SC7201B

PT100 Intelligent temperature controller

User Manual

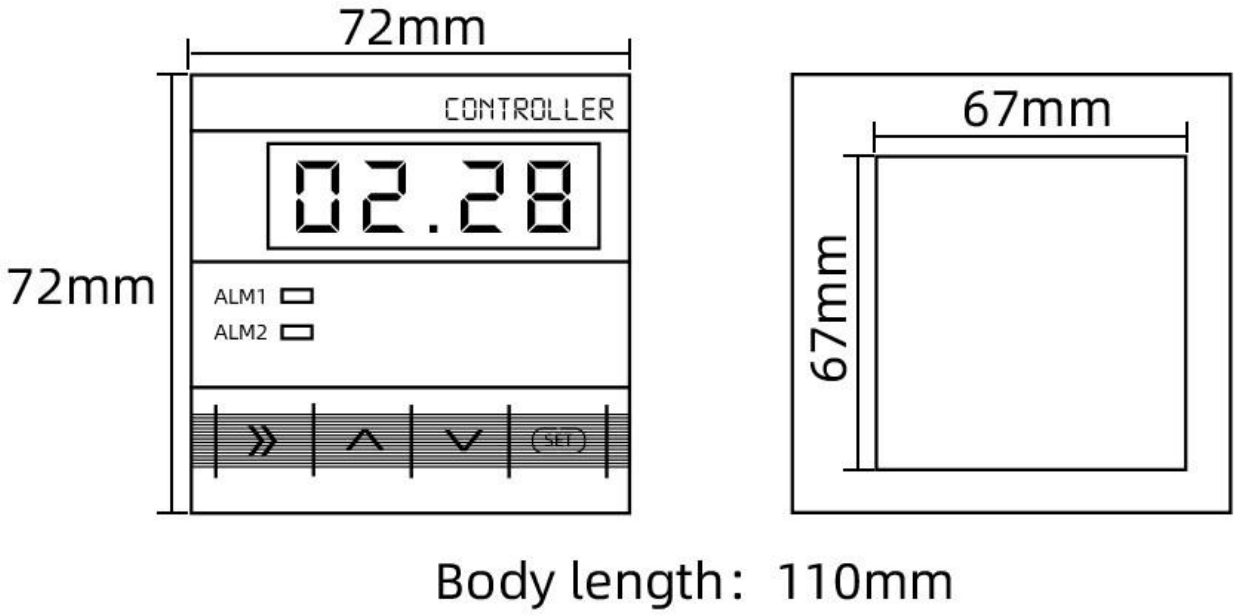
File Version: V23.6.25

SC7201B using the standard ,easy access to PLC， DCS and other instruments or systems for monitoring temperature 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

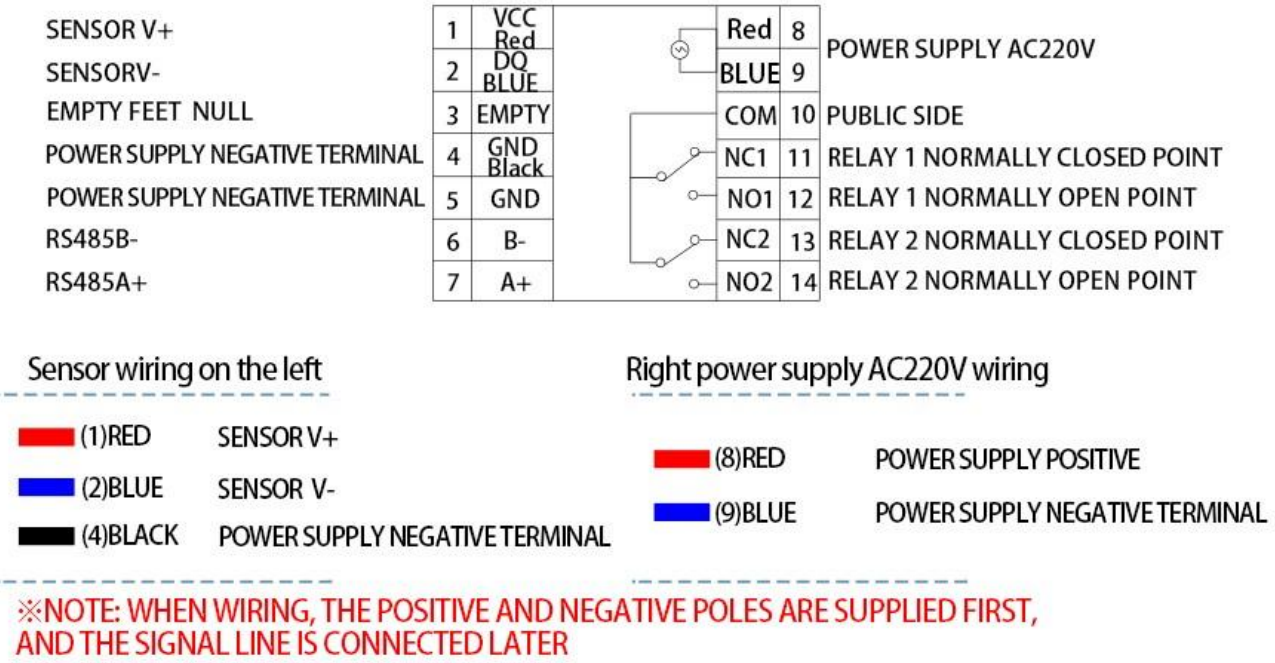
Technical parameter	Parameter value
Brand	SONBEST
Temperature measurement range	-50℃ to +100℃ (optional with other ranges)
Detecting Core Devices	PT100
Temperature Measurement Accuracy	± 0.5℃ (0.5FS)
Thermal Response Coefficient	10mΩ/K
The resistance @ ℃	1000Ω±0.12Ω/K
The resistance rate	0.385Ω/K
Reference Standards	Using EN 60751 Class B Standards
Channels	1
Power	AC185~265V 1A
Display	LED
Running temperature	-30~85℃
Working humidity	5%RH~90%RH

Product Size



Body length: 110mm

Wiring mode

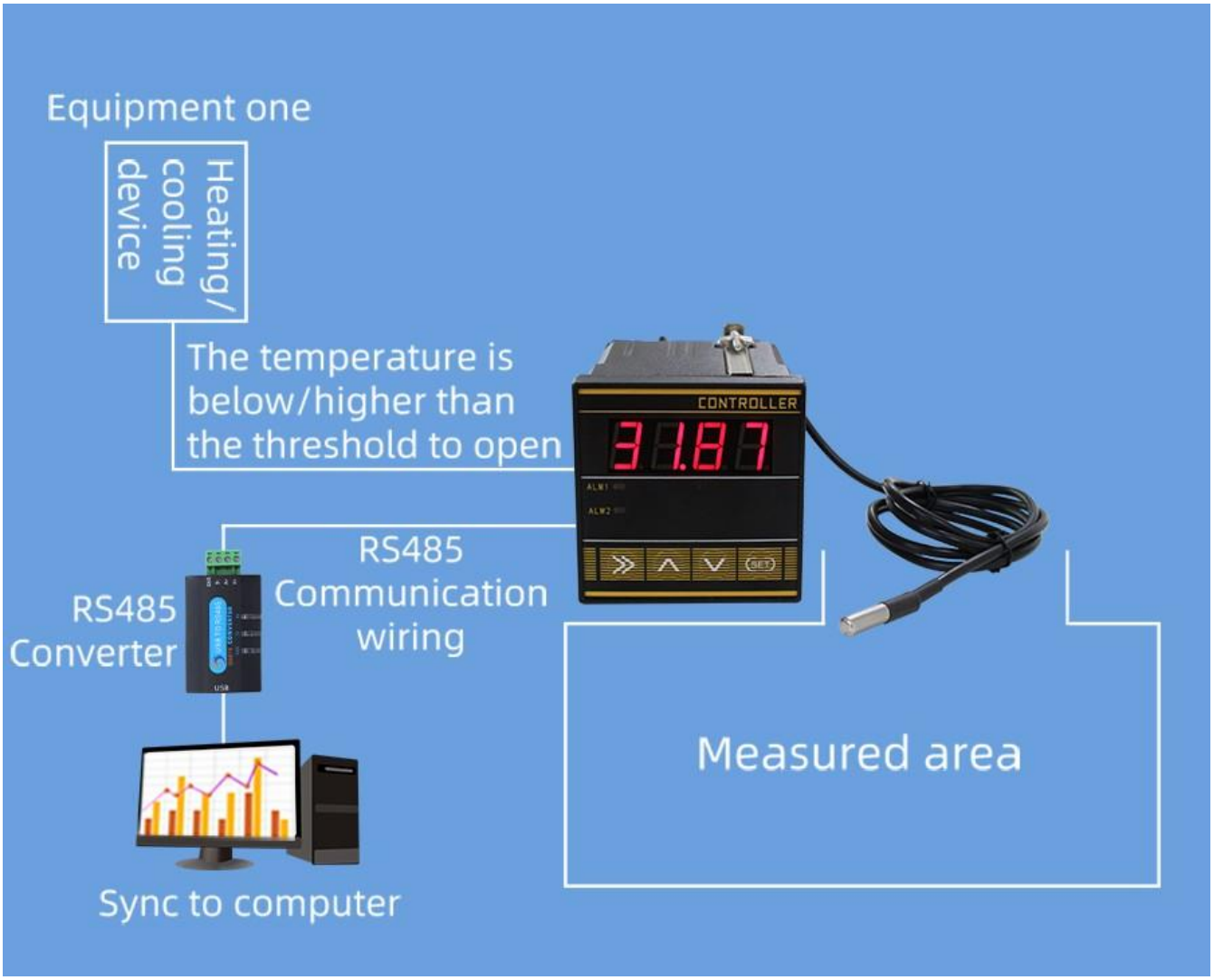


In the case of broken wires, wire the wires as shown in the figure. If the product itself has no leads, the core color is for reference.

How to use?

Intelligent temperature controllers are used in the anti-condensation protection and environmental protection of high and low voltage switch cabinets, terminal boxes, box-type substations, and can also be used in granaries, warehouses, pharmacies, and factories where high temperature environment requirements are required.

Application solution


Equipment one
Heating/ cooling device
The temperature is below/higher than the threshold to open
CONTROLLER
RS485 Communication wiring
RS485 Converter
Measured area
Sync to computer

DETAILED BUTTON

Standard MODBUS-RTU protocol, the default baud rate is 9600, invalid verification, 8 data bits, software can change parameters such as threshold, and real-time query of temperature data through RS485

» : Use the selection key when setting

^ : Up key

v : Down key

SET : Set key

KEY OPERATION

◆Short press SET and then release to enter the temperature upper limit threshold setting
Press "⟫ " to select the position, press "Λ" and "V" to adjust the value
Relay 1 will act when the value is lower than the offline threshold
Upper threshold: minimum temperature 0, maximum 99

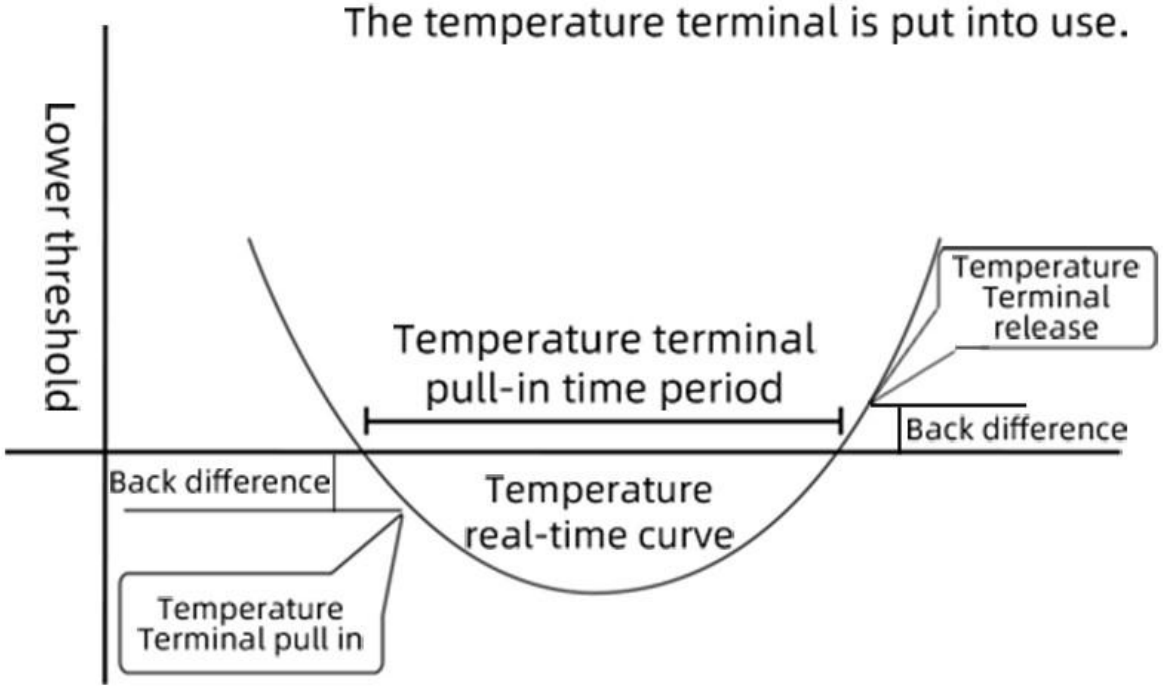
◆Press the second SET to enter the temperature lower limit threshold setting
Press "⟫ " to select the position, press "Λ" and "V" to adjust the value
Relay 2 will act when the value is higher than the upper limit threshold
Lower threshold: minimum temperature -50, maximum 99

◆Press SET for the third time to enter the control hysteresis setting
Press "⟫ " to select the position, press "Λ" and "V" to adjust the value
Return difference: minimum temperature 0, maximum 10

◆Press the fourth SET to save the data

CONTROL MODE AND PROCESS

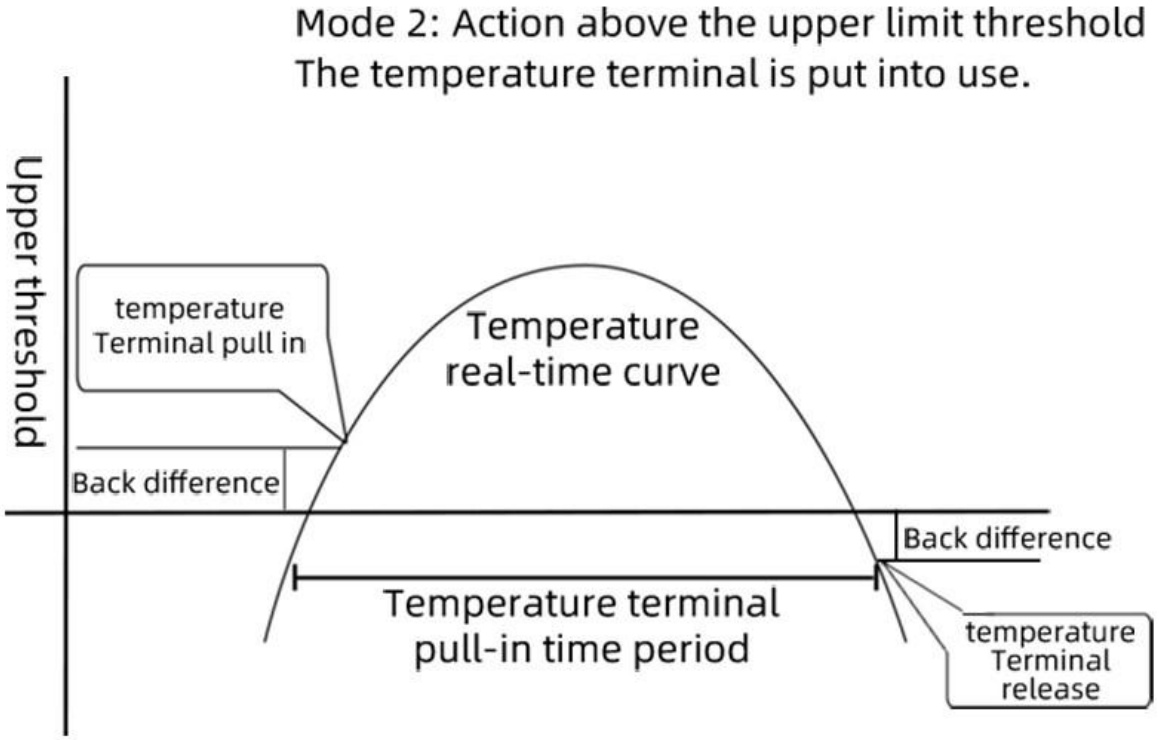
Mode 1: Action below the lower limit threshold
The temperature terminal is put into use.



The opening and closing process of temperature control equipment

Temperature terminal pull-in action conditions:
measured value <lower limit threshold-return difference
Temperature terminal release action condition:
measured value>lower limit threshold + return difference value

※As shown in the figure above, when the measured value is lower than the lower limit threshold minus the difference, the internal temperature of the controller
The terminal pulls in to turn on the device; when the measured value rises to the lower limit threshold and adds back the difference, the temperature
The degree terminal is disconnected and the device is turned off.



The opening and closing process of temperature control equipment

The temperature terminal pull-in action condition:
measured value>upper limit threshold + return difference value
Temperature terminal release conditions:
measured value <upper limit threshold-return difference

※As shown in the figure above, when the measured value is higher than the upper limit threshold and the difference is added back, the internal temperature of the controller
The terminal pulls in to turn on the device; when the measured value drops to the upper limit threshold and subtracts the difference, the temperature
The degree terminal is disconnected and the device is turned off.

Product List

Intelligent temperature controller
(Including power supply, sensor)

Warm reminder card

Certificate of conformity

Disclaimer

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