

## TE-6700 Series 2nd Generation Temperature Elements

The TE-6700 Series is our 2nd Generation of temperature elements. This line is comprised of attractively styled, feature-packed temperature sensing products offering ease of installation, user friendliness, and application flexibility in one package.

The TE-6700 Series Temperature Elements supersede the TE-6400 Series for space sensing applications. The 2nd Generation elements are designed for use with most Johnson Controls controllers, and now work directly with the VMA1200 and VMA1400 Series controllers. Johnson Controls consolidated the 300 original TE-64xx product code numbers to 40 TE-67xx numbers. This reduces product inventory, improves product delivery, and makes many features now standard.



Figure 1: TE-6700 Series Temperature Elements

Features and Benefits	
<input type="checkbox"/> <b>Temperature Sensor Time Response Improvement (TRI)</b>	Improves temperature control of the space, increases employee productivity and comfort, and reduces energy consumption
<input type="checkbox"/> <b>Controller Configuration Switch</b>	Allows users to adjust room comfort and to choose occupancy features that match the application and controller
<input type="checkbox"/> <b>Occupancy Light-Emitting Diode (LED) Indicator</b>	Displays the controller's current operating mode
<input type="checkbox"/> <b>Manual Override Pushbutton (PB)</b>	Signals the controller that the space is occupied in order to override time-of-day scheduling
<input type="checkbox"/> <b>Globally Scaled Unit</b>	Includes setpoint and bulb indicator (both optional) that measure Fahrenheit and Celsius ranges, 65 to 85°F (19 to 29°C)
<input type="checkbox"/> <b>Universal Mounting</b>	Ships with wallbox and surface mounting plates (all installation hardware included)
<input type="checkbox"/> <b>Single or Dual Setpoint Adjustment</b>	Allows for separate heating and cooling settings; makes setpoint viewing and adjustment easier
<input type="checkbox"/> <b>Analog Profile and Starfield Display Compatible</b>	Analyzes heating and cooling efficiency with the M-Series Workstation

## Product Overview

**IMPORTANT:** The TE-6700 Series elements are intended to provide an input to equipment under normal operating conditions. Where failure or malfunction of the TE-6700 could lead to an abnormal operating condition that could cause personal injury or damage to the equipment or other property, other devices (limit or safety controls) or systems (alarm or supervisory) intended to warn of, or protect against, failure or malfunction of the TE-6700 must be incorporated into and maintained as part of the control system.

TE-6700 Series is the second generation of temperature elements for space applications. The temperature sensor is time response improved, resulting in a 70% decrease in time response. This improvement in time response leads to:

- increased comfort and a reduction of hot/cold complaints
- increased comfort by eliminating temperature overshoot
- increased savings/reduced energy consumption
- extended life of HVAC (Heating, Ventilating, and Air Conditioning) products by eliminating adjustments due to slow thermal response or inaccurate temperature reporting

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 occupancy LED with pad-printed identification is standard. A red LED displays a controller's current operating mode: On = Occupied, Off = Unoccupied, Flashing = Standby.

Another new feature is the controller compatibility Dual Inline Package (DIP) switch, which programs the TE-6700 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-6700 is available with a phone 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.

When released, the TE-6700's access door swings down to reveal the Zone Bus connector and optional temperature indicator and setpoint adjustments.

Three temperature setpoint adjustment types are available:

- **Single Setpoint Adjustment, Warmer/Cooler:** setpoint can be adjusted up to heat or down to cool.
- **Single Setpoint Adjustment, Fahrenheit/Celsius:** setpoint can be adjusted to any value within the 65 to 85°F (19 to 29°C) range.
- **Dual Setpoint Adjustment, Fahrenheit/Celsius, Scaled:** separate heating and cooling setpoints can be individually adjusted within the 65 to 85°F (19 to 29°C) range.

The TE-6700 features a quick-mount design that saves time and simplifies installation. Two bases and screws are provided with the sensor, so it can be mounted directly to drywall (spring clips provided) or a U.S. wallbox.

## Dimensions

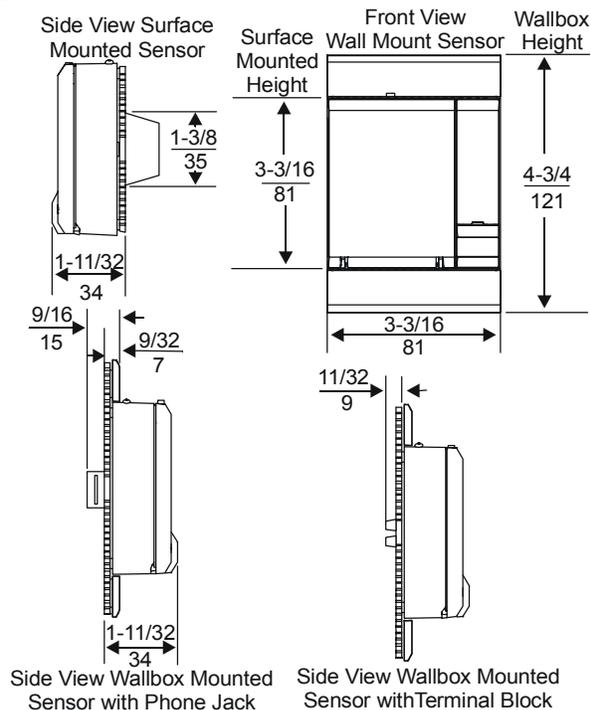


Figure 2: TE-6700 Dimensions, in. (mm)

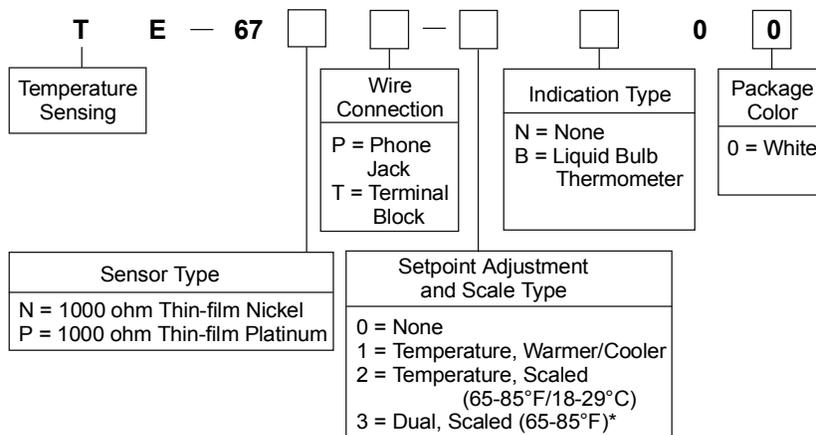
# Repair and Replacement

The TE-6700 units are not field repairable.

**IMPORTANT:** The Printed Circuit Board (PCB) is retained with a tamper-resistant mechanism. Removal of the PCB from the plastic housing will void the product warranty.

# Ordering Information

To order a replacement or an accessory, contact the nearest Johnson Controls representative. Specify the desired product code number from Figure 3 or Table 1.



\* These models do not have a functioning LED, but all models have the manual override PB.

Example 1: To order a nickel sensor with a phone jack, a warmer/cooler temperature setpoint, and a liquid bulb thermometer, specify Product Code Number TE-67NP-1B00.

Example 2: To order a platinum sensor with a terminal block, a scaled temperature setpoint, and no indication, specify Product Code Number TE-67PT-2N00.

**Figure 3: Ordering Template**

**Table 1: Accessories**

Product Code Number	Description
ACC-DWCLIP-0	Drywall Clip Mounting Kit (10/bag)
ACC-INSL-0**	Wallbox Mounting Pad (10/bag)
ACC-INSL-1**	Surface Mounting Pad (10/bag)
GRD10A-608	Plastic Guard with Baseplate and Mounting Ring
T-4000-119	Allen-head Adjustment Tool (30/bag)
TE-67D0-601	Door Replacement Kit with Johnson Controls Logo (10/box)
TE-67D0-602	Door Replacement Kit without a Logo (10/box)
TE-67E0-600	Replacement Endcaps (10/bag)
TE-67L-600	Fahrenheit Label Replacement Kit
TE-67L-601	Celsius Label Replacement Kit
TE-67S-600	Surface Mounting Kit
TE-67W-600	U.S. Wallbox Mounting Kit

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

# Specifications

<b>Product</b>	TE-6700 Series 2nd Generation Temperature Elements	
<b>Nickel Sensor</b>	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)
<b>Platinum Sensor</b>	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:	±0.65F° at 70°F (±0.36C° at 21°C)
<b>Temperature Indicator</b>	Type:	Liquid filled bulb thermometer
	Range:	40 to 90°F or 5 to 30°C
	Resolution:	Fahrenheit scale graduated at 10F° intervals; Celsius scale and graduated at 5C° intervals.
<b>Setpoint</b>	Single Adjustment:	Warmer/cooler, red/blue visual scale, or temperature – scaled °F/°C
	Dual Adjustment:	Heating and cooling, graduated scale 65 to 85°F (19 to 29°C)
	Resistance:	Nominal 1.5k ohm
	Resolution:	Fahrenheit scale graduated at 5F° intervals; Celsius scale at 2C° intervals
<b>Sensor Response Time</b>	One-time constant = 8 ±2 minutes at 10 feet per minute (fpm) airflow rate	
<b>Field Connections</b>	Phone Jack:	8-pin connector for 8-conductor 24 AWG phone cable
	Terminal Block:	Screw type terminals for 18 to 24 AWG wire
<b>Zone Bus Access</b>	6-pin connector with front access for a laptop with HVAC PRO™ software, Palm™ compatible handheld device with Variable Air Volume Modular Assembly Balancing Tool (VBT) software, or a Zone Terminal	
<b>Manual Override</b>	Integral momentary pushbutton (DIP switch selectable)	
<b>LED Display</b>	Red LED indicates three modes of operation (application and controller dependent)	
<b>Ambient Operating Conditions</b>	32 to 131°F (0 to 55°C) 0 to 100% RH, non-condensing; 85°F (29°C) maximum dew point	
<b>Ambient Storage Conditions</b>	-40 to 160°F (-40 to 71°C) 0 to 100% RH, non-condensing; 85°F (29°C) maximum dew point	
<b>Mounting Style</b>	Standard bases for surface or U.S. wallbox mounting, including hardware	
<b>Materials</b>	White plastic case with dark grey plastic mounting bases	
<b>Dimensions (H x W x D)</b>	3.2 x 3.2 x 1.4 in. (81 x 81 x 36 mm)	
<b>Shipping Weight</b>	1 lb (0.5 kg)	

*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.*



**Controls Group**  
507 E. Michigan Street  
P.O. Box 423  
Milwaukee, WI 53201

Printed in U.S.A.  
www.johnsoncontrols.com