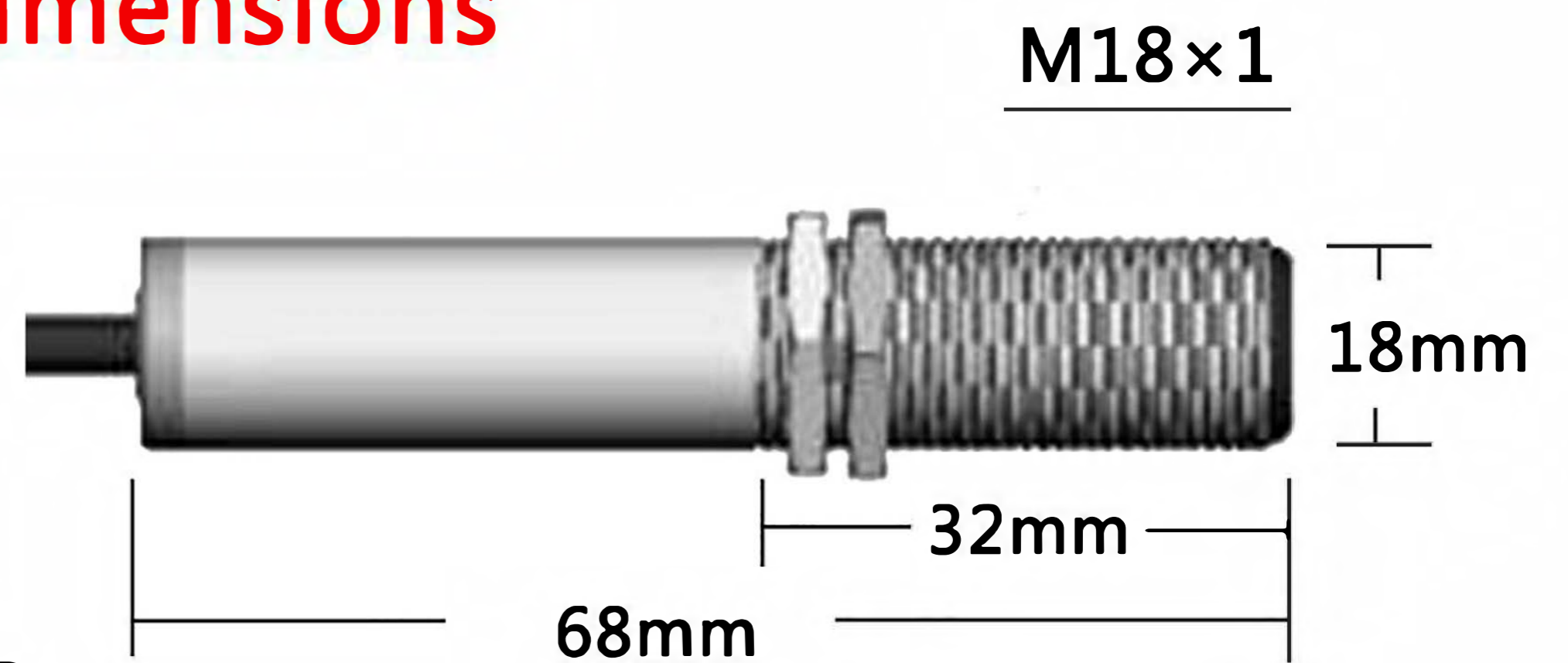
IRT-500RTU

◆ **IRT-500RTU Infrared Temperature Sensor**

Product Brief

IRT-500RTU infrared temperature sensor adopts standard 485 protocol communication, no need to connect 485 module。

◆ **Dimensions**

M18×1

18mm

32mm

68mm

Parameters

Model number : IRT-500RTU

Measuring range : 0℃-500℃

D:S : 20:1

Measurement accuracy : ±1.5% or ±2.5°C

Spectrum range : 8-14μm

Repeated accuracy : ±1℃

Adapting time : 300ms (95%)

Emissivity : 0.95 or 1.0 fixed

Protection class : IP64

Ambient temperature : 0℃-60℃

Storage temperature : -20℃-80℃

Relative humidity : 10%-95% (NO dews)

Operating power : 6-24V DC,20mA

Output signals : 485 signal (Modbur RTU/ASCII/fast hexadecimal and other protocols) and 0~5V output

Size : 68mm×Φ18mm (Length×Diameter)

Weight : 128g

Material : Stainless steel

Cable length : 2M and particular specifications (customized)

DOBENY

◆ **IRT-FS500A Waterproof Infrared Temperature Sensor**

IRT-FS500A

Product Brief

IRT-FS500A Series Waterproof Infrared Thermometer is specially designed for the site with waterproof requirements, such as humid environment, outdoor, etc.There are special four-wire system, three-wire system and two-wire system integrated design.

Model number : IRT-FS500A

Measuring range : 0℃-500℃ (standard range);
　　　　　　　　-20℃-1300℃ (selectable in sections)

D:S ： 25:1

Measurement accuracy : ±1% or ±1℃

Spectrum range : 8-14μm

Repeated accuracy : ±1℃

Adapting time : 300ms (95%)

Emissivity : 0.95 or 1.0 fixed

Protection class : IP68

Ambient temperature : 0℃-60℃

Storage temperature : -20℃-80℃

Relative humidity : 10%-95% (NO dews)

Operating power : 12-24V DC,20mA

Output signals : 4-20mA

Parameters

Size : 134mm×Φ18mm (Length×Diameter)

Weight : 268g

Material : Stainless steel

Cable length : 2M and particular specifications (customized)

DOBENY

IRT-FS500A
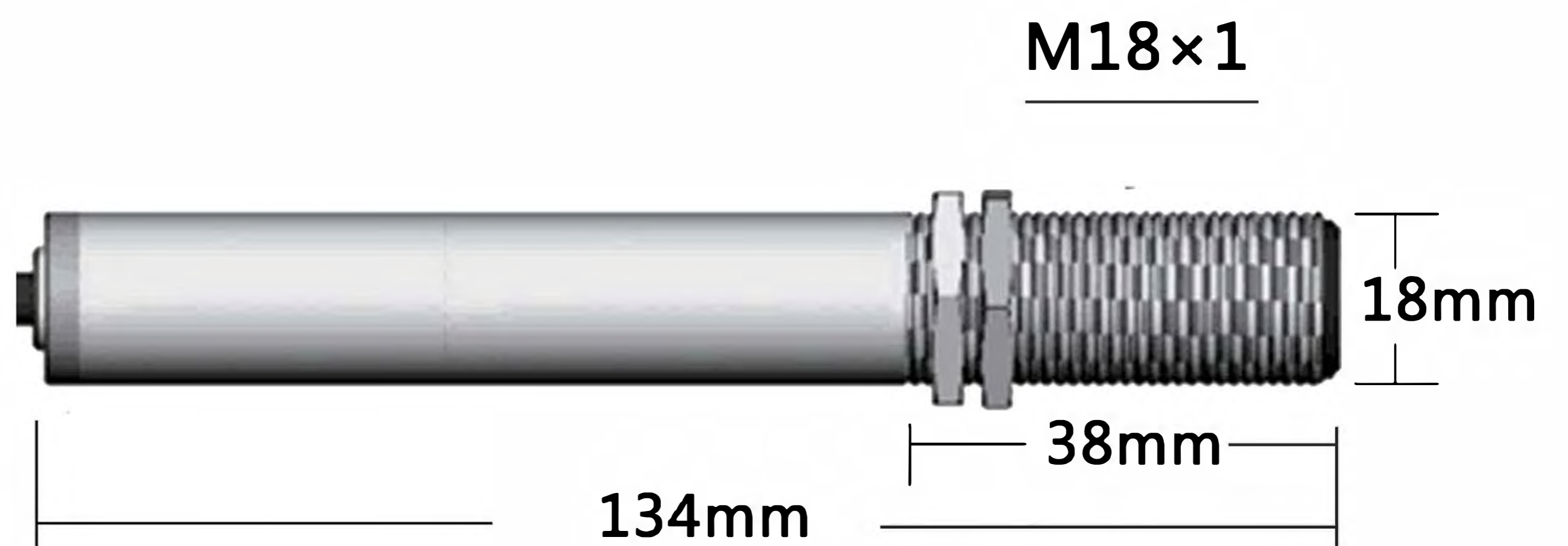
◆ **IRT-FS500A Waterproof Infrared Temperature Sensor**

◆ **Dimensions**

M18×1

18mm

38mm

134mm

Waterproof Housing

M5

Ø16mm

Ø22mm
M18×1

24mm

Product Bracket

26mm

46mm

46mm

Optional accessories

Cooling Protective Sleeve

211mm
193mm

60mm

65mm

The all-inclusive cooling protective sleeve can pass compressed air or water, and the front part contains a sweeper, which can effectively protect against heat radiation.

DOBENY

IRT-A/V Series Infrared Temperature Sensor

IRT-A/V

◆ **IRT-A/V Series Infrared Temperature Sensor**

Product Brief

IRT-A/V series infrared temperature sensors have industry standard output, which can be easily interfaced directly with all instruments, controllers, data loggers, computer boards and PLCs. You can select various temperature ranges from -60℃ to 1300℃, and various signal outputs (4-20mA, 0-5V, 0-10V, E, K, RS-485 or RS-232).

Model number : IRT-A/V

Measuring range : -60℃-1300℃ (selectable in sections)

D:S : 30:1(Customizable 4:1, 15:1, 25:1)

Measurement accuracy : ±1% or ±1℃

Spectrum range : 8-14μm

Repeated accuracy : ±1℃

Adapting time : 300ms (95%)

(Customizable 10ms, 50ms)

Emissivity : 0.95 or 1.0 fixed

Protection class : IP65(NEMA-4)

Ambient temperature : 0℃-60℃

Storage temperature : -20℃-80℃

Relative humidity : 10%-95% (NO dews)

Operating power : 24V DC,50mA

(Customizable 3.3V DC or 12V DC)

Output signals : 4-20mA/0-5V/0-10V/ E/ K/RS-485/RS-232

Parameters

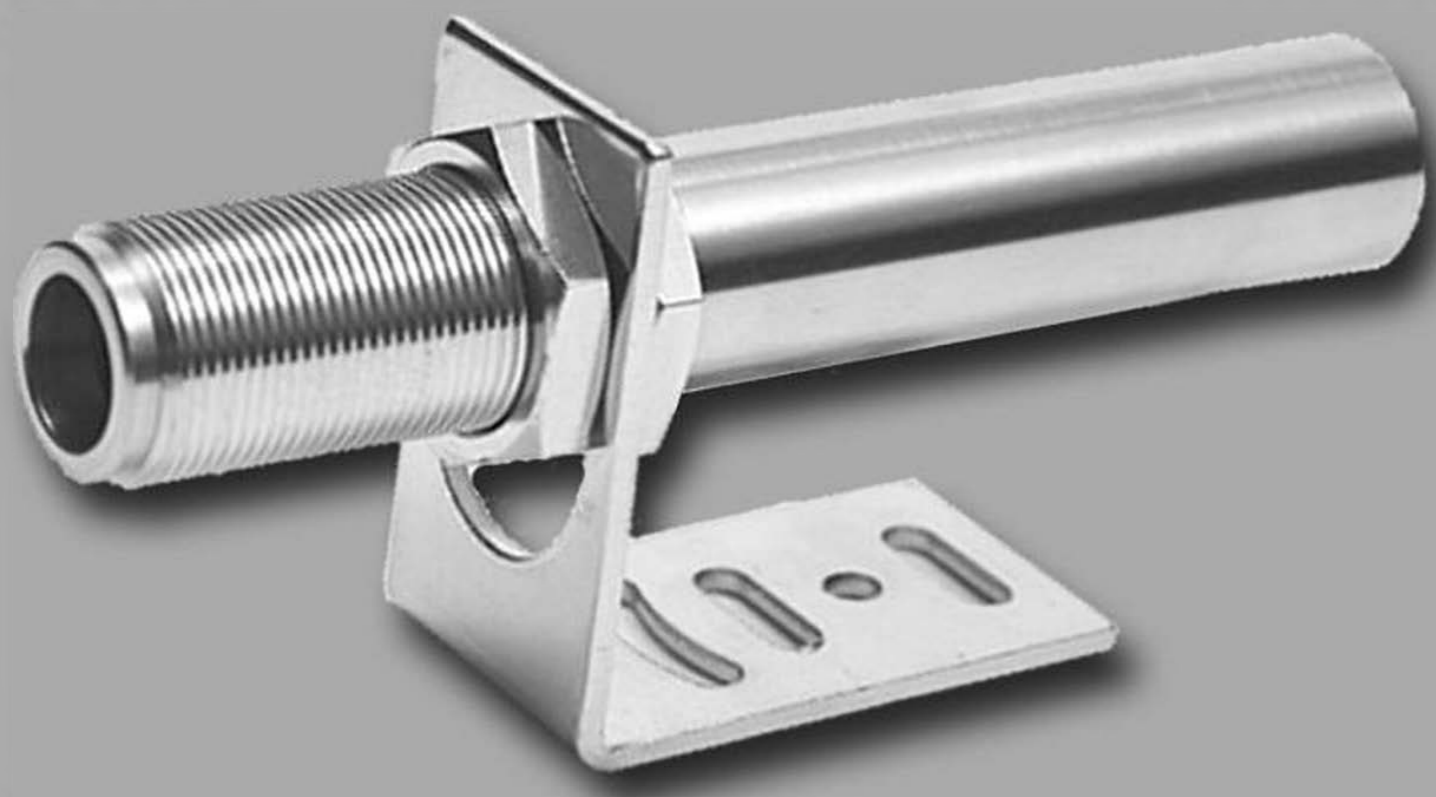Size : 106mm×Φ18mm (Length×Diameter)

Weight : 178g

Material : Stainless steel

Cable length : 2M and particular specifications (customized)

DOBENY

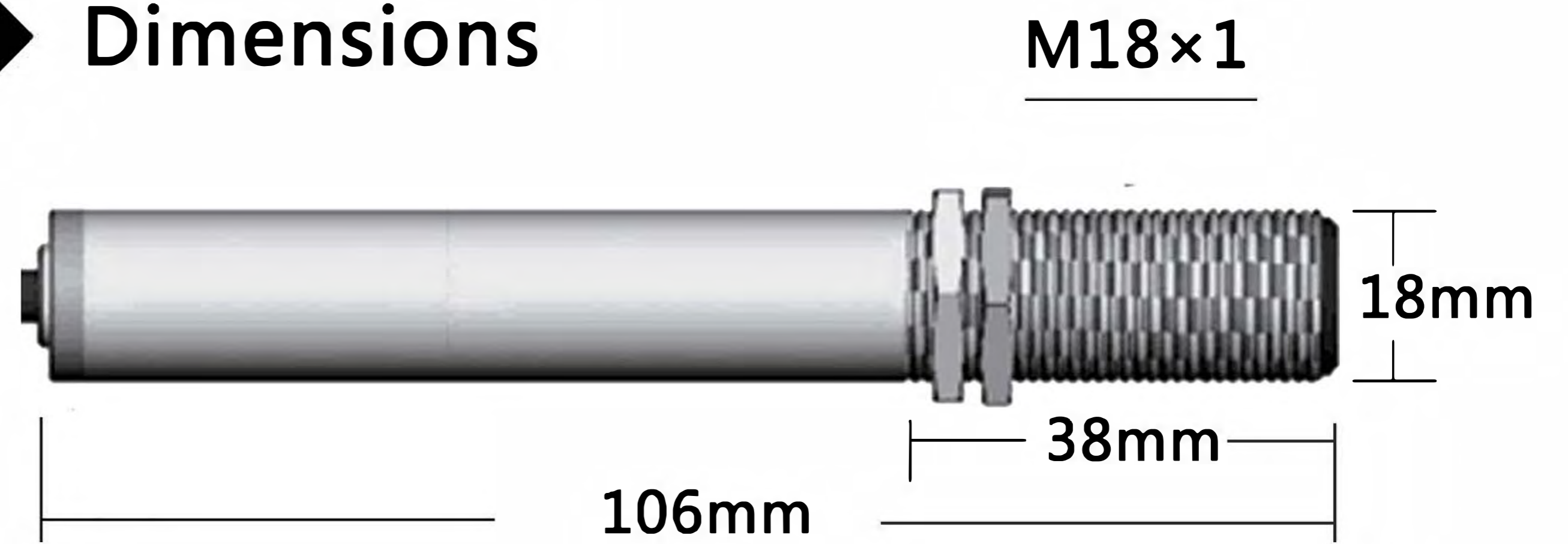## IRT-A/V Series Infrared Temperature Sensor

◆ **IRT-A/V Series Infrared Temperature Sensor**

IRT-A/V

◆ **Dimensions**

M18×1

18mm

38mm

106mm

0–50℃	0–700℃	–20–100℃
0–100℃	0–800℃	–20–200℃
0–200℃	0–900℃	–20–300℃
0–300℃	0–1000℃	–20–500℃
0–400℃	0–1100℃	–30–300℃
0–500℃	0–1200℃	–40–300℃
0–600℃	0–1300℃	–60–100℃
Selectable temperature segment		–60–200℃

DOBENY

IRT-LAS Series Infrared Temperature Sensor

◆ **IRT-LAS Series Infrared Temperature Sensor**

IRT-LAS

Double Laser Aiming Series

Product Brief

In addition to the various advantages of infrared temperature sensor, IRT-LAS series also has dual laser aiming function, which makes temperature measurement more vivid and accurate.IRT-LAS series also has the function of adjustable emissivity, which is more widely used than the sensors with fixed emissivity in the past.

Model number : IRT-LAS

Measuring range : 0℃-500℃

D:S ： 25:1

Measurement accuracy : ±1% or ±1°C

Spectrum range ： 8-14μm

Repeated accuracy : ±1°C

Adapting time : 300ms (95%)

Emissivity : 0.1-1.0 (adjustable)
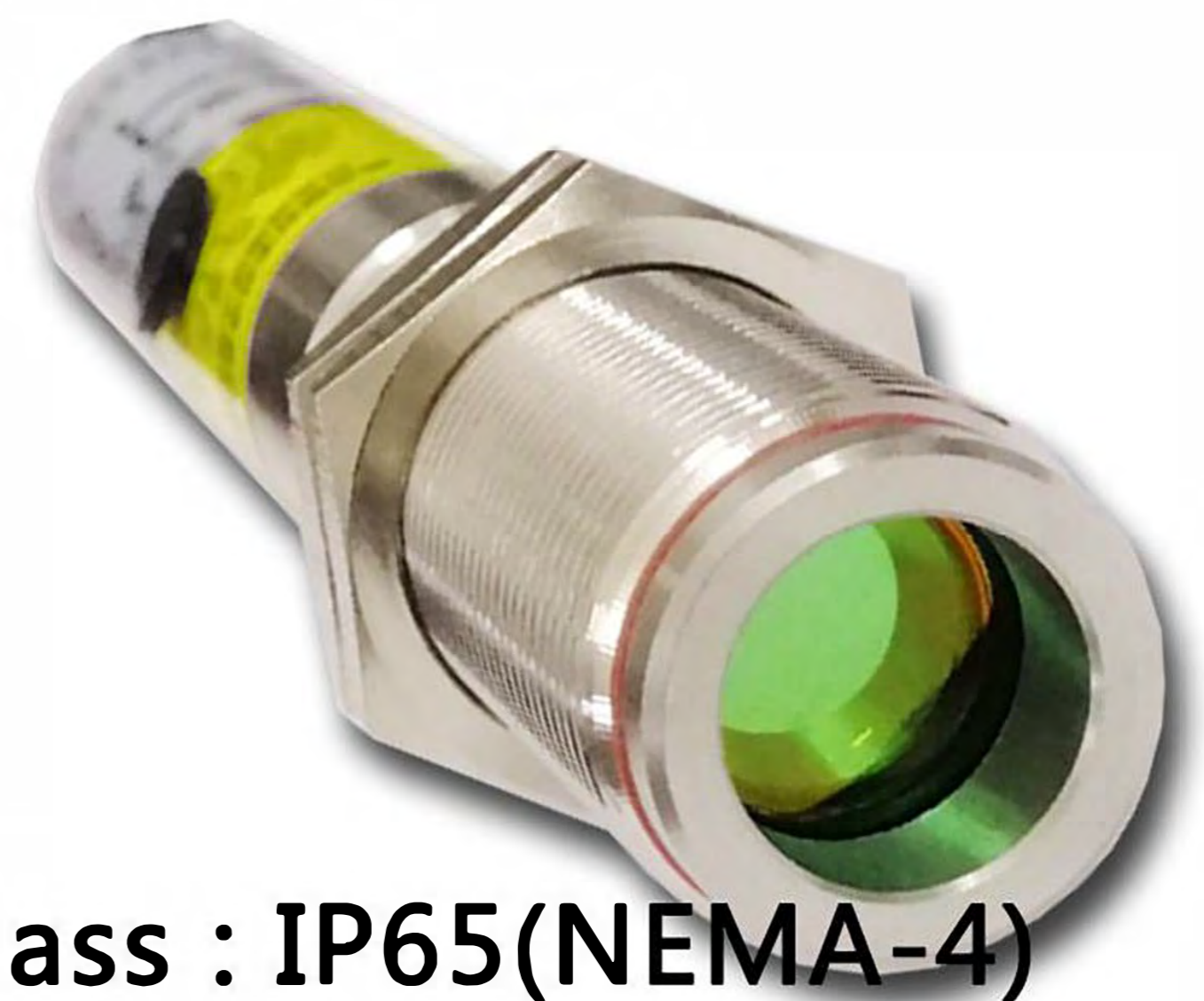
Protection class : IP65(NEMA-4)

Ambient temperature : 0℃-60℃

Storage temperature : -20℃-80℃

Relative humidity : 10%-95% (NO dews)

Aiming method: Green dual laser aiming

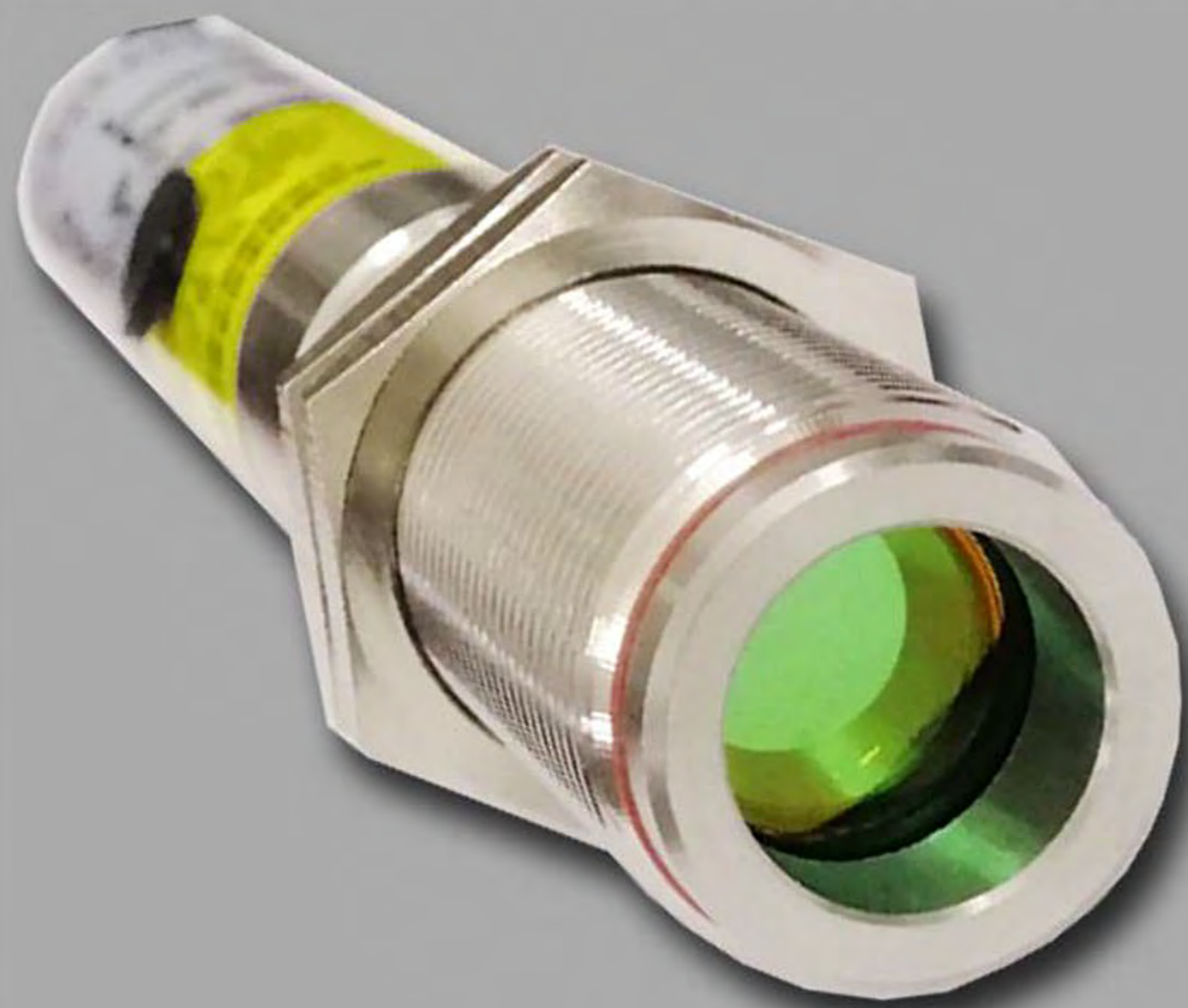Operating power : 24V DC,50mA

Output signals : 4-20mA

Parameters

Size : 106mm×Φ18mm (Length×Diameter)

Weight : 178g

Material : Stainless steel

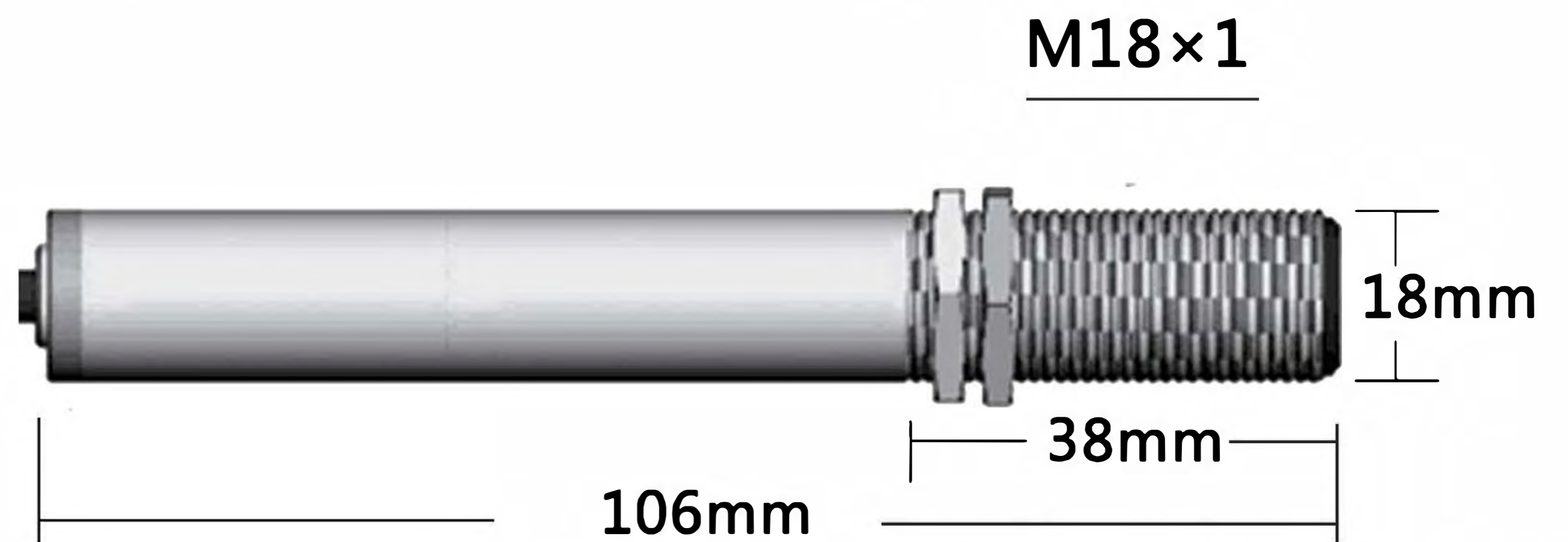Cable length : 2M and particular specifications (customized)
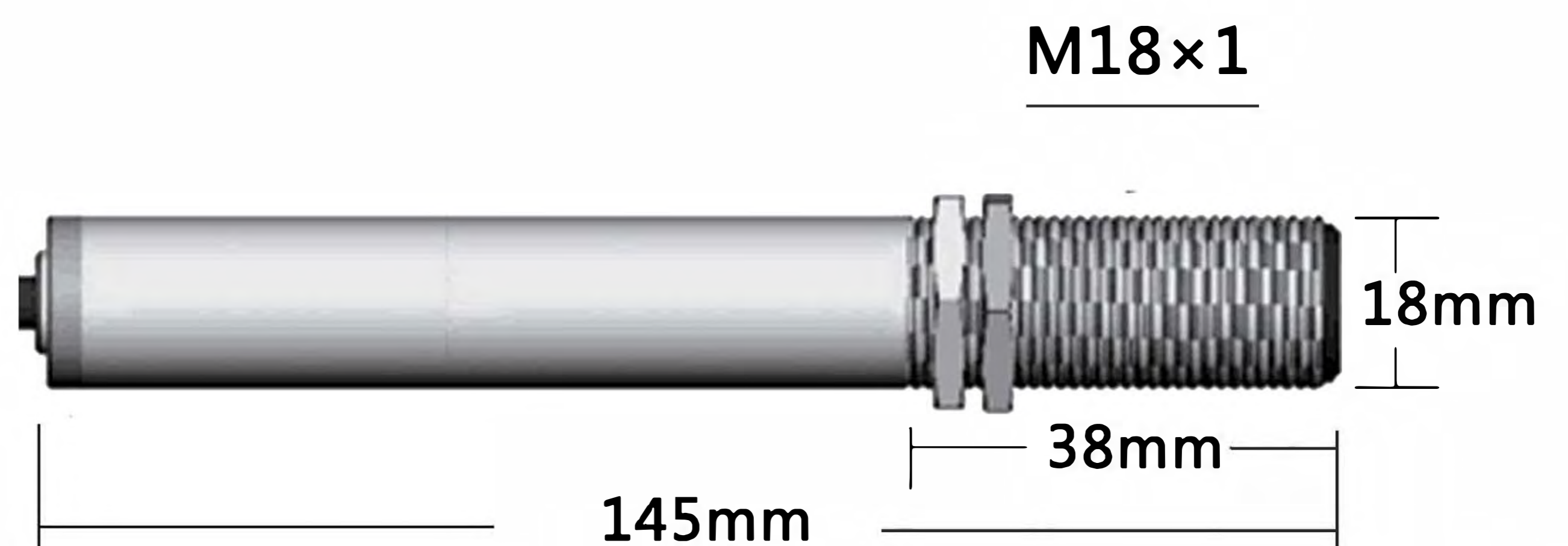
DOBENY

IRT-LAS Series Infrared Temperature Sensor

◆ **IRT-LAS Series Infrared Temperature Sensor**

IRT-LAS

M18×1

18mm

38mm

106mm

IRT-LAS low temperature section (0-500℃) size

M18×1

18mm

38mm

145mm

IRT-LAS high temperature section (350-2400℃) size

Related parameters of IRT-LAS series high temperature section products

Model number	IRT-LAS1200AH	IRT-LAS1700AH	IRT-LAS2000AH	IRT-LA2400AH
Measuring range	350-1200℃	700-1700℃	800-2000℃	1000-2400℃
Spectrum range	1.6μm	1.6μm	1.0μm	1.0μm

Remark: IRT-LAS series high temperature
section does not have adjustable emissivity.

DOBENY

IRT-MITC Series Infrared Temperature Sensor

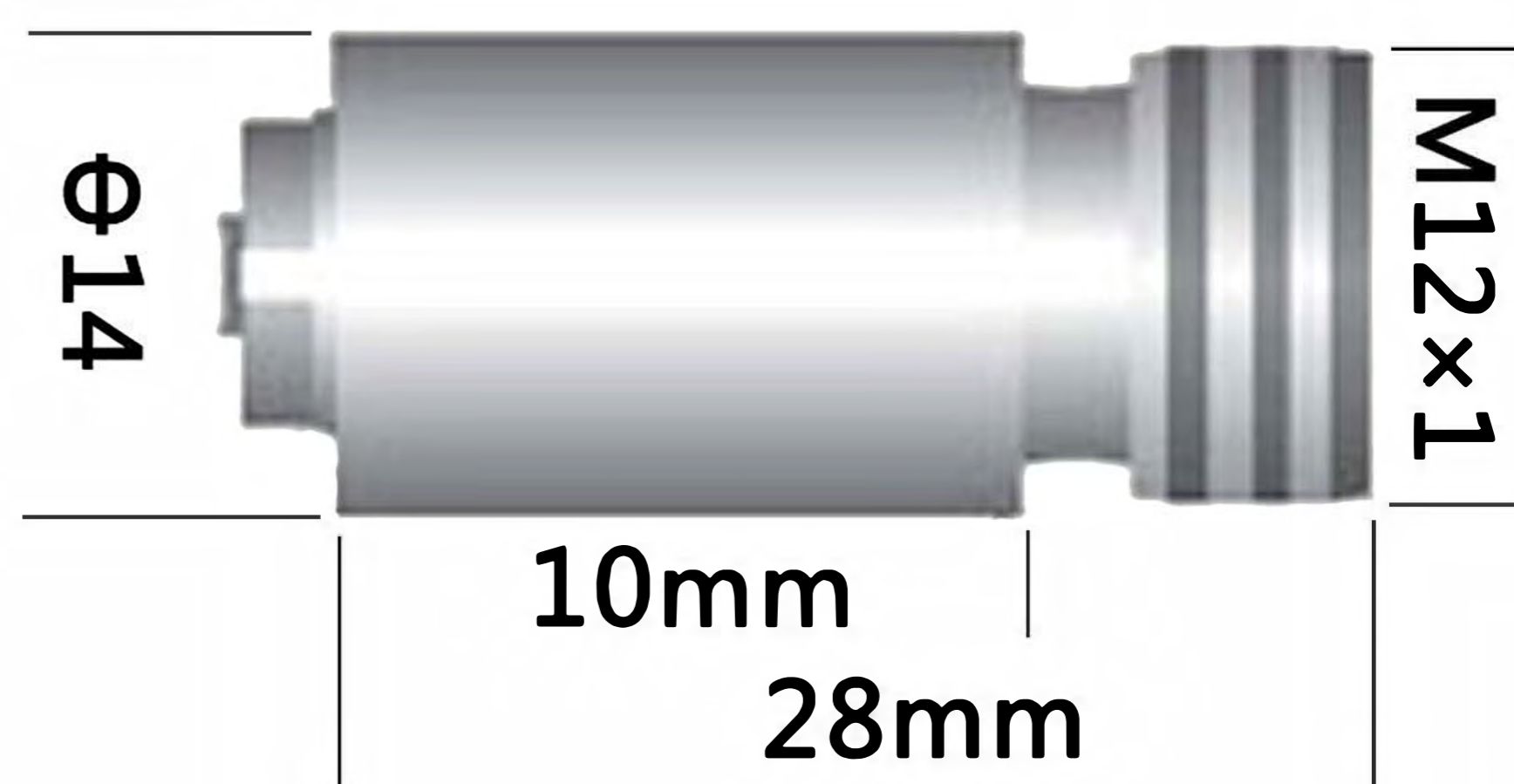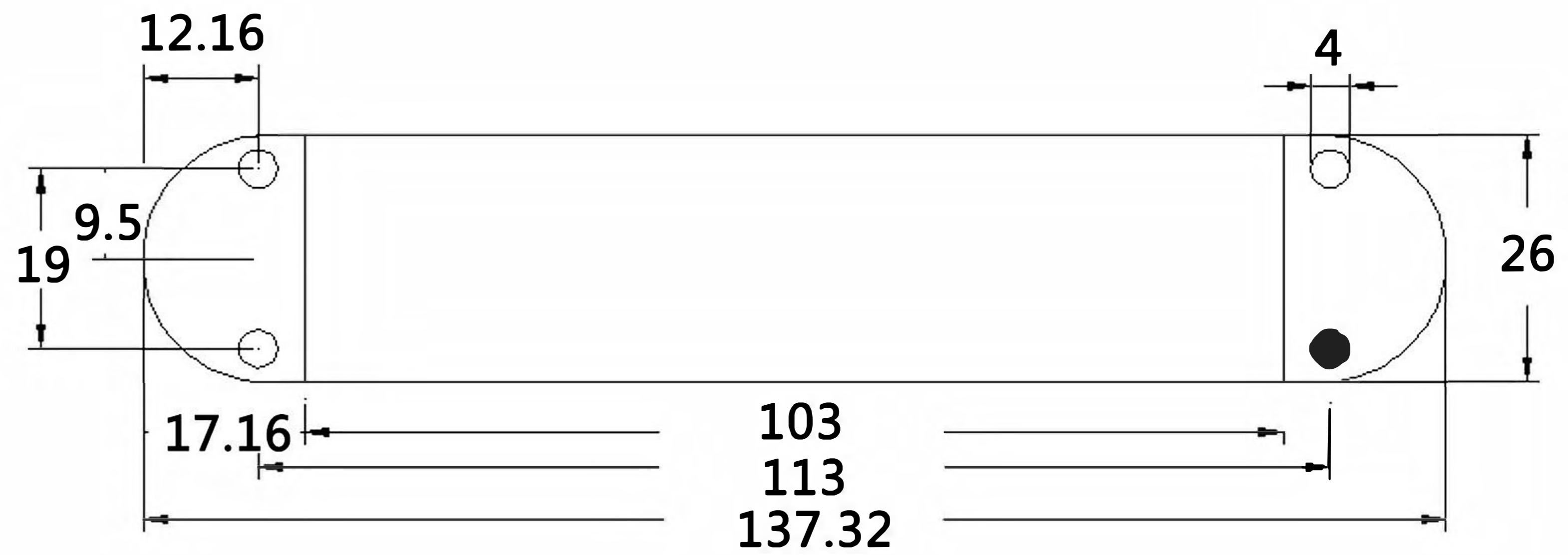◆ **IRT-MITC Series Infrared Temperature Sensor**

IRT-MITC

Split Type

Product Brief

IRT-MITC series products are split type infrared temperature sensors. The working environment temperature reaches 120℃, and has short circuit protection and reverse polarity protection.

Parameters

Model number : IRT-MITC

Measuring range : -60℃-1200℃

D:S : 20:1

Measurement accuracy : ±1% or ±2°C

Spectrum range : 8-14μm

Repeated accuracy : ±0.5°C

Adapting time : 75ms (95%)

Emissivity : 0.95

Φ14   M12×1

10mm

28mm

Protection class : IP65

Storage temperature : -20℃-80℃

Relative humidity : 10%-95% (NO dews)

Operating power : 24V DC,50mA

Output signals : 4-20mA

Weight : 48g

Material : Stainless steel

Ambient temperature of electronic box : 0℃-60℃

Sensor ambient temperature : 0℃-120℃
(Can be customized for low temperature resistance)

Sensor size : 28mm×Φ14mm (Length×Diameter)

Electronic box size : 130mm×26mm×26mm (L×W×H)

Cable length : 2M and particular specifications (customized)

DOBENY

◆ **IRT-MITC Series Infrared Temperature Sensor**

12.16 4

9.5

19 26

17.16

103
113
137.32

Electronic Box Size Chart
(Unit : mm)

IRT-MITC

Split Type

IRT-MITC series product model table		
Model number	IRT-MITC6020A	IRT-MITC4030A	IRT-MITC2050A
Measuring range	-60-200℃	-40-300℃	-20-500℃
Model number	IRT-MITC500A	IRT-MITC800A	IRT-MITC1200A
Measuring range	0-500℃	0-800℃	0-1200℃
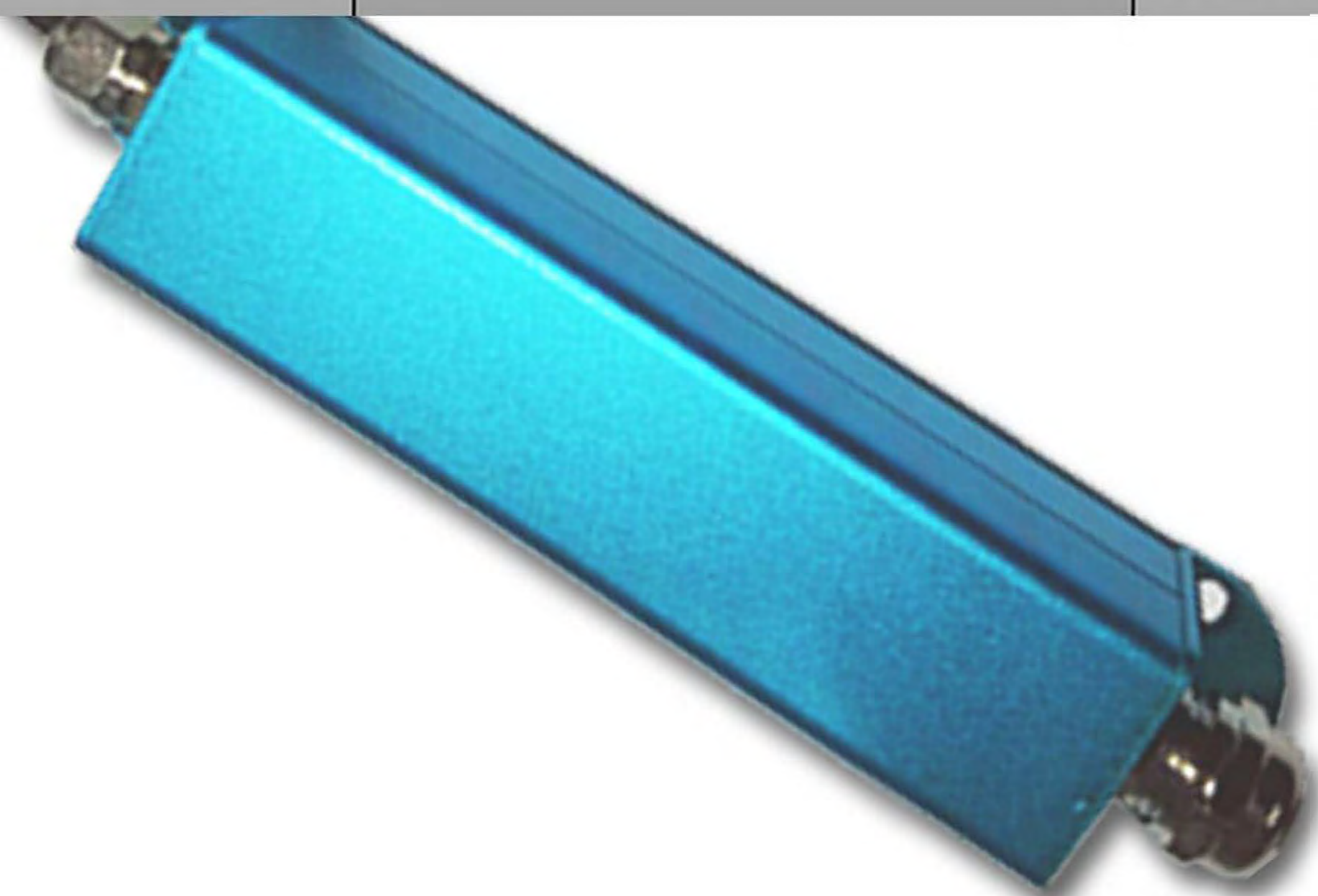
DOBENY

IRT-CF Series Infrared Temperature Sensor

◆ **IRT-CF Series Infrared Temperature Sensor**

IRT-CF

Laser Aiming

Product Brief

The IRT-CF series has an accurate laser aiming function, and the LCD displays the current status. It can easily align the measurement target and indicate the best measurement distance.

Model number : IRT-CF

Measuring range : 0℃-3000℃

D:S : 65:1/150:1

Measurement accuracy : ±0.5% or ±1℃

Spectrum range : 8-14μm/2.0-3.0μm/1.6μm/1.0μm

Repeated accuracy : ±1℃

Adapting time : 75/20/10/5ms (95%)

Emissivity : 0.1000-1.099

Parameters

Protection class : IP65(NEME-4)

Storage temperature : -20℃-80℃

Ambient temperature : 0℃-60℃

Relative humidity : 10%-95% (NO dews)

Operating power : 24V DC,100mA

Output signals : 4-20mA

Weight : 400g

Material : Stainless steel

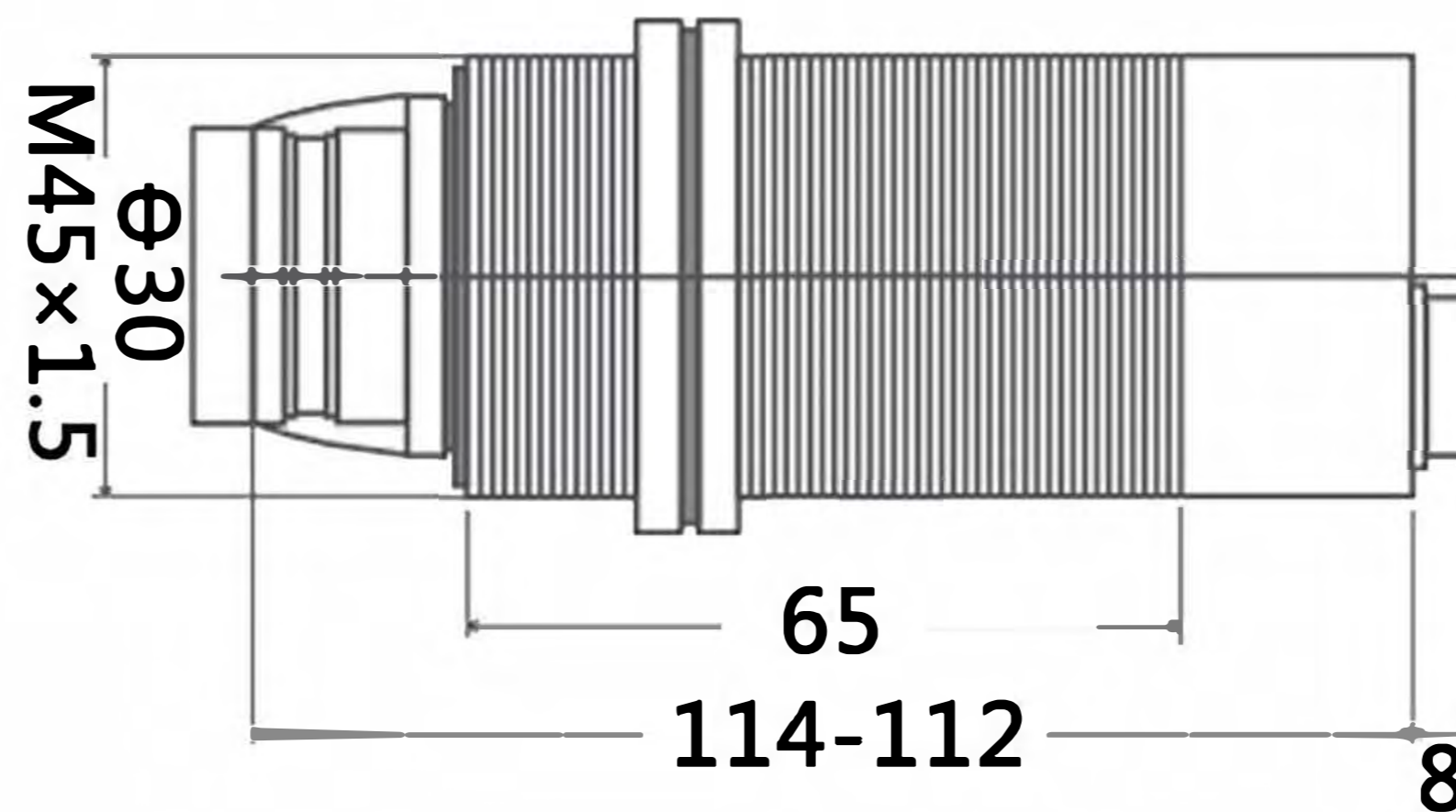Cable length : 2M and particular specifications (customized)
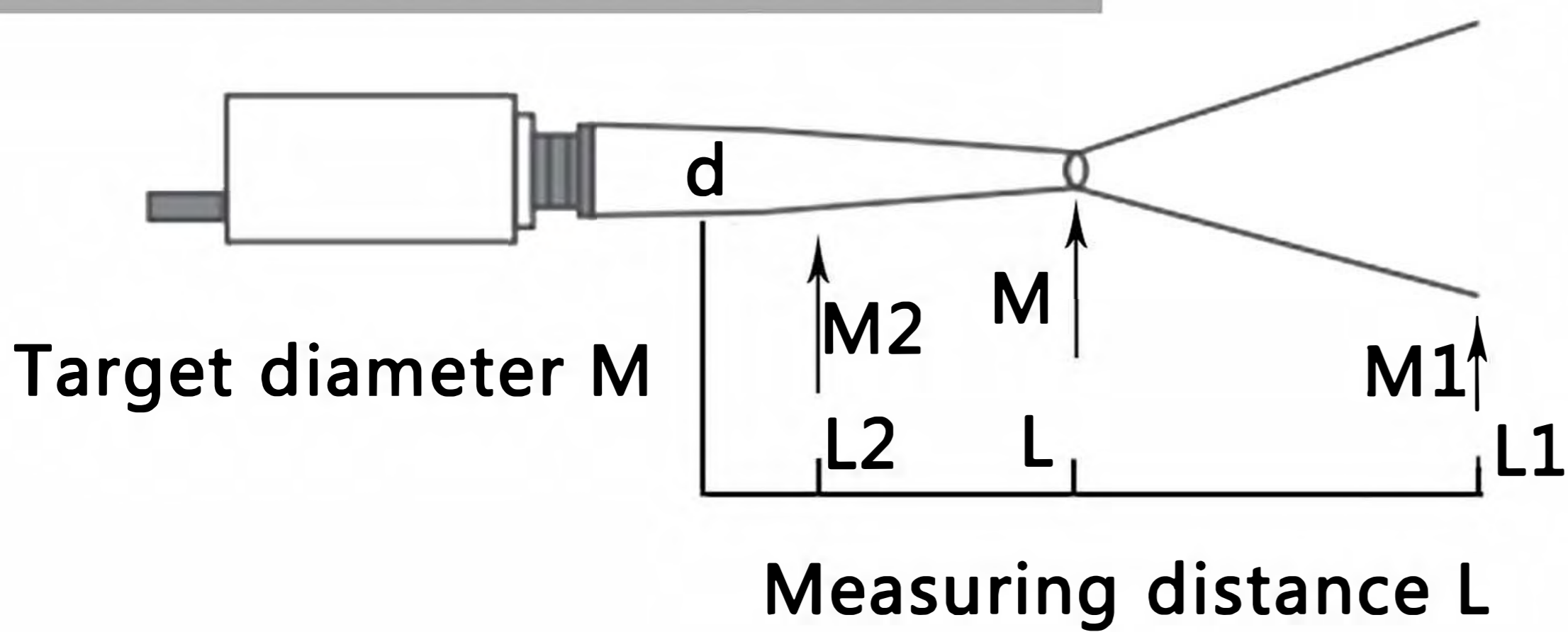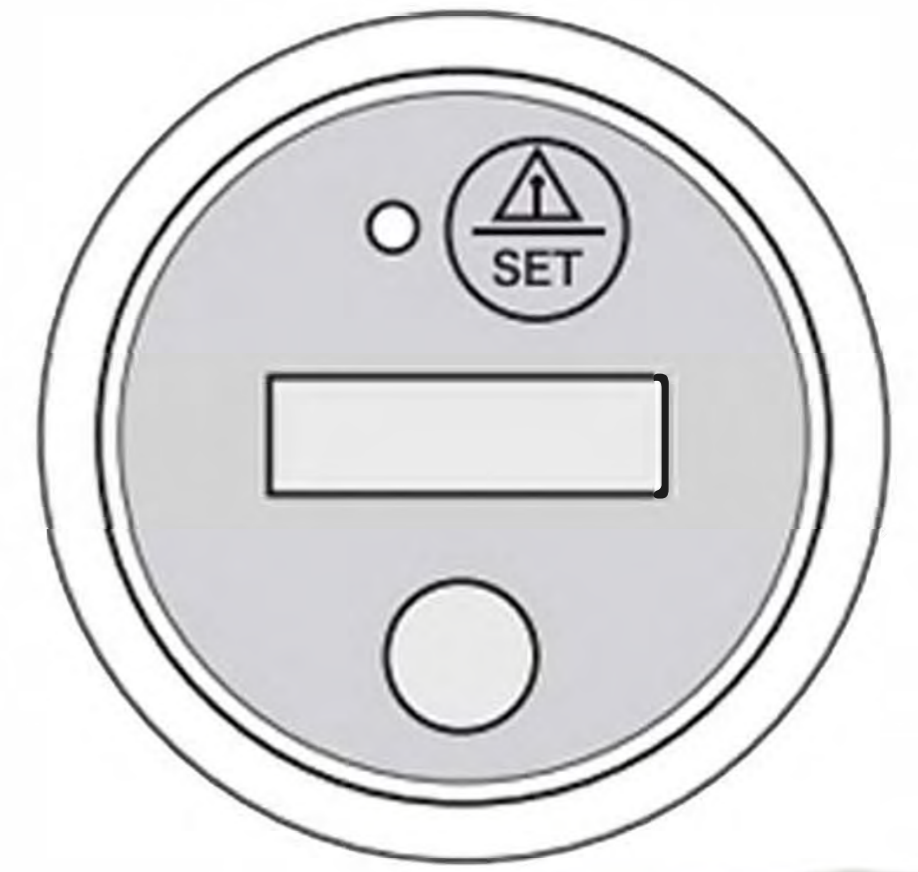
DOBENY

IRT-CF Series Infrared Temperature Sensor

IRT-CF

Laser Aiming

◆ **IRT-CF Series Infrared Temperature Sensor**

◆ **Dimensions**

Φ30
M45×1.5

65
114-112
8

Unit : mm

SET

Target diameter M

d
M2 M
M1
L2 L L1

Measuring distance L

d (20mm): Effective caliber
L: Factory calibration distance
M: Factory calibration photoelectric size
When the installation distance>L: $M1=(L1/L)(M+d)-d$
When the installation distance <L: $M2=(L2/L)(M-d)+d$

IRT-CF series product model table

Model number	Measuring range	Spectrum range	D:S	Adapting time	Focal length
IRT-CFL500AD	0-500℃	8-14μm	65:1	≤75ms(95%)	95@1.5mm
IRT-CF300AD	50-300℃	2.0-3.0μm	65:1	≤20ms(95%)	95@1.5mm
IRT-CF400AD	70-400℃	2.0-3.0μm	150:1	≤10ms(95%)	300@2mm
IRT-CF500AD	100-500℃	2.0-3.0μm	150:1	≤10ms(95%)	300@2mm
IRT-CF1400AD	300-1400℃	1.6μm	150:1	≤5ms(95%)	300@2mm
IRT-CF2000AD	600-2000℃	1.0μm	150:1	≤5ms(95%)	300@2mm
IRT-CF2400AD	1000-2400℃	1.0μm	150:1	≤5ms(95%)	300@2mm
IRT-CF3000AD	1200-3000℃	1.0μm	150:1	≤5ms(95%)	300@2mm

DOBENY

IRT-GW
Laser Aiming

◆ **IRT-GW Series Infrared Temperature Sensor**

Product Brief

IRT-GW series infrared laser aiming sensors can measure small objects more accurately, and the focus point can measure objects with a diameter of 0.5mm.

The parameters of IRT-GW series products are basically the same as those of IRT-CF series products. Please refer to the selection table for different places.

IRT-GW series product model table

Model number	Measuring range	Spectrum range	D:S	Adapting time	Focal length
IRT-GW300AD	50-300℃	2.0-3.0μm	65:1	≤20ms(95%)	30-35@0.5mm
IRT-GW400AD	70-400℃	2.0-3.0μm	150:1	≤10ms(95%)	70-80@0.5mm
IRT-GW500AD	100-500℃	2.0-3.0μm	150:1	≤10ms(95%)	70-80@0.5mm
IRT-GW1400AD	300-1400℃	1.6μm	150:1	≤5ms(95%)	70-80@0.5mm
IRT-GW2000AD	600-2000℃	1.0μm	150:1	≤5ms(95%)	70-80@0.5mm
IRT-GW2400AD	1000-2400℃	1.0μm	150:1	≤5ms(95%)	70-80@0.5mm
IRT-GW3000AD	1200-3000℃	1.0μm	150:1	≤5ms(95%)	70-80@0.5mm
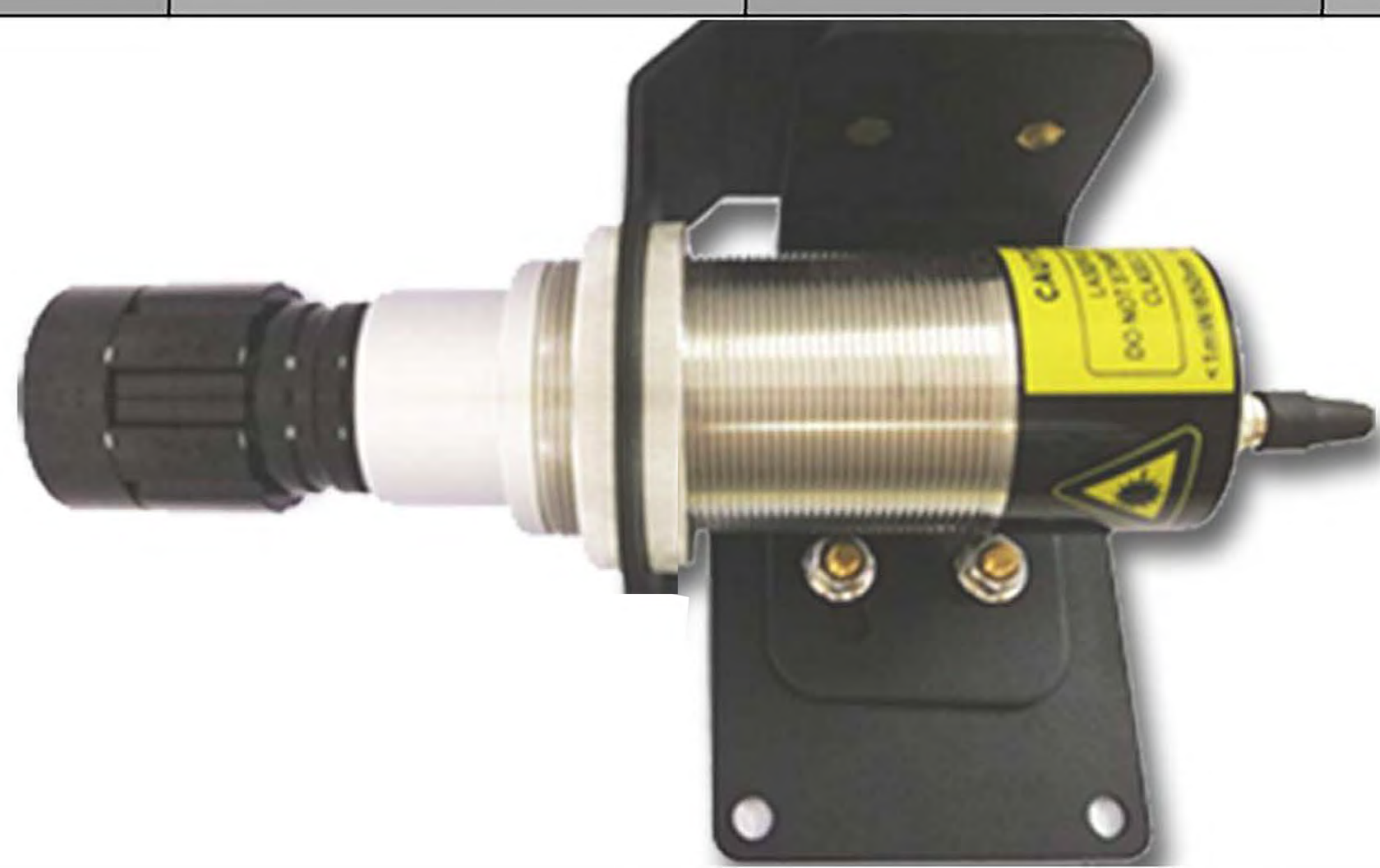
DOBENY

◆ **Explosion-proof Series Infrared Temperature Sensor**

Parameters

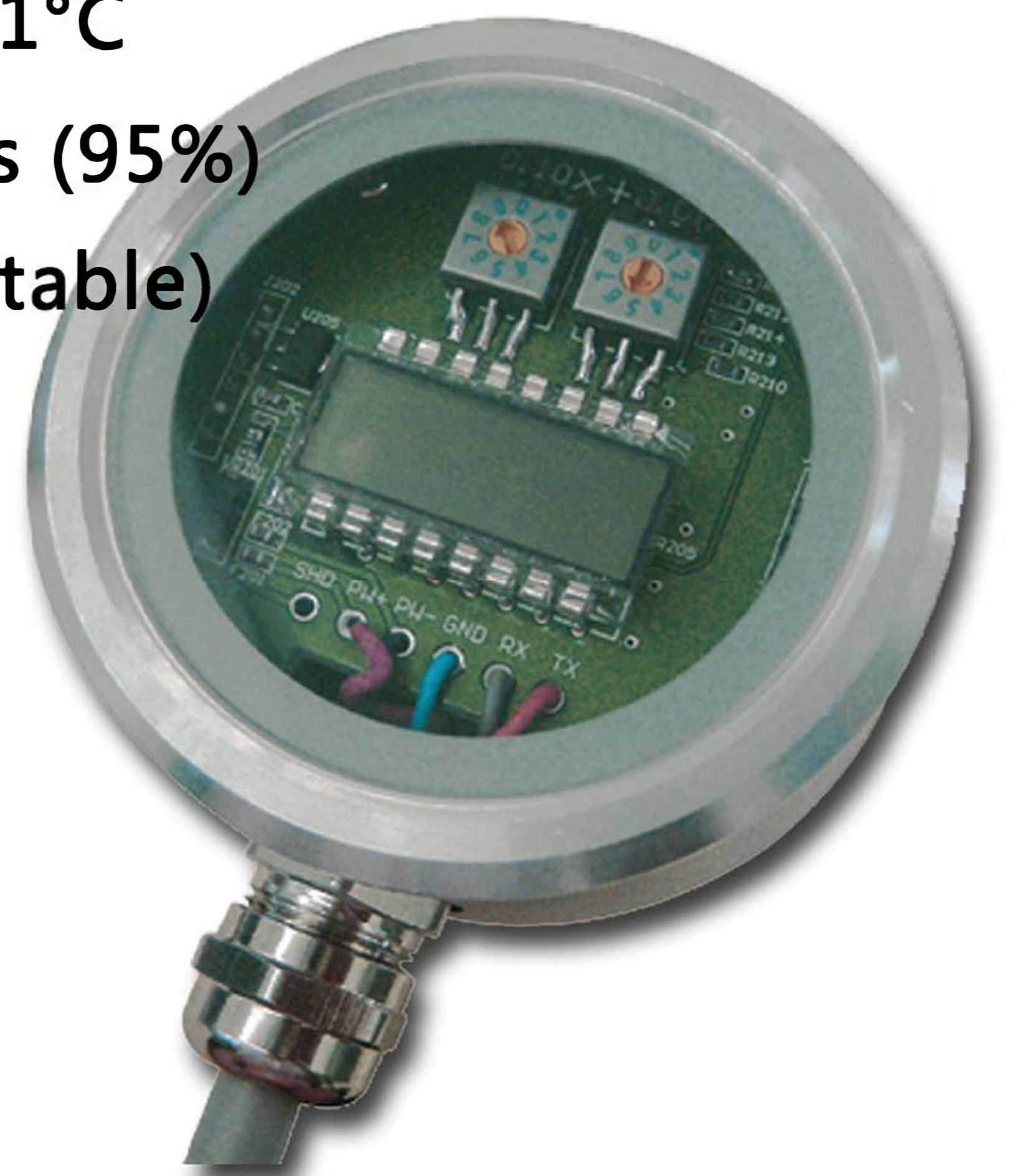Model number : IRT-FB500T

Measuring range : 0℃-500℃

D:S : 20:1

Measurement accuracy : ±1% or ±1.5°C

Spectrum range : 8-14μm

Repeated accuracy : ±1°C

Adapting time : 500ms (95%)

Emissivity : 0.95(Adjustable)

IRT-FB

Explosion-proof Series

Protection class : IP65(NEME-4)

Storage temperature : -20℃-80℃

Ambient temperature : 0℃-60℃

Relative humidity : 10%-95% (NO dews)

Operating power : 24V DC

Output signals : 4-20mA

Cable length : 1.8M and particular specifications (customized)

Product Brief

◆ **Explosion-proof mark: Ex iaⅡCT4 Ga**

Explosion-proof series IRT-FB500T infrared thermometer must be combined with an isolated safety barrier that has passed the explosion-proof certification to form an intrinsically safe explosion-proof system before it can be used in hazardous locations where explosive gas mixtures exist on site. The system wiring must comply with this product and all The instructions for use with isolated safety barriers require that the wiring terminals are not connected incorrectly.

DOBENY

◆ **Explosion-proof Series Infrared Temperature Sensor**

Parameters

IRT-CFEx

Explosion-proof Series

Model number : IRT-CFEx

Measuring range : 300℃-2400℃

D:S : 100:1/150:1

Measurement accuracy : ±1.5% or ±2°C

Spectrum range : 1.0/1.7/0.9-1.7μm

Repeated accuracy : ±1°C/±2°C

Adapting time : ≤5ms (95%)

Emissivity : 0.100-1.099

Weight : ≤5.5KG

Protection class : IP66

Storage temperature : -20℃-80℃

Ambient temperature : 0℃-60℃

Relative humidity : 10%-95% (NO dews)

Operating power : 24V DC , 100mA

Output signals : 4-20mA/485

Cable length : 1.8M and particular specifications (customized)

380mm

140mm

◆ **Explosion-proof mark: ExdIIBT6/ExdIICT6**

Product Brief

Explosion-proof special infrared thermometer is specially designed for industries requiring explosion-proof, with precise laser aiming function, LCD displays the current status, can easily align the measurement target and indicate the best measurement distance.The detection target will not affect the temperature measurement result even if the detection signal is attenuated by 95% in environments such as water vapor, dust, target size change, partial blockage, and emissivity change. The software and hardware design is suitable for the processing of hundreds of thousands of times of signal, and can meet the user's requirements for instrument accuracy and repeatability.

DOBENY

IRT-FO Series Infrared Temeperature Sensor

◆ **IRT-FO Series Infrared Temperature Sensor**
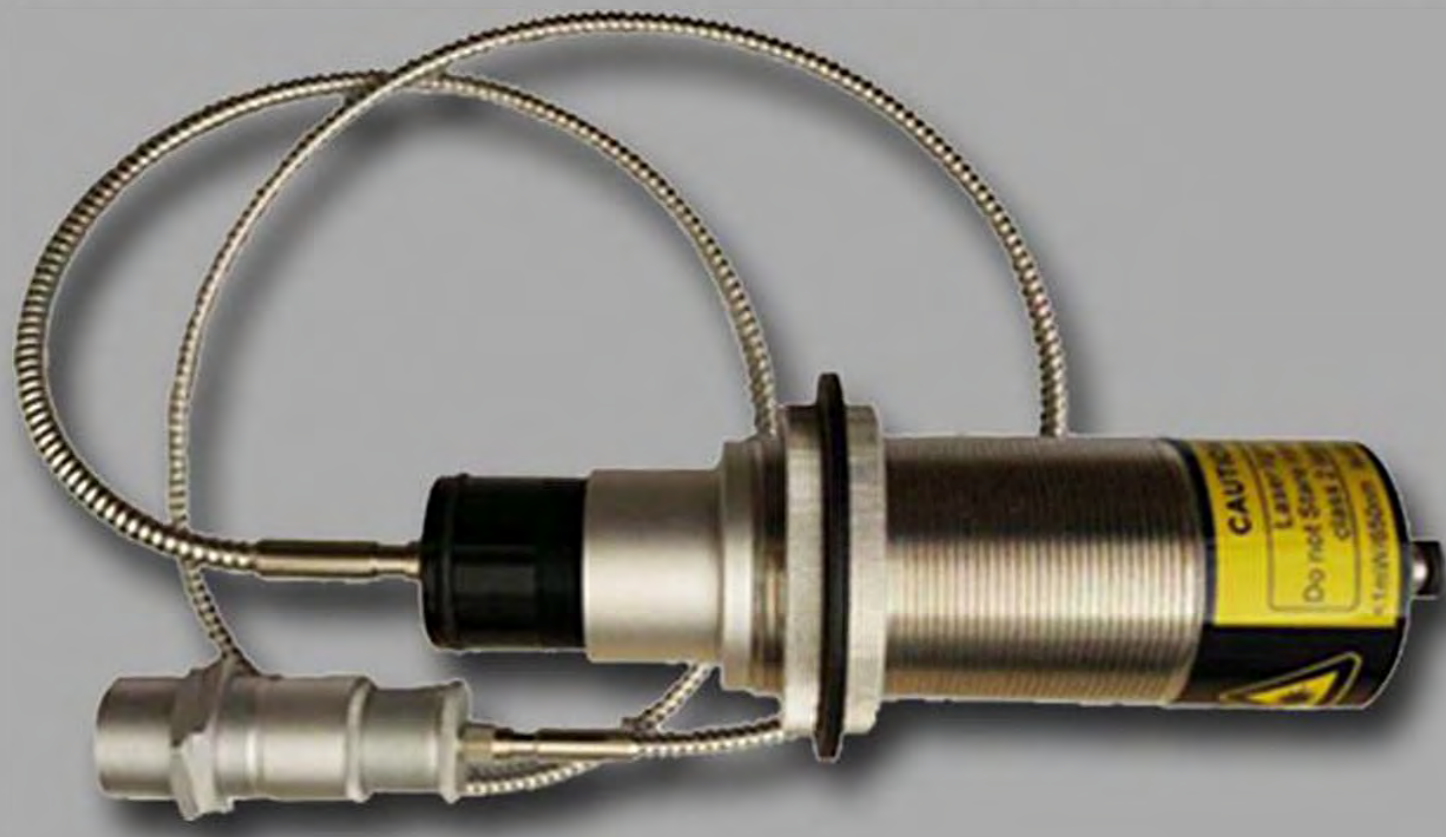
IRT-FO
Fiber optic

Product Brief

IRT-FO series optical fiber monochromatic thermometer has a sturdy shape, adopts stainless steel lens (with purge function), aluminum die-casting shell, protection level is IP54.It consists of lens, optical fiber and processing components. The fiber and lens assembly can withstand a high temperature of 250°C without additional cooling.

Model number : IRT-FO

Measuring range : 120°C-2000°C (selectable in sections)

D:S ： 100:1/150:1

Measurement accuracy : ±1%

Spectrum range ： 2.0-3.0/1.6/1.0μm

Repeated accuracy : ±1°C

Adapting time : ≤5ms (95%)

Emissivity : 0.95 or 1.0 fixed

Protection class : IP54
Storage temperature : -20°C-80°C
Relative humidity : 10%-95% (NO dews)
Operating power : 12-24V DC, 20mA
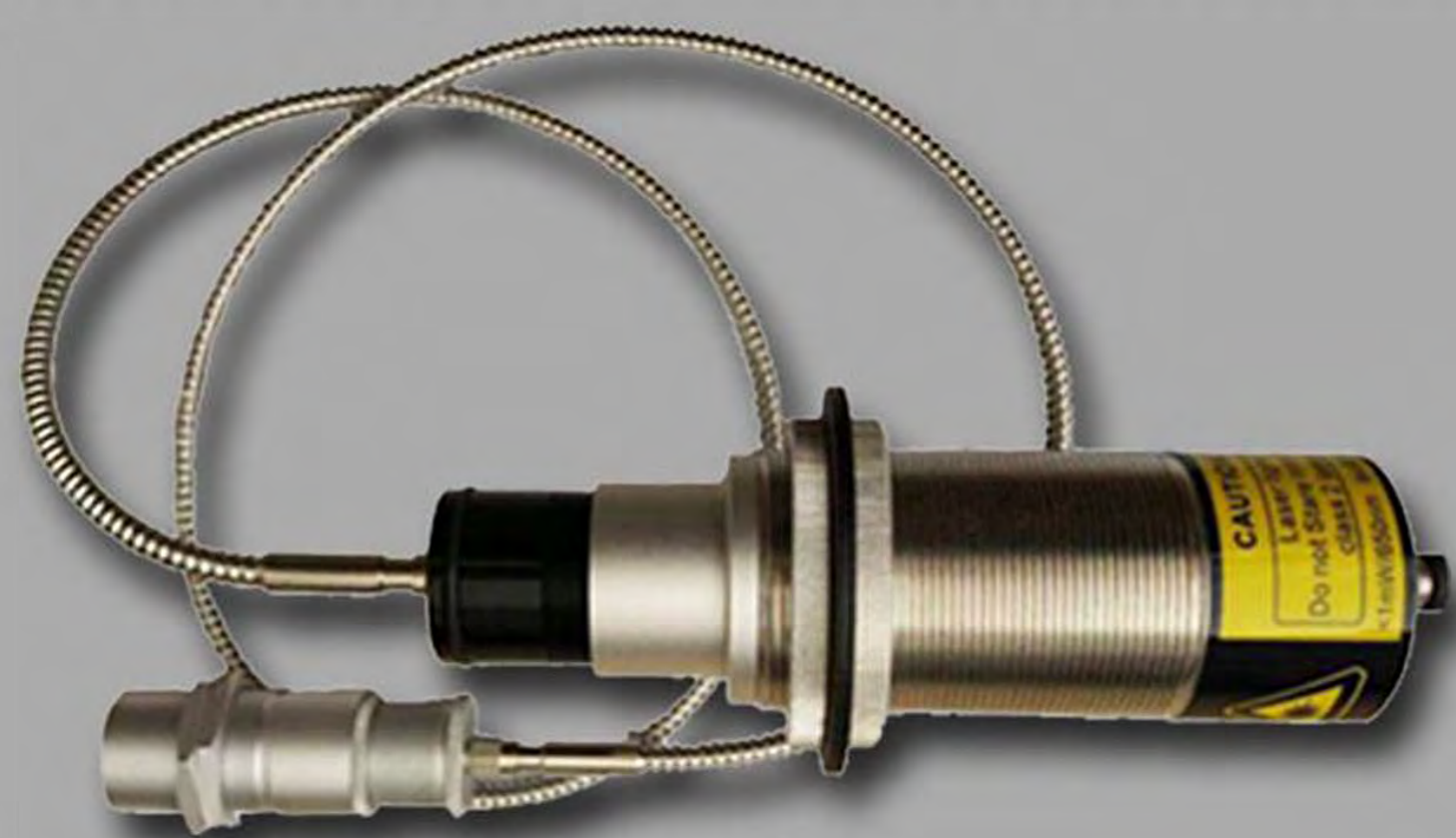Output signals : 4-20mA

Parameters

Operating environment:
Thermometer:Without water cooling -30°C-+55°C
　　　　　　　With water cooling: -30°C-+120°C
Lens and optical fiber: -30°C-+180°C

DOBENY

IRT-FO

Fiber optic

◆ **IRT-FO Series Infrared Temperature Sensor**

Product Brief

The IS-FO series infrared temperature sensor is not only suitable for temperature measurement in general industrial occasions, but also suitable for installation in places with strong electromagnetic interference and high ambient temperature. IS-FO uses laser aiming to clearly show the location and size of the target being measured. IS-FO adopts hardware and software watchdog, hardware EMI filtering and other designs to improve system stability and resist 2500VDC burst interference. Support up to 26 thermometers bus cascade, realize network control through PC.

IRT-FO series product model table

Model number	Measuring range	Spectrum range	D:S
IRT-FO600AD	120-600℃	2.0-3.0μm	100:1
IRT-FO1400AD	400-1400℃	1.6μm	100:1
IRT-FO1600AD	600-1600℃	1.6μm	150:1
IRT-FO2000AD	800-2000℃	1.0μm	150:1

DOBENY

Thermocouple Thermal Resistance

◆ **Thermocouple Thermal Resistance Series**

A thermocouple is a temperature measuring device that consists of two different conductors that contact each other at one or more points. When the temperature of one of the points is different from the reference temperature of other parts of the circuit, it will generatea voltage.

Thermocouples are a widely used type of temperature sensor for measurement and control, and can also convert temperature gradients into electrical energy.

Commercial thermocouples are cheap, interchangeable, and equipped with standard connectors to measure various temperatures. Compared with most other temperature measurement methods, thermocouples are self-powered and do not require external excitation.

Recommended Selection Of Thermocouple Thermal Resistance Series

Choose according to the temperature measurement range: thermocouple is suitable for above 500 ℃; thermal resistance is below 500 ℃.

Choose according to measurement accuracy: thermocouple is suitable for ordinary measurement accuracy; thermal resistance is suitable for high measurement accuracy.
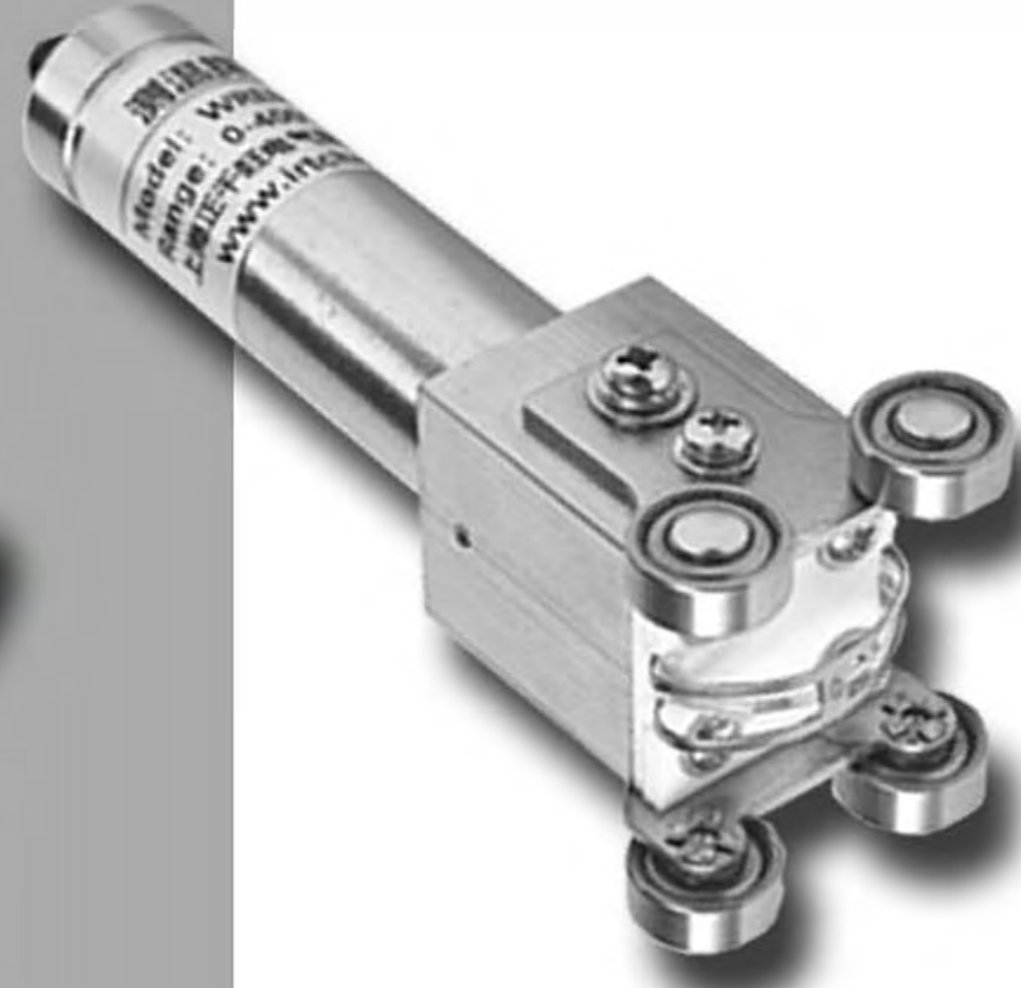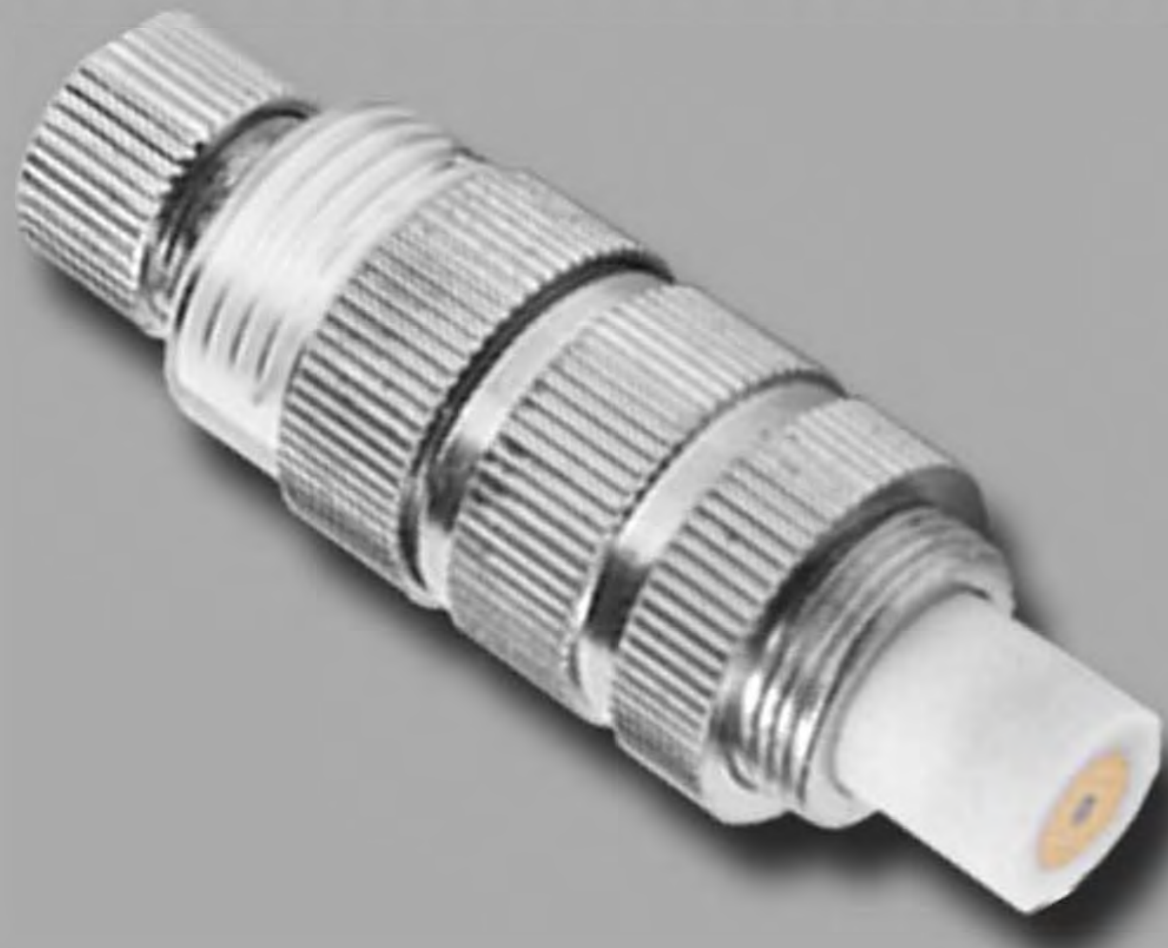
Choose according to the measuring range: thermocouple to measure the single-point temperature; the thermal resistance is suitable for measuring the average temperature in a certain space.
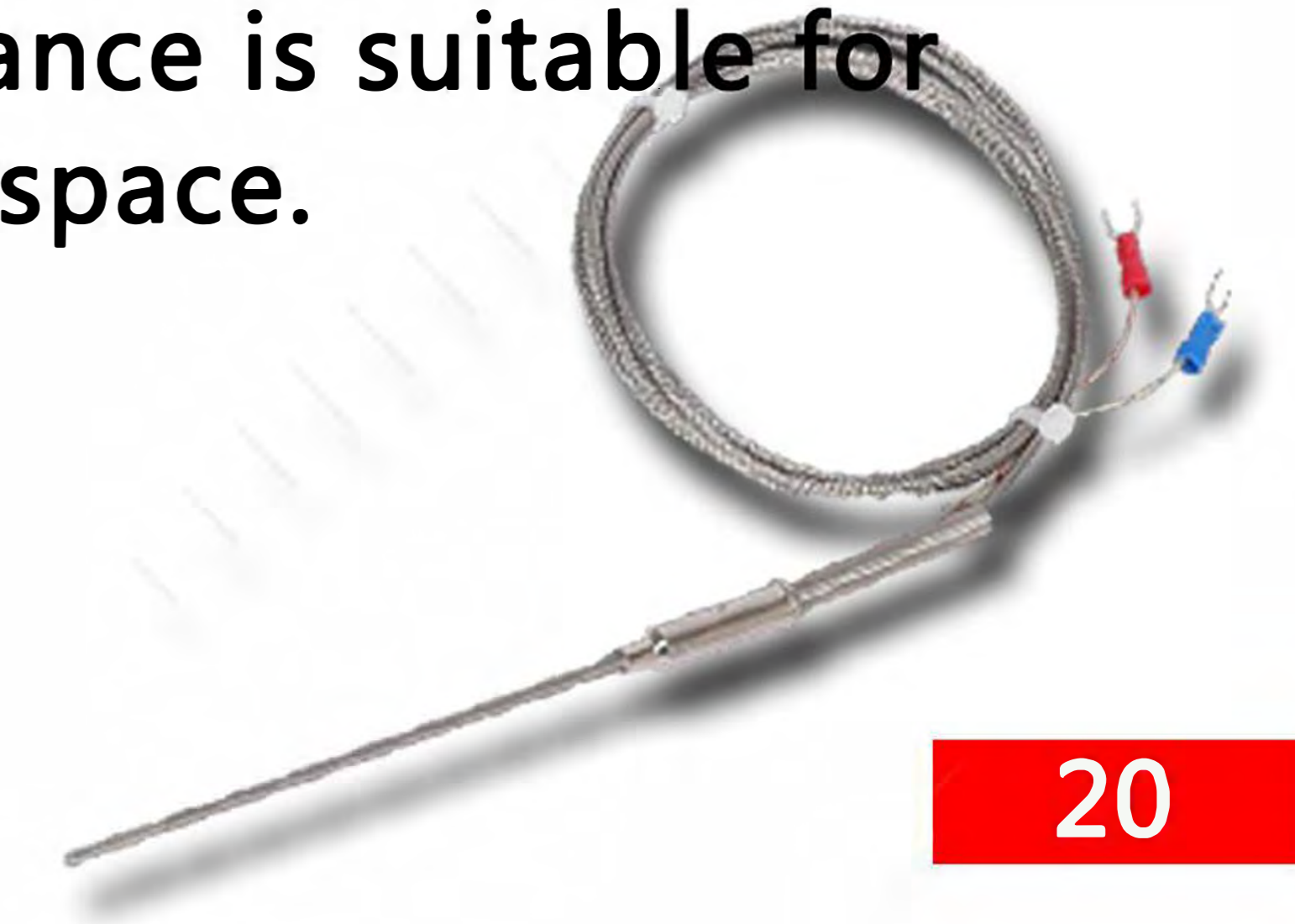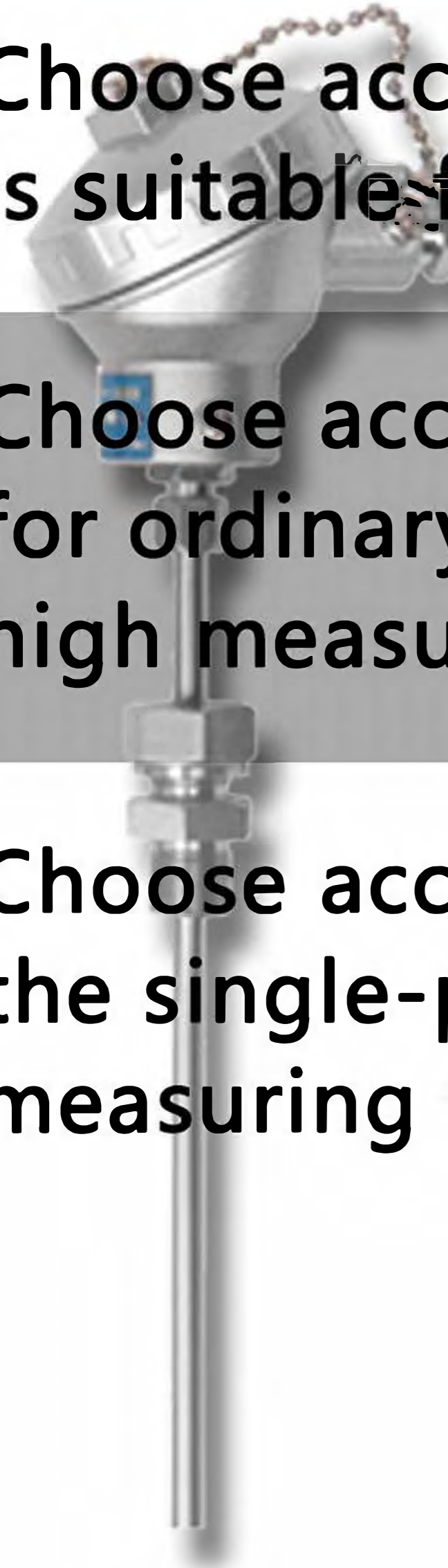
DOBENY

◆ **Thermocouple Thermal Resistance Series**

Thermocouple

Thermal Resistance

China·Dongben Measurement and Control Technology Co., Ltd.

In addition to the conventional thermocouple thermal resistance, our company can also customize various specifications of thermocouple thermal resistance. We will provide the most suitable products according to specific customer requirements.
The thermocouple index number that our company can produce is: S\R\B\K\T\J\N\E.
The thermal resistance index number that our company can produce is: Pt100/Pt50/Pt10/Cu100/Cu50/Cu10.

DOBENY

◆ Temperature Controller Series

Temperature Controller Series

Parameters

Dimensions (mm)

48×48×80/48×48×110
48×96×75/48×96×85/48×96×110
72×72×75/72×72×85/72× 72×110
96×96×75/96×96×85/96×96×110
(Other non-standard sizes can be customized.)

Input Signal

S\R\B\K\T\J\N\E type thermocouple
Pt100/Pt50/Pt10/Cu100/Cu50/Cu10 type thermal resistance
Standard voltage, standard resistance, current 0-10mA/4-20mA

Control Output

Relay contact
Trigger SSR voltage signal
Output DC4-2mA current
Unidirectional triac zero-crossing trigger pulse
Single-phase bidirectional thyristor phase shift trigger pulse

Alarm Output : Relay contact

## Working power source : AC220V±10%(50/60Hz)

DOBENY

◆ **Optional Accessories**

Various accessories can be purchased according to the specific use environ-ment of the product.
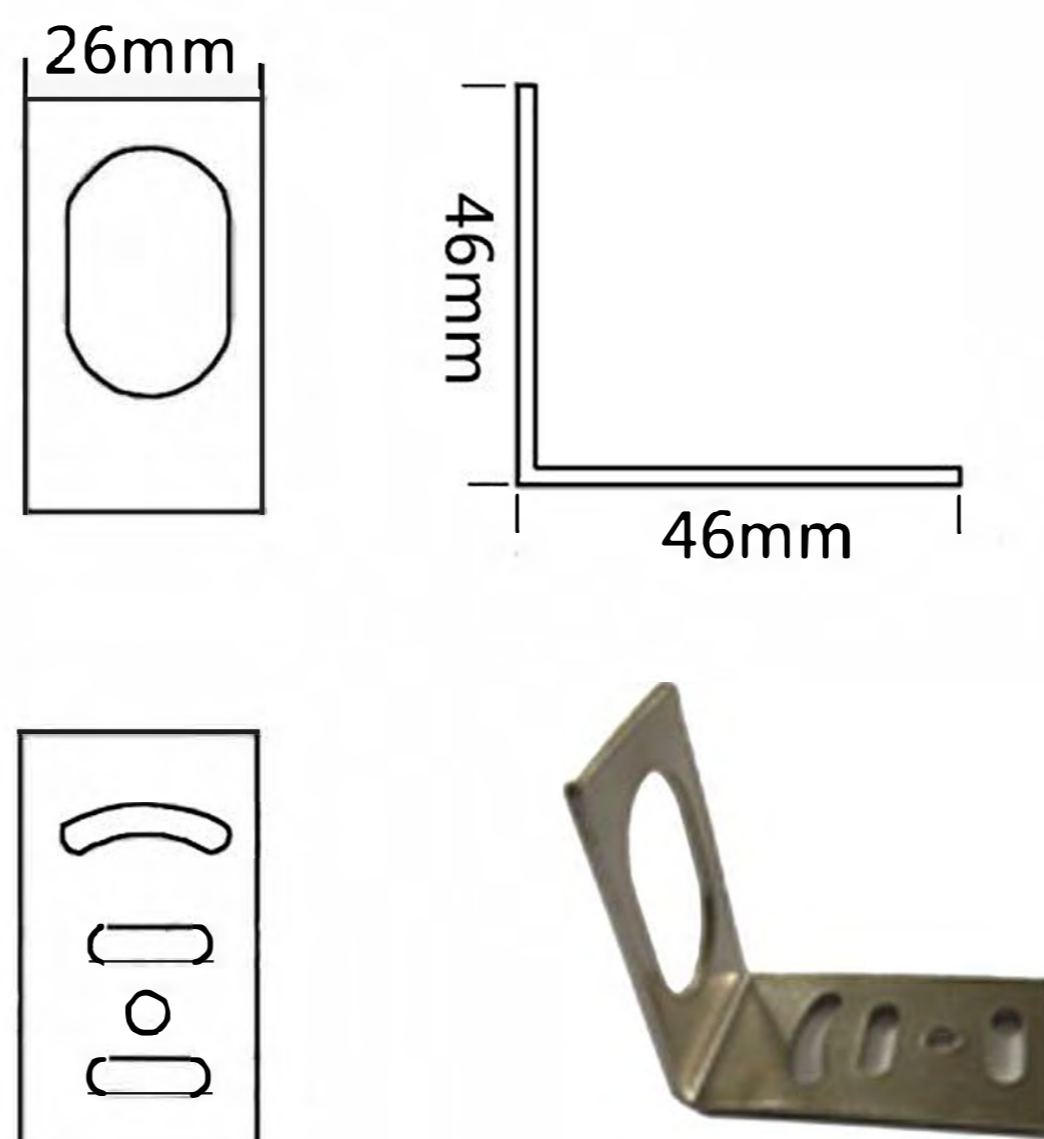
In addition to the following commonly used accessories, we also have other accessories, such as micro dust blocking devices, infrared steering devices, etc.
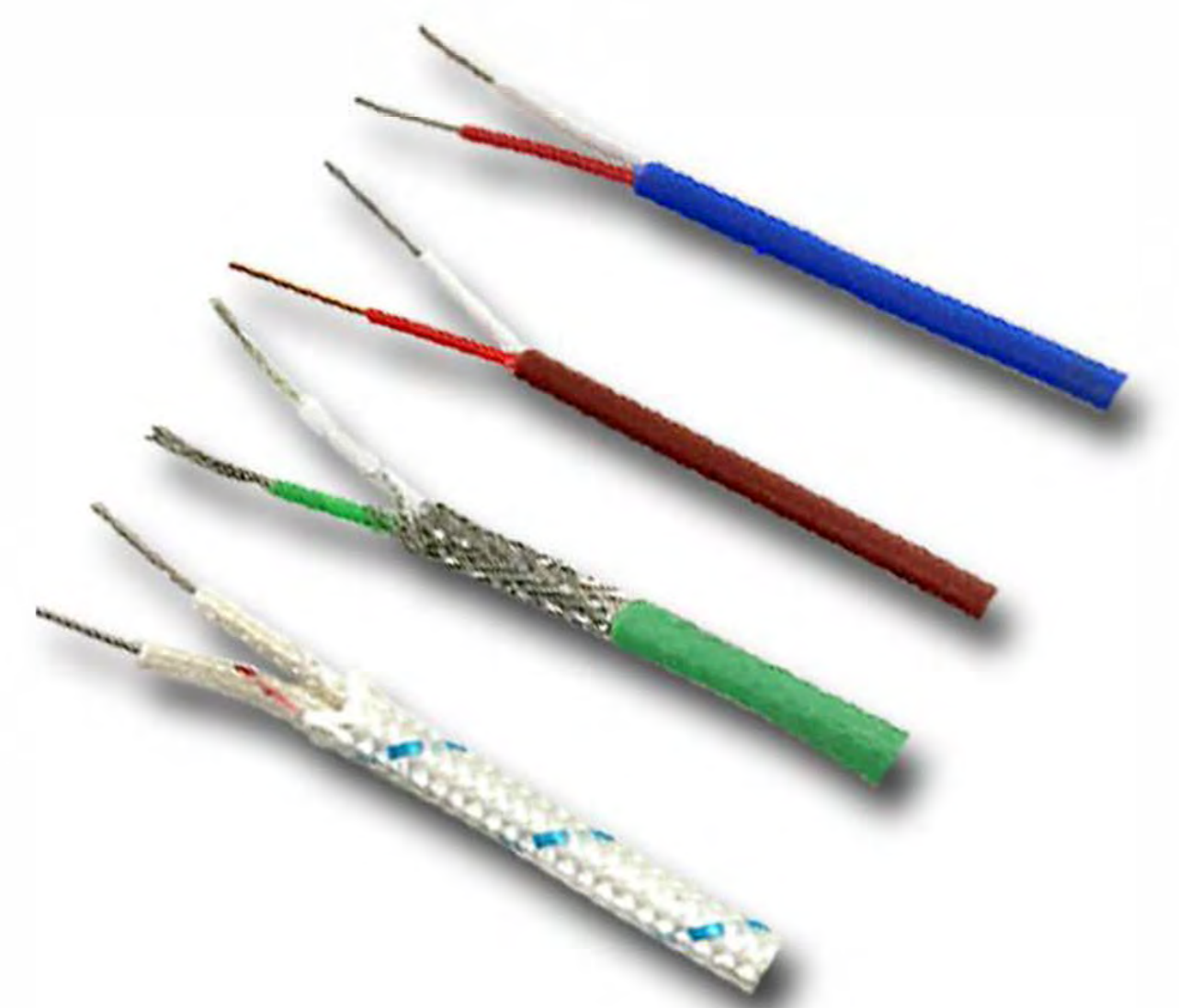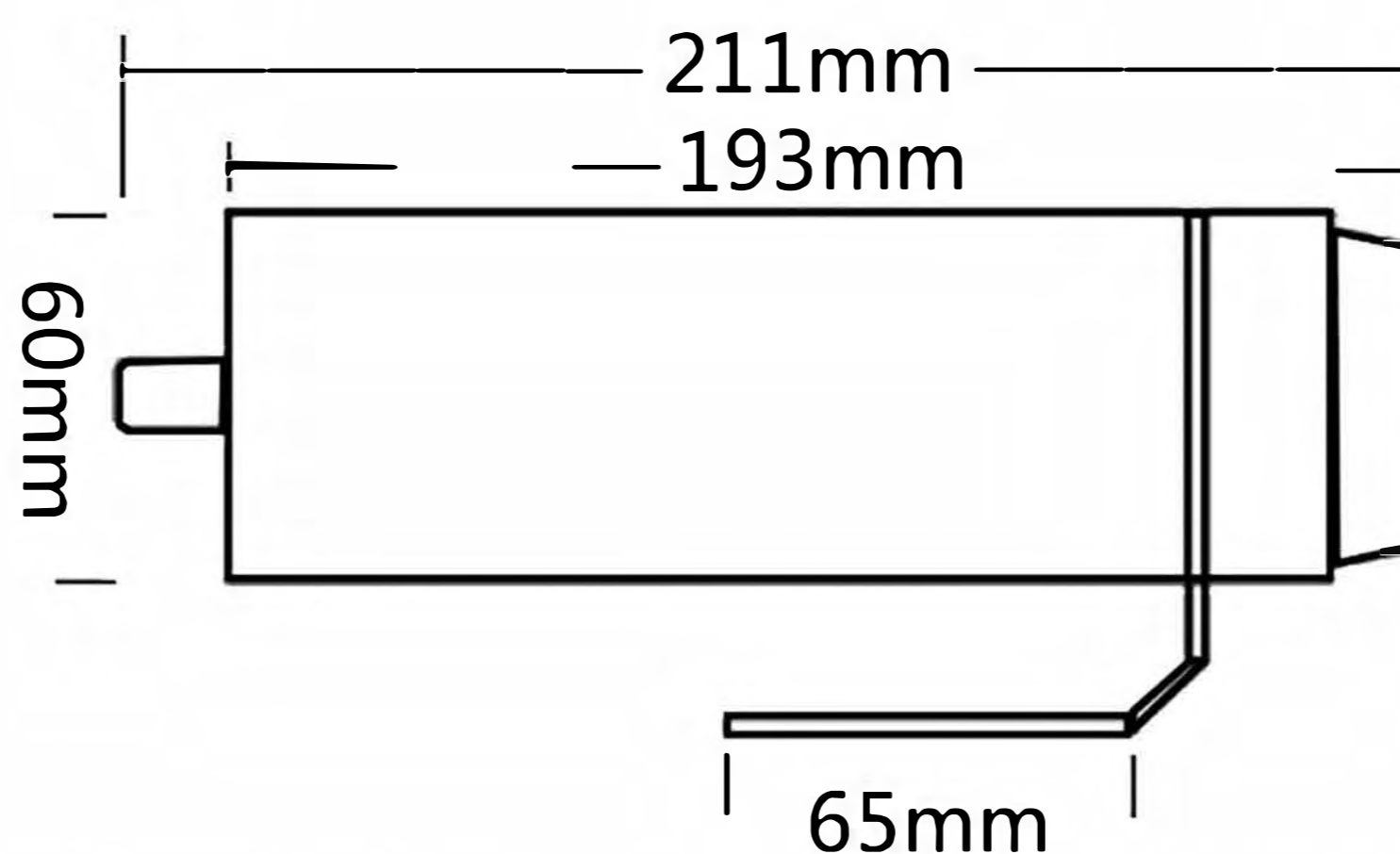
Optional Accessories

Waterproof Housing

M5
Θ16mm
Θ22mm
M18×1
24mm

Product Bracket

26mm
46mm
46mm
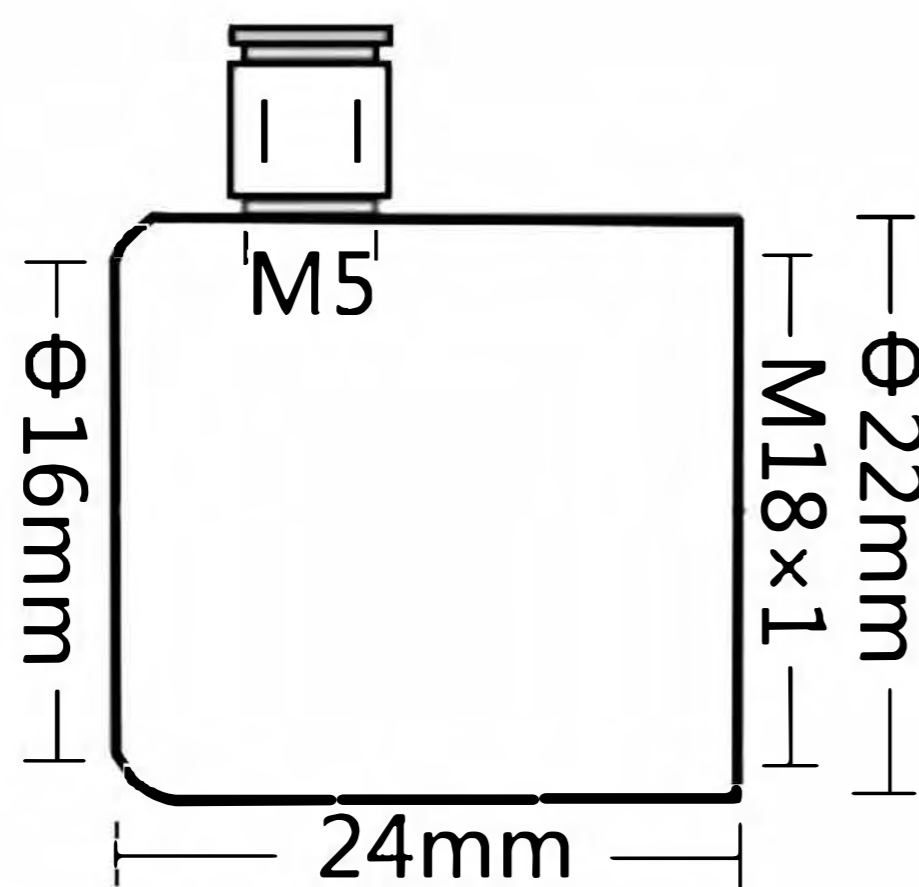
Compensation wire

Cooling Protective Sleeve

211mm
193mm
60mm
65mm

The all-inclusive cooling protective sleeve can pass compressed air or water, and the front part contains a sweeper, which can effectively protect against heat radiation.

China·Dongben Measurement and Control Technology Co., Ltd.

ООО "РусАвтоматизация"

454010 г. Челябинск, ул. Гагарина 5, оф. 507
тел. 8-800-775-09-57 (звонок бесплатный), +7(351)799-54-26, тел./факс +7(351)211-64-57
info@rusautomation.ru;   русавтоматизация.рф;   www.rusautomation.ru