

SM8701B

Infrared temperature sensor

User Manual

File Version: V23.6.24



SM8701B using the standard USB,easy access to PLC , DCS and other instruments or systems for monitoring LORA state quantities.The internal use of high-precision sensing core and related devices to ensure high reliability and excellent long-term stability,can be customized

RS232,RS485,CAN,4-20mA,DC0~5V\10V,ZIGBEE,Lora,WIFI,GPRS and other output methods.

Technical Parameters

Technical parameter	Parameter value
Brand	SONBEST
Wireless signal	LORA
Radio frequency	410~439MHz
Rate level	0~5
Transmit power	5~20dBm
Communication Interface	USB
Default baud rate	9600 8 n 1
Power	DC5V 1A
Running temperature	-30~85℃
Working humidity	5%RH~90%RH

Product Size



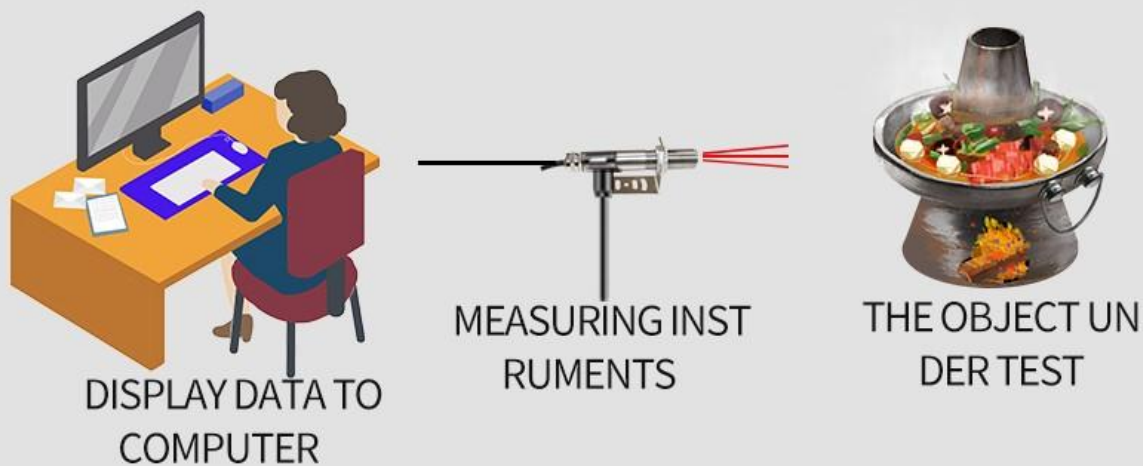
High sensitivity, industrial grade design

EVERY OUTER DETAIL HAS GONE THROUGH MANY TIMES OF MANUAL TESTING, REPEATEDLY MODIFIED, ONLY TO BRING YOU A BETTER LIFE EXPERIENCE, CAREFULLY BUILD HIGH-QUALITY PRODUCTS.



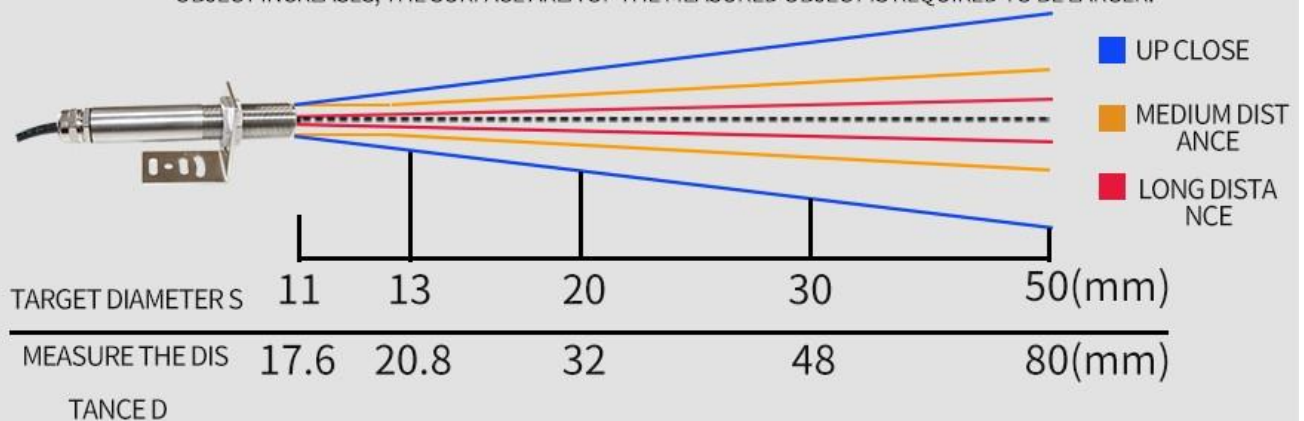
Instrument principle, advance notice

ANY OBJECT RADIATES INFRARED ENERGY OUTWARDS, AND THE RADIATION INTENSITY VARIES WITH TEMPERATURE. THE INFRARED RADIATION ENERGY IS GENERALLY USED IN THE WAVELENGTH RANGE OF 5.5-14MM. INFRARED TEMPERATURE SENSOR IS A KIND OF PHOTOELECTRONIC SENSOR, IT RECEIVES INFRARED RADIATION AND CONVERTS IT INTO ELECTRICAL SIGNAL, THROUGH ELECTRONIC CIRCUIT



Light path map

THE OBJECT-TO-DISTANCE RATIO (D: S) IS 16:1 FOR THE LONG DISTANCE, 1.6:1 FOR THE MEDIUM DISTANCE, AND 1.2:1 FOR THE SHORT DISTANCE, WHICH IS THE RATIO OF THE MEASURED DISTANCE TO THE DIAMETER OF THE OBJECT BEING MEASURED. WHEN THE DISTANCE BETWEEN THE INFRARED TEMPERATURE SENSOR AND THE MEASURED OBJECT INCREASES, THE SURFACE AREA OF THE MEASURED OBJECT IS REQUIRED TO BE LARGER.







D: S IS THE OPTICAL RESOLUTION, REPRESENTING THE RATIO OF THE DIAMETER OF THE SPOT AT THE DISTANCE TO THE MEASUREMENT POINT SUCH AS THE FOREHEAD DIAMETER OF ABOUT 30 MM FOR A DISTANCE MEASUREMENT OF 480 MM FOR A DISTANCE MEASUREMENT OF UP TO 48 MM FOR A DISTANCE MEASUREMENT OF UP TO 36 MM FOR A CLOSE MEASUREMENT

Simple layout, at a glance

ADOPT 304 STAINLESS STEEL, NOT EASY CORROSION,
GOOD TOUGHNESS, BEAUTIFUL AND GENEROUS



RS485 connection method

	Red	Power supply positive pole
	Green	Power supply negative
	Yellow	RS485 A+
	Blue	RS485 B-

4-20mA wiring method

	Red	Power supply positive pole
	Black	Power supply negative
	Blue	Current output

0-5V connection method

	Red	Power supply positive pole
	Black	Power supply negative
	Blue	Current output

In the case of broken wires, wire the wires as shown in the figure. If the product itself has no leads, the core color is for reference.

How to use?



■ Boiler —

Boiler Room is placed in the boiler and water pumps and other auxiliary equipment room. Generally used for heating and production use.

— Steel mill ■

Long-term high temperature working environment needs to monitor the temperature of the environment at any time in case of accidents

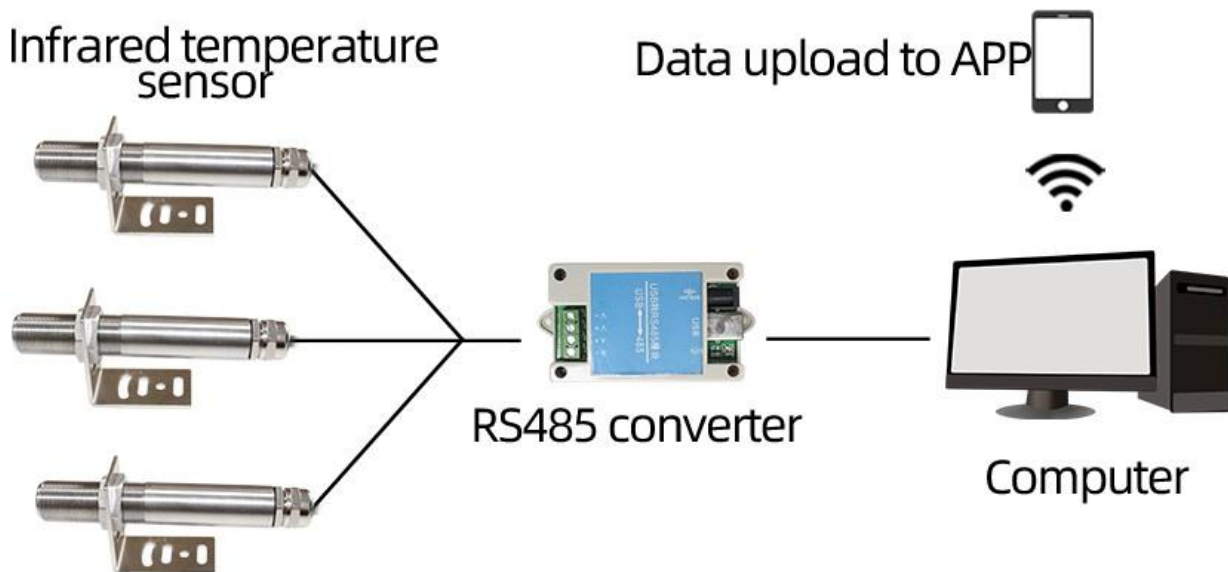


■ Power Plant —

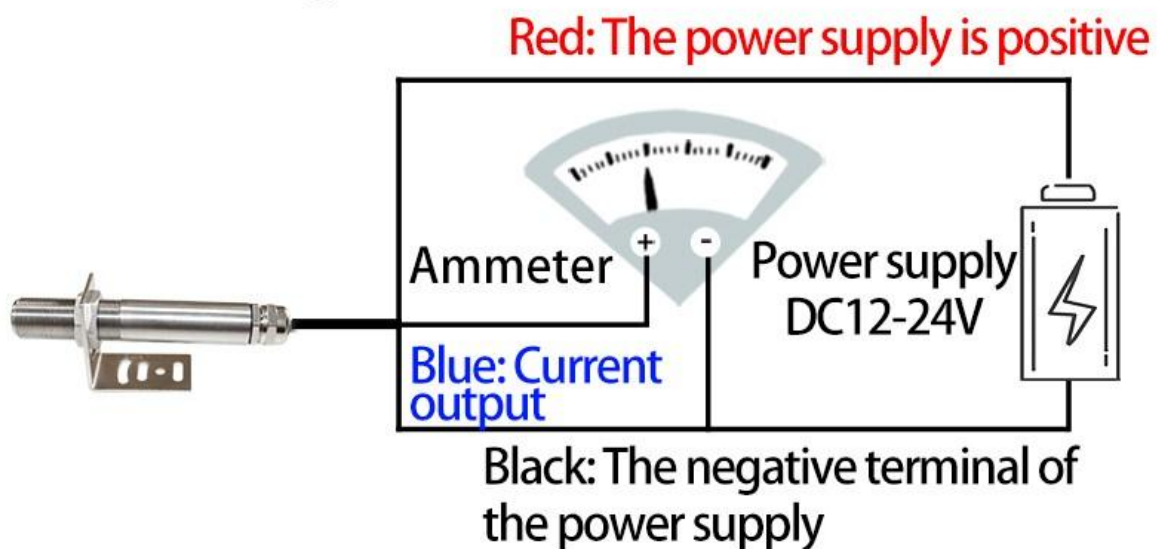
The occasion of greater heat energy
As long as do not pay attention to easily cause accidents require long-term monitoring equipment configuration

Application solution

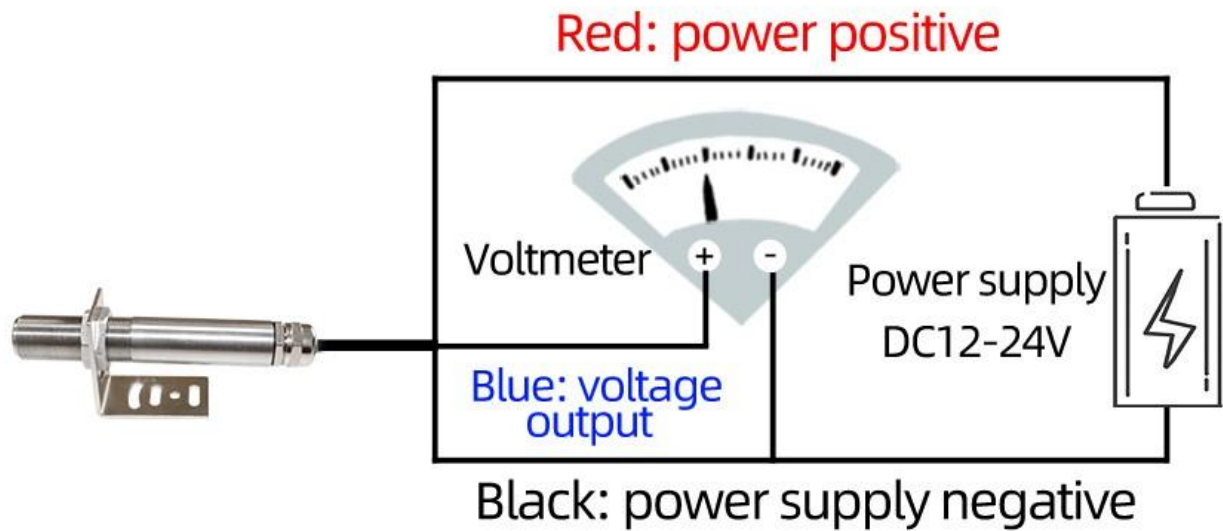
RS485 connection method



4-20mA wiring method



0-5V connection method



Product List



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Infrared temperature sensor

Reminder card

Certificate

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Contact Us

Company: Shanghai Sonbest Industrial Co., Ltd

Address: Building 8, No. 215 North east road, Baoshan District, Shanghai, China

Web: <http://www.sonbest.com>

Web: <http://www.sonbus.com>

SKYPE: soobuu

Email: sale@sonbest.com

Tel: 86-021-51083595 / 66862055 / 66862075 / 66861077