WINTERS Instruments

Excellence Since 1953

WR1/WT1

Indoor Temperature Sensor

INSTRUCTION AND MAINTENANCE MANUAL (IOM)

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WR1/WT1 Indoor Temperature Sensor

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Product Introduction

The WR1 and WT1 Series Indoor Temperature Sensors are designed for use in BAS (Building Automation Systems) and HVAC systems. They feature wall-mount installation for measuring indoor, humidity and ambient temperature.

With an attractive design and easy installation, these products are widely used in commercial buildings, laboratories, airports, pharmaceutical factories, clean rooms, subways, museums, gymnasiums, and other facilities, thanks to its outstanding long-term stability and reliability.

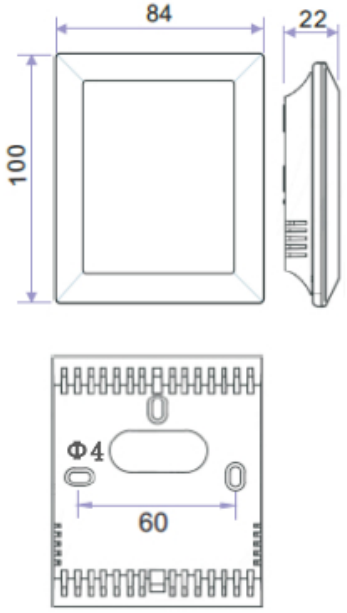
Technical Specifications

Specifications	
Temperature Range	0–50°C/32-122°F, 0–100°C/32-212°F, −20–80°C/-4-176°C (or custom); or resistance output: PT100, PT1000, NTC10K, NTC20K, and others.
Temperature Accuracy	±0.3°C (@ 25°C/77°F)
Output Signal	4–20mA, 0–10V (0–5V), RS485
Power Supply	24Vdc, 24Vac/dc, 12Vdc
Response Time	≤15 seconds (@ 25°C/77°F)
Operating Environment	0–70°C/32-158°F & 0–95%RH, non-condensing
Display Type	LCD display (optional, Housing B only)
Enclosure Protection	ABS+PC, V-0 (per UL94), IP30 (per IEC529-598 / GB 700-86 / GB 4208)
EMC Compatibility	EMC per GB/T 13926, EN61000-6-2, EN61000-6-3

**Note: Technical specifications may vary between different product types and models. Please refer to the label on the product for exact specifications.*

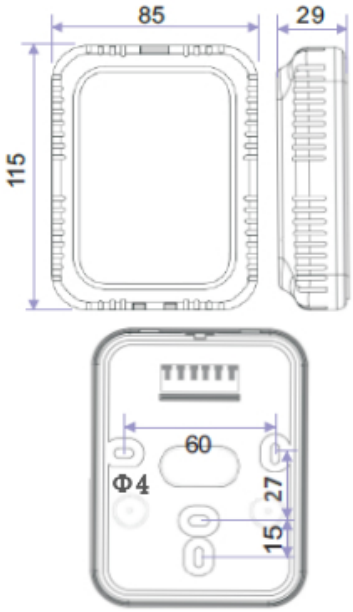
Dimensions (mm)

A



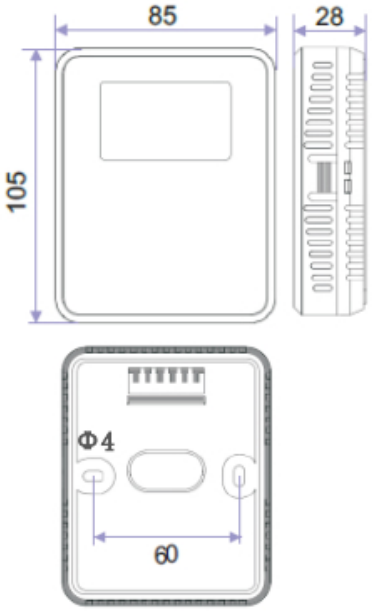
Type A: 84(W) x 100(H) x 22(D) mm

B



Type B: 85(W) x 115(H) x 29(D) mm

C

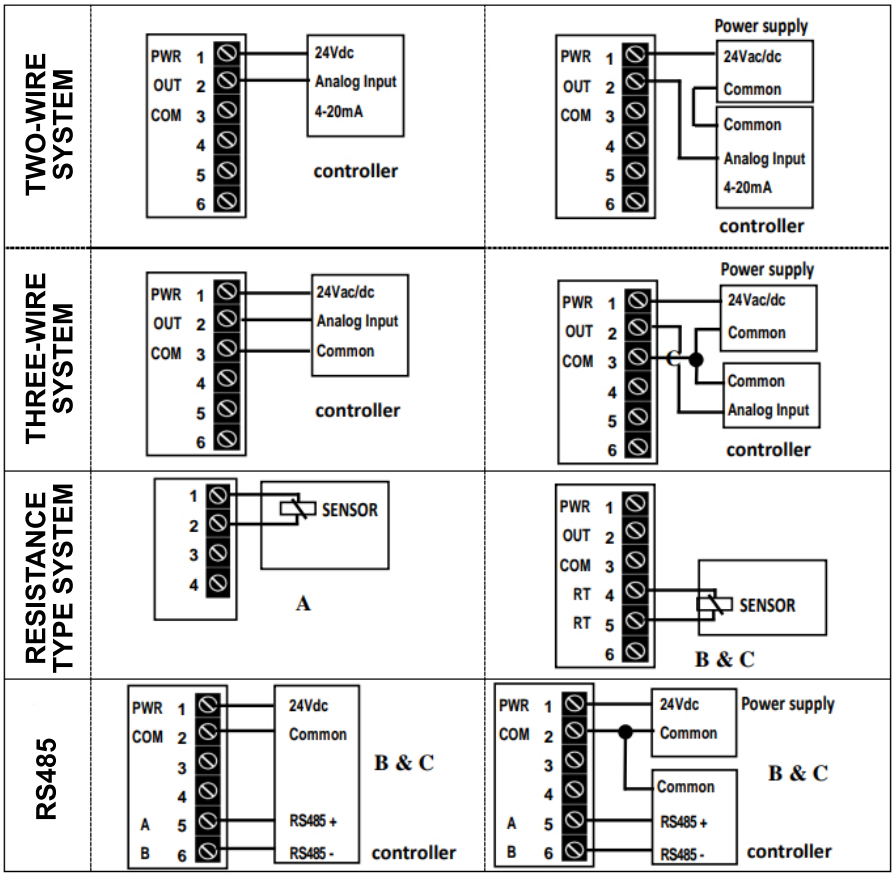


Type C: 85(W) x 105(H) x 28(D) mm

4mm = 0.16”
15mm = 0.59”
22mm = 0.87”
27mm = 1.06”
28mm = 1.1”
29mm = 1.14”
60mm = 2.4”

84mm = 3.3”
85mm = 3.34”
100mm = 3.9”
115mm = 4.5”

Wiring Diagram



2-Wire	PWR(1)=24Vdc/24Vac, OUT(2)=Analog Input / 4-20mA. Connect to controller.
3-Wire	PWR(1)=24Vac/dc, OUT(2)=Analog Input, COM(3)=Common. Separate power supply and controller connections.
Resistance Output	Type A: Terminals 1–4, Sensor connected to terminals 1 & 2. Type B & C: RT terminals 4 & 5 for sensor.
FS485	PWR(1)=24Vdc, COM(2)=Common, A(5)=RS485+, B(6)=RS485−. Type B & C only.

**Note: When using 24Vdc (or 12Vdc) power supply with 4-20mA output, the product supports both 2-wire and 3-wire configurations simultaneously. Wiring may differ slightly by model — refer to the internal wiring diagram on the product.*

Precautions

Please read the product manual carefully before installation and use, and observe the following:

- All products must be properly protected against electrostatic discharge during installation and use. Disconnect the power supply before handling - never operate with power on, as this may damage the sensor.
- Before powering on, carefully verify the polarity of the power supply and the output signal selection. Incorrect connection may damage the acquisition unit.
- Install the product away from frequency inverters and other equipment that may generate high-frequency interference, as this can affect normal operation and cause inaccurate output.
- Some technical specifications of the product may be subject to change. The specifications marked on the product label shall prevail.

Quality Warranty

Within 12 months of shipment from the factory, the product is covered by a free repair service, provided the damage is not caused by misuse or human error, and the product has been used under normal operating conditions.