

T606MSx-4 and T606MSx-4+PIR Series

# Multi-Stage Temperature and Humidity Controllers

## Description

The T606MSN-4 and T606MSN-4+PIR Series Non-programmable and T606MSP-4 and T606MSP-4+PIR Series Programmable Temperature and Humidity Controllers are specifically designed for control of multi-stage heating and cooling equipment, such as rooftop or self-contained units with a humidifier and/or dehumidifier.

The T606MSx-4+PIR Series Controllers have occupancy sensing capability built into the device. These are stand-alone devices that maximize up to 30% energy savings in high-energy usage light commercial buildings, such as schools and hotels, during occupied times by using additional setpoint strategies.

The T606MSx-4 and T606MSx-4+PIR Series Controllers provide exceptional temperature control in an easy-to-use and flexible package. All models have over 20 configurable parameters, enabling the controllers to adapt to a variety of applications.

The T606MSx-4 and T606MSx-4+PIR Series Controller models employ an embedded complete humidity solution with a unique, Proportional-Integral (PI) time-proportioning algorithm that virtually eliminates temperature offset associated with traditional, differential-based controllers.

Refer to the *T606MSx-4 and T606MSx-4+PIR Series Multi-Stage Temperature and Humidity Controllers Product Bulletin (LIT-12011654)* for important product application information.

## Features

- embedded humidification sequence (0 to 10 VDC output) and dehumidification sequence (dry contact)
- onboard occupancy sensor (Passive Infrared [PIR] Models)
- password protection option
- backlit Liquid Crystal Display (LCD)
- simplified setpoint adjustment



T606MSx-4 and T606MSx-4+PIR Series Controllers

- five easy-to-use interface keys
- three Light-Emitting Diodes (LEDs)
- one configurable digital input
- over 20 configurable parameters
- configurable auxiliary output

## Repair Information

If either the T606MSx-4 or T606MSx-4+PIR Series Thermostat Controller fails to operate within its specifications, replace the unit. For a replacement thermostat controller, contact the nearest Johnson Controls® representative.

## Accessories

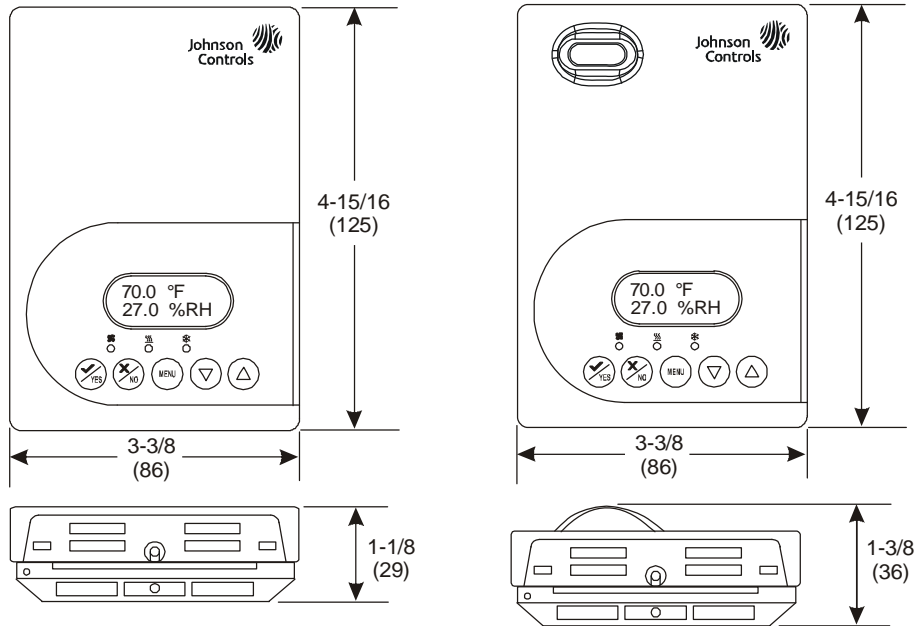
Code Number	Description
Hx-67 Series <sup>1</sup>	Duct- or Wall-Mount Humidity Sensor
TE-6361M-1 <sup>2</sup>	Duct-Mount Air Temperature Sensor
TE-6363P-1 <sup>2</sup>	Outside Air Temperature Sensor
TEC-3-PIR <sup>3</sup>	Cover with Occupancy Sensor

1. The humidity sensor must have a 0 to 10 VDC output. Remote wall-mounted version can be used for remote return or room air humidity sensing with the sensor mounted on the wall. Remote duct-mounted humidity sensor can be used for remote return air humidity sensing with the sensor mounted on the return air duct or as a supply air humidity sensor used as a high limit protection.
2. Additional TE-63xx-x Series 10k ohm Johnson Controls® Type II Thermistor Sensors are available; refer to the *TE-6300 Series Temperature Sensors Product Bulletin (LIT-216320)* for more details. When a TE-63xx-x Series Sensor is installed according to remote sensing wiring, the thermostat controller controls based off the temperature sensed by the TE-63xx-x Series Sensor.
3. The TEC-3-PIR Accessory Cover can be used to replace the existing cover on a non-PIR T606MSx-4 Series Thermostat Controller to provide occupancy sensing capability.

## Selection Chart

Code Number	Onboard Occupancy Sensor	Application
<b>Non-programmable</b>		
T606MSN-4	No	Multi-Stage Packaged Heating/Cooling Equipment with Humidifier and/or Dehumidifier
T606MSN-4+PIR	Yes	
<b>Programmable</b>		
T606MSP-4	No	Multi-Stage Packaged Heating/Cooling Equipment with Humidifier and/or Dehumidifier
T606MSP-4+PIR	Yes	

## T606MSx-4 and T606MSx-4+PIR Series Multi-Stage Temperature and Humidity Controllers (Continued)



T606MSx-4 Series Controller (Left) and T606MSx-4+PIR Series Controller (Right)  
Dimensions, in. (mm)

### Technical Specifications

T606MSx-4 and T606MSx-4+PIR Series Controllers		
<b>Power Requirements</b>	19 to 30 VAC, 50/60 Hz, 2 VA (Terminals RC and C) at 24 VAC Nominal, Class 2 or Safety Extra-Low Voltage (SELV)	
<b>Relay Contact Rating (Y2, Y1, G, W1, W2, and AUX)</b>	19 to 30 VAC, 1.0 A Maximum, 15 mA Minimum 3.0 A Inrush, Class 2 or SELV	
<b>Digital Input</b>	Voltage-Free Contacts across Terminal C to Terminal DI	
<b>Humidification Analog Output Rating</b>	0 to 10 VDC into 2k ohm Resistance Minimum	
<b>Wire Size</b>	18 AWG (1.0 mm Diameter) Maximum, 22 AWG (0.6 mm Diameter) Recommended	
<b>Temperature Sensor Type</b>	Local 10k ohm Johnson Controls Type II Negative Temperature Coefficient (NTC) Thermistor Sensor	
<b>Temperature Range</b>	<b>Backlit Display</b>	-40.0°F/-40.0°C to 122.0°F/ 50.0°C in 0.5° Increments
	<b>Heating Control</b>	40.0°F/4.5°C to 90.0°F/32.0°C
	<b>Cooling Control</b>	54.0°F/12.0°C to 100.0°F/38.0°C
<b>Accuracy</b>	<b>Temperature</b>	±0.9°F/±0.5°C at 70.0°F/21.0°C Typical Calibrated
	<b>Humidity</b>	±5% RH from 30 to 70% RH at 50 to 90°F (10 to 32°C)
<b>Minimum Deadband</b>	2F°/1C° between Heating and Cooling	
<b>Ambient Conditions</b>	<b>Operating</b>	32 to 122°F (0 to 50°C); 95% RH Maximum, Noncondensing
	<b>Storage</b>	-22 to 122°F (-30 to 50°C); 95% RH Maximum, Noncondensing
<b>Compliance</b>	<b>United States</b>	UL Listed, File E27734, CCN XAPX, Under UL 873, Temperature Indicating and Regulating Equipment
		FCC Compliant to CFR 47, Part 15, Subpart B, Class A
	<b>Canada</b>	UL Listed, File E27734, CCN XAPX7, Under CAN/CSA C22.2 No. 24, Temperature Indicating and Regulating Equipment
		Industry Canada, ICES-003
<b>Europe</b>	CE Mark – Johnson Controls, Inc., declares that this product is in compliance with the essential requirements and other relevant provisions of the EMC Directive 2004/108/EC.	
	<b>Australia and New Zealand</b>	C-Tick Mark, Australia/NZ Emissions Compliant
<b>Shipping Weight</b>	T606MSx-4 Models: 0.75 lb (0.34 kg) T606MSx-4+PIR Models: 0.77 lb (0.35 kg)	