T600xxx-3 Series Thermostats

Description

The T600xxN-3 Series non-programmable and T600xxP-3 Series programmable thermostats are specifically designed for control of single-stage, multi-stage, and heat pump commercial heating and cooling equipment. The T600xxP-3 Series thermostats are also specifically designed for control of rooftop units (with and without economizers).

The T600xxx-3 Series thermostats provide exceptional temperature control in an easy-to-use, yet flexible, package. The T600xxx-3 Series thermostats have over 20 configurable parameters, enabling the thermostats to adapt to a variety of applications.

The T600xxx-3 Series thermostats include several models: Single-stage (T600HCx-3), Heat Pump (T600HPx-3), Multi-stage (T600MSx-3), and Economizer (T600MEP-3). All thermostats use a unique Proportional-Integral (PI) proportional control algorithm that virtually eliminates temperature offset associated with traditional differential based thermostats.

Refer to the *T600xxx-3 Series Thermostats Product Bulletin (LIT-12011193)* for important product application information.

Features

- Backlit Liquid Crystal Display (LCD) — offers real-time control status of the environment in easy-to-read, English plain text messages with constant backlight that brightens during user interaction.
- Simplified Setpoint Adjustment — enables user to change the setpoint by simply pressing the UP/DOWN arrow keys.
- Five Easy-to-Use Interface Keys — allow for easy commissioning and adjustment of the thermostat and eliminates the need for Dual Inline Package (DIP) switches.
- Three Light-Emitting Diodes (LEDs) — provide fan, heating, and cooling status at a glance
- Two Configurable Digital Inputs — provide additional inputs for advanced functions such as remote night setback, occupancy override, and service or filter alarms.
- Over 20 Configurable Parameters — enable the thermostat to adapt to any application, allowing installer parameter access without opening the thermostat cover.
- Configurable Auxiliary Output — provides 24 VAC control for exhaust fans, lighting, and other auxiliary functions.
- Economizer Output (T600MEP-3) — controls economizer operation for single- and multi-stage unitary rooftop equipment.

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Repair Information

If the T600xxx-3 Series thermostat fails to operate within its specifications, replace the unit. For a replacement T600xxx-3 Series thermostat, contact the nearest Johnson Controls® representative.

Selection Chart

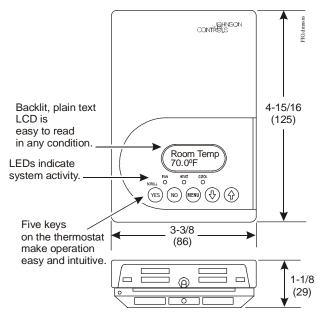| Code Number	Description	Applications
Non-Programmable		
T600HCN-3	Single-stage	Fan Coil Units, Unit Heaters, and Single-stage Packaged Heating/Cooling Equipment
T600HPN-3	Heat Pump	Heat Pump with up to 3 Heating/2 Cooling Stages
T600MSN-3	Multi-stage	Multi-stage Packaged Heating/Cooling Equipment
Programmable		
T600HCP-3	Single-stage	Fan Coil Units, Unit Heaters, and Single-stage Packaged Heating/Cooling Equipment
T600HPP-3	Heat Pump	Heat Pump with up to 3 Heating/2 Cooling Stages
T600MEP-3	Economizer	Packaged Rooftop Units with Economizers
T600MSP-3	Multi-stage	Multi-stage Packaged Heating/Cooling Equipment

Accessories

Code Number	Description
SEN-600-1	Remote Indoor Air Temperature Sensor
SEN-600-4	Remote Indoor Air Temperature Sensor with Occupancy Override and LED
TE-6361P-1	8 in. (203 mm)[1] Duct Mount Air Temperature Sensor
TE-6363P-1	Outdoor Air Temperature Sensor

1. Other probe lengths available.

T600xxx-3 Series Thermostats (Continued)

Backlit, plain text LCD is easy to read in any condition.

LEDs indicate system activity.

Room Temp 70.0°F

Five keys on the thermostat make operation easy and intuitive.

4-15/16 (125)

3-3/8 (86)

1-1/8 (29)

T600xxx-3 Series Thermostats Front Cover

Technical Specifications

T600xxx-3 Series Thermostats		
Power Requirements		19 to 30 VAC, 50/60 Hz, 2 VA (Terminals 4 and 5) at 24 VAC Nominal, Class 2 or Safety Extra-Low Voltage (SELV)
Relay Contact Rating Maximum Inductive		30 VAC, 1.0 A Maximum, 3.0 A In-Rush
Digital Inputs		Voltage-Free Contacts across Terminal C to Terminals DI1 or DI2
Economizer Output		0 to 10 VDC into 2k ohm resistance minimum (T600MEP-3 only)
Recommended Wire Size		18 AWG (1.0 mm Diameter) Maximum, 22 AWG (0.6 mm Diameter) Recommended
Sensor Type		Local 10k ohm NTC thermistor
Temperature Range	**Backlit Display**	-40.0°F/-40.0°C to 122.0°F/ 50.0°C in 0.5° Increments
	Heating Control	40.0°F/4.5°C to 90.0°F/32.0°C
	Cooling Control	54.0°F/12.0°C to 100.0°F/38.0°C
Accuracy	**Temperature**	±0.9F°/±0.5C° at 70.0°F/21.0°C Typical Calibrated
Minimum Deadband		2F°/1C° between Heating and Cooling
Ambient Conditions	**Operating**	32 to 122°F (0 to 50°C); 95% RH Maximum, Noncondensing
	Storage	-22 to 122°F (-30 to 50°C); 95% RH Maximum, Noncondensing
Dimensions (H x W x D)		4.94 x 3.38 x 1.13 in. (125 x 86 x 29 mm)
Compliance	**United States**	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
	Canada	UL Listed, File E27734, CCN XAPX7, Under CAN/CSA C22.2 No. 24, Temperature Indicating and Regulating Equipment
		Industry Canada, ICES-003
	Europe	CE Mark, EMC Directive 89/336/EEC
	Australia and New Zealand	C-Tick Mark, Australia/NZ Emissions Compliant
Shipping Weight		0.75 lb (0.34 kg)