

Remote Wall Sensor

WL4-10k3-03 & WL4-PT1000-03

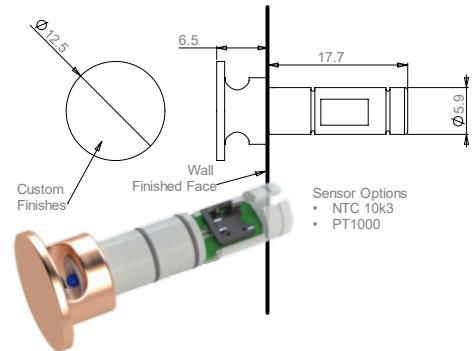


Description

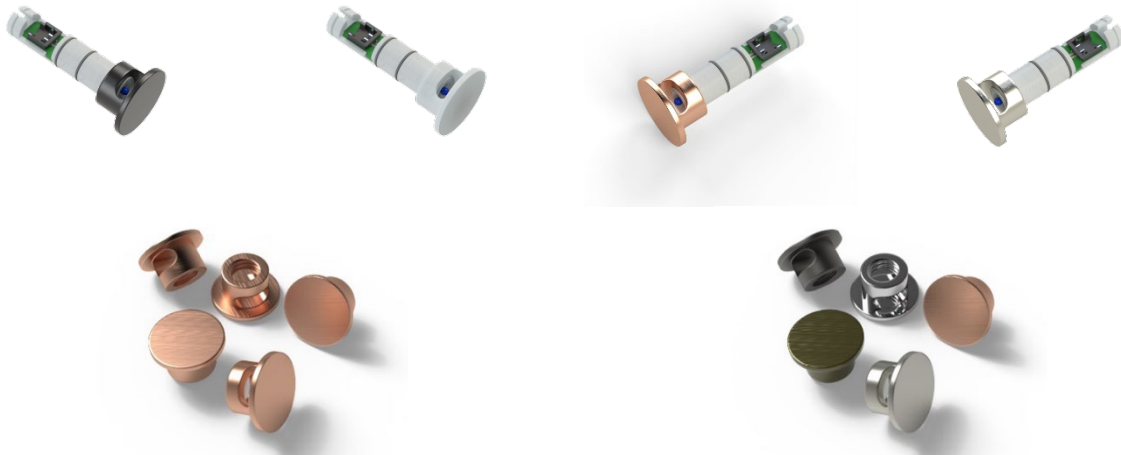
A remote wall sensor designed to be used with Polar Bear Design thermostats to measure the ambient air temperature within a room. Supplied with either a black or white plastic tip. Custom tips are available in a metal finish as a separate accessory; WL-TIP-ff-10PK. Follow [this link](#) for more information on available finishes.

Specifications

Operating range:	0 to +50°C 0 to 9% RH non-condensing
Accuracy:	±0.5°C in range 0 to 70°C
Form factor:	ø6mm body with screw tip
Protection:	IP30
Termination:	28AWG Cable Tail, 300mm long



Variants:	WL4-10K3-03-BL-10PK	NTC Thermistor, 10kΩ @ 25°C, black tip, pack of 10
	WL4-10K3-03-WH-10PK	NTC Thermistor, 10kΩ @ 25°C, white tip, pack of 10
	WL4-PT1000-03-BL-10PK	PT1000, black tip, pack of 10
	WL4-PT1000-03-WH-10PK	PT1000, white tip, pack of 10



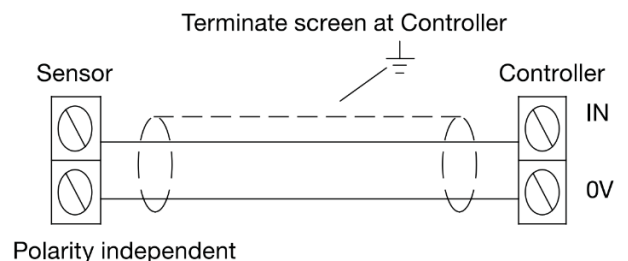
Installation

The sensor must be wired to the thermostat using a screened (shielded) 2-core cable. The tails of the sensor should be spliced to the cable using a connector suited to the gauges of both the cable and the tails (28AWG, ø0.32mm).

The cable should be treated as a signal cable and be routed away from objects that may radiate interference.

It is important to consider the placement of the sensor; it should be situated in a location that most accurately reflects the temperature in the room, away from direct sources of heat, draughts, and not in an area prone to rapid changes in temperature, such as close to a window or door.

Securing field wiring is essential to prevent reverse pulling of the cable, it's crucial to secure the field wiring in place using appropriate methods such as cable ties, clamps, or clips, reducing the risk of movement or strain. Proper cable management practices should always be followed to ensure that wiring is installed securely and safely. Failure to secure the cabling can result in damaging the sensor.



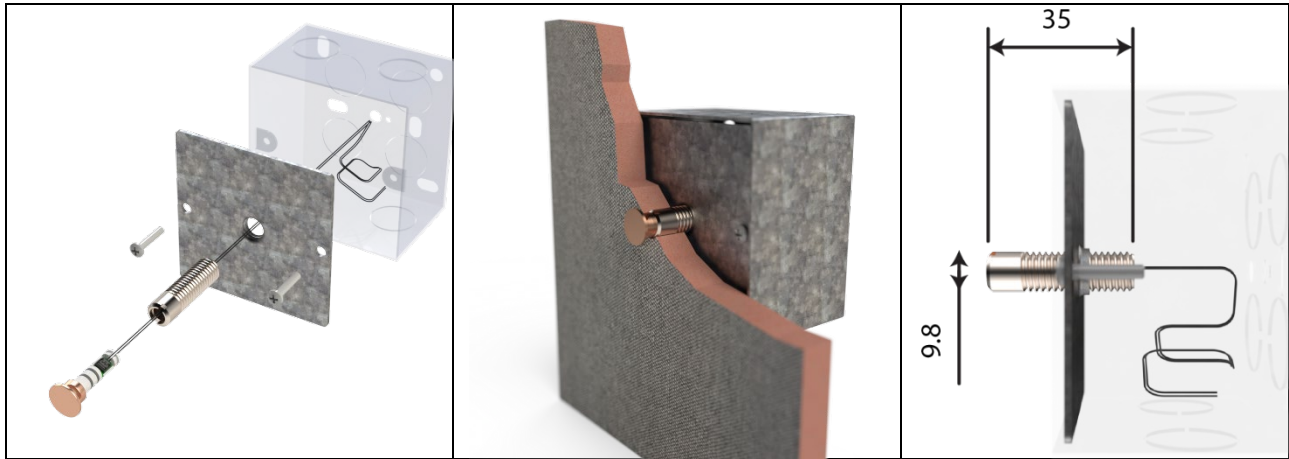
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(10 Apr. 24)

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It is recommended that the sensor is installed into a WL4-FIX-KIT which provides a solid 1st fix installation plate.



Painting / Wallpapering

It is possible to paint the plastic finishes using the following recommended process.

- Lightly sand the surface with fine-grit sandpaper to help create a rough texture.
- Clean the surfaces to remove any dirt, grease, or contaminants.
- Apply a primer using an aerosol specifically formulated for plastics / polyoxymethylene, following the manufacturer's instructions.
- Ensure that the aperture is not blocked, which would impede air flow.
- Allow primer to cure before applying the desired final coloured paint finish. If applying wallpaper, use a suitable glue that works with the primer and wallpaper.

NTC Thermistor Reference

Temp / °C	Resistance / Ω	Temp / °C	Resistance / Ω	Temp / °C	Resistance / Ω	Temp / °C	Resistance / Ω
-10	55,329	8	21,918	18	13,681	28	8,779
-5	42,327	9	20,884	19	13,073	29	8,406
0	32,650	10	19,902	20	12,491	30	8,055
1	31,030	11	18,970	21	11,940	35	6,532
2	29,498	12	18,091	22	11,421	40	5,324
3	28,051	13	17,256	23	10,924	45	4,368
4	26,683	14	16,461	24	10,448	50	3,602
5	25,391	15	15,710	25	10,000		
6	24,170	16	15,000	26	9,574		
7	23,015	17	14,325	27	9,165		