

# Zone Temperature Sensor Installation Instructions

## Description

Novar Controls Corporation's low profile Zone Temperature Sensor is a precision electronic sensor designed for use with the ETM-3010 and VAV-4020. This sensor combines space temperature capabilities with a timed schedule override button and a light-emitting diode (LED) schedule status light.

An optional temperature setpoint adjustment (potentiometer) for modifying the zone setpoint is available for this sensor.

## Specifications

### Output

0 to 3.5 VDC

### Physical Dimensions

Height:  $3\frac{3}{8}$  inches

Width:  $3\frac{3}{8}$  inches

Depth:  $1\frac{1}{4}$  inches

### Range

20° to 127°F

### Accuracy

Better than 1°F over the operating range

## Mounting the Zone Temperature Sensor

The Zone Temperature Sensor should be installed in a vertical position (with the LED at the top) on an interior wall in an area with ample air circulation and free from drafts and sudden changes in temperature.

Use the following procedure and refer to Figure 1, as necessary, to mount the Zone Temperature Sensor.

Step	Procedure
1	Remove the sensor case locking screw at the bottom of the case.
2	Remove the backplate that snaps onto the rear of the sensor case.  <b>NOTE!</b> Do not remove or damage the faceplate when removing the backplate.  <i>continued</i>

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Step	Procedure
3	Position the sensor's backplate against the mounting surface and mark the surface to show the location of the mounting screw holes.
4	Drill holes in the marked locations and insert hollow-wall anchors (not included), if needed.
5	Pull the wires through the hole in the center of the backplate.
6	Position the backplate over the mounting holes and insert and tighten the mounting screws to secure the backplate.

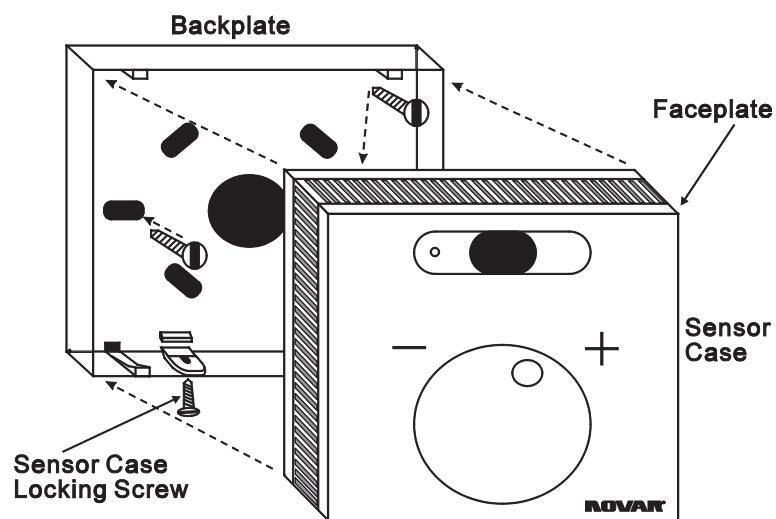


Figure 1. Mounting the Zone Temperature Sensor

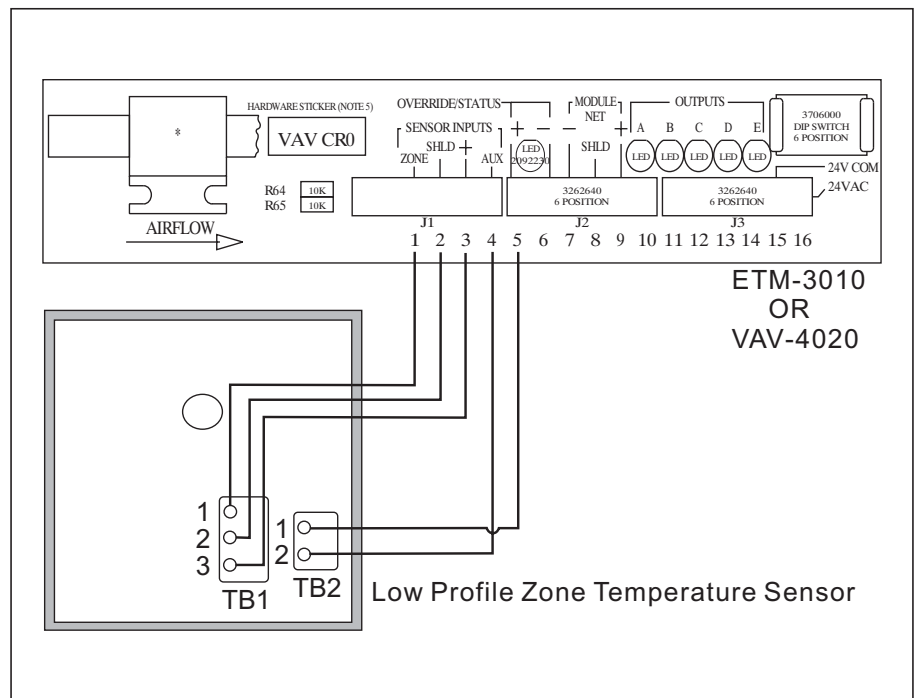
## Wiring the Zone Temperature Sensor

The wiring connections should be made with shielded twisted-pair wires (Belden 8761, Novar Controls WIR-1010, or equivalent).

Use the following procedure and refer to Figure 2, as necessary, to wire the sensor.

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Step	Procedure
1	Connect the Zone, Shield, and positive (+) wires from the ETM-3010 or VAV-4020 to the sensor at TB1 connections 1, 2, and 3, respectively.
2	<p>Make the following connections, as appropriate.</p> <ul style="list-style-type: none"> <li>■ Sensors with a temperature setpoint adjustment control</li> </ul> <hr/> <p><b>NOTE!</b> The temperature setpoint adjustment is used to reset the zone control setpoint <math>\pm 3^{\circ}\text{F}</math>.</p> <hr/> <p>Connect the wiring from Terminals 4 and 5 on the ETM-3010 or VAV-4020 to the sensor's TB2 Connections 2 and 1, respectively.</p> <ul style="list-style-type: none"> <li>■ Sensors without the temperature setpoint control</li> </ul> <p>Connect the wiring from Terminal 5 on the ETM-3010 or VAV-4020 to the sensor's TB2 Connection 1.</p>
3	Check all wiring connections to make sure they are correct and secure and snap the sensor case onto the backplate.
4	Insert and tighten the sensor case locking screw at the bottom of the case.



**Figure 2.** Wiring connections for the Zone Temperature Sensor

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## Model and Part Numbers

Use the part numbers provided in Table 1 to order the necessary Novar Controls parts.

<b>Table 1. Novar Controls Part Numbers</b>		
<b>PRODUCT</b>	<b>MODEL NO.</b>	<b>PART NO.</b>
Zone Temperature Sensor (ZTS)	ZTS	732021000
Zone Temperature Sensor with Temperature Setpoint Adjustment (ZTS-P)	ZTS-P	732020000
Two-conductor shielded cable (Belden 8761 equivalent)	WIR-1010	709001000



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NOVAR CONTROLS CORPORATION  
6060 ROCKSIDE WOODS BLVD., CLEVELAND, OH 44131  
TEL.: 800.348.1235 WWW.NOVARCONTROLS.COM