TE-6800 Series Temperature Sensors

Product Bulletin

TE-68xx-xN00S

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The TE-68xx-xN00S Series provides temperature sensing in room wall mount applications. It allows local setpoint temperature adjustment and temporary occupancy override.

A warmer/cooler dial is included on certain models for minor temperature adjustments from the setpoint. An occupancy override button allows the user to request a time-of-day scheduling override when the space is occupied outside of the normal occupied hours schedule. All sensors have DIP switches that enable or disable unit functions.

Depending on the model chosen, the wires connecting the sensor to the controller can be terminated using a screw terminal block or modular jack connection, offering wiring flexibility. All models include a Zone Bus access port for connecting accessories to access the 6-pin modular jack. This feature allows a technician to commission or service the controller via the sensor.



Figure 1: TE-6800 Series Temperature Sensors

Table 1: Features and Benefits

Features	Benefits
Controller Configuration Switch	Allows users to adjust room comfort and to choose occupancy features that match the application and controller.
Occupancy Light-Emitting Diode (LED) Indicator	Displays the current operating mode of the controller (VMA1200 and VMA1400 Series controllers only).
Manual Override Pushbutton (PB)	Overrides time-of-day scheduling when the space is occupied outside of normal occupied hours schedule.

Product Overview

IMPORTANT: The TE-6800 Series Temperature Sensors are intended to provide an input to equipment under normal operating conditions. Where failure or malfunction of the TE-6800 sensor could lead to personal injury or property damage to the controlled equipment or other property, additional precautions must be designed into the control system. Incorporate and maintain other devices, such as supervisory or alarm systems or safety or limit controls, intended to warn of or protect against failure or malfunction of the TE-6800 sensor.

A manual override PB allows the occupant to control the space temperature. This feature allows the end user to signal the controller that the space is occupied after hours or on weekends.

An LED is standard for all models. When used with a VMA1200 or VMA1400 Series controller, the green LED can display the current operating mode of that controller: On = Occupied, Off = Unoccupied, and Flashing = Standby.

The controller compatibility DIP switch programs the TE-6800 to:

- disable the PB and LED indicator
- enable PB with LED indicator
- enable PB without LED indicator

The DIP switch matches the PB and LED indication with features recognized by more recent Johnson Controls® controllers. Specifically, the DIP switch allows for matching controller features to disable the occupancy LED and/or PB.

The TE-6800 is available with a modular jack or terminal block wiring connections, and either a 1000-ohm nickel or platinum temperature sensing element. The unit can be used with Application Specific Controllers (ASCs) or for universal applications.

The TE-6800 Temperature Sensor uses a warmer/cooler single setpoint adjustment dial. The setpoint dial is adjusted clockwise to heat and counterclockwise to cool.

Ordering Information

To order a TE-6800 Series Temperature Sensor, contact the nearest Johnson Controls representative. Specify the desired sensor product code number from Table 2 and accessories from Table 3, depending on the model.

Table 2: TE-6800 Series Temperature Sensor Product Code Numbers

Product Code Number	Temperature Sensing Element	Warmer/Cooler Temperature Setpoint Adjustment Override	Temperature Display	Connection	Enclosure Dimension, mm
TE-68NT-0N00S	Ni1000	No	No	Terminal Block	80 x 80
TE-68NT-1N00S	Ni1000	Yes	No	Terminal Block	80 x 80
TE-68NP-0N00S	Ni1000	No	No	Modular Jack	80 x 80
TE-68NP-1N00S	Ni1000	Yes	No	Modular Jack	80 x 80
TE-68PP-0N00S	Pt1000	No	No	Modular Jack	80 x 80
TE-68PP-1N00S	Pt1000	Yes	No	Modular Jack	80 x 80
TE-68PT-0N00S	Pt1000	No	No	Terminal Block	80 x 80
TE-68PT-1N00S	Pt1000	Yes	No	Terminal Block	80 x 80

Table 3: Optional Accessories

Product Code Number	Description
ACC-INSL-0[1]	Wallbox Mounting Pad (10/bag)
ACC-INSL-1[1]	Surface Mounting Pad (10/bag)
NS-WALLPLATE-0	Adapts a TE-6800 Sensor (80 x 80 mm) to a standard 80 x 120 mm wallbox
T-4000-119	Hex-head Adjustment Tool (30/bag)

1. These foam pads help prevent drafts from entering the unit through the wall, and make installation easier when mounting on an uneven surface.

Repair Information

Do not field repair the TE-6800 Series Temperature Sensors. As with any electrical device, keep the air vents clean and free from dust or obstruction. If the TE-6800 temperature sensor fails to operate within its specifications, replace the unit. For a replacement sensor, contact the nearest Johnson Controls representative.

IMPORTANT: Do not remove the Printed Circuit Board (PCB). Removing the PCB voids the product warranty.

Technical Specifications

TE-6800 Series Temperature Sensors (Part 1 of 2)

Nickel Sensor	Temperature Sensor	1000 ohm thin-film nickel
	Temperature Coefficient	Approximately 3 ohms per F° (5.4 ohms per C°)
	Reference Resistance	1000 ohms at 70°F (21°C)
	Accuracy	±0.34F° at 70°F (±0.18C° at 21°C)
Platinum Sensor	Temperature Sensor	1000 ohm thin-film platinum
	Temperature Coefficient	Approximately 2 ohms per F° (3.9 ohms per C°)
	Reference Resistance	1000 ohms at 32°F (0°C)
	Accuracy	±0.35F° at 70°F (±0.19C° at 21°C)
Setpoint	Range	Warmer/Cooler
	Resistance	1500 Ohms
Sensor Response Time	10 minutes at 10 feet per minute	
Field Connections	Modular Jack	8-position modular jack connector
	Terminal Block	Screw type terminals for 18 to 24 AWG wire
Zone Bus Access	6-pin connector with front bottom access for a laptop with HVAC PRO software and CVTPRO converter	
Manual Override	Integral momentary push button (DIP switch selectable)	
LED Light	Green LED light indicates two modes of operation (VMA1200 and VMA1400 Series controllers only)	
Ambient Operating Conditions	32 to 131°F (0 to 55°C) 10 to 95% RH, noncondensing; 86°F (30°C) maximum dew point	
Ambient Storage Conditions	-40 to 140°F (-40 to 60°C) 5 to 95% RH, noncondensing; 86°F (30°C) maximum dew point	
Materials	White thermoplastic	
Accessory	NS-WALLPLATE-0	Adapts a TE-6800 Sensor (80 x 80 mm) to a standard 80 x 120 mm wallbox
Dimensions (H x W x D)	3-1/4 x 3-1/4 x 1-7/16 in. (80 x 80 x 36 mm)	

TE-6800 Series Temperature Sensors (Part 2 of 2)

Shipping Weight	1 lb (0.5 kg)	
Compliance	United States	UL Listed, File E107041, CCN PAZX, Under UL 916, Energy Management Equipment
	Canada	UL Listed, File E107041, CCN PAZX7, Under CAN/CSA C22.2 No. 205, Signal Equipment
CE	Europe	CE Mark – Johnson Controls, Inc. declares that the TE-6800 Series Temperature Sensors are in compliance with the essential requirements and other relevant provisions of the EMC Directive 2004/108/EC
	Australia and New Zealand	C-Tick Mark, Australia/NZ Emissions Compliant

The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products.

United States Emissions Compliance

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when this equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his/her own expense.

Canadian Emissions Compliance

This Class (A) digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la Classe (A) respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

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