

# TEC2145-2 N2 Networked Thermostat with Single Proportional Output and One-Speed Fan Control

## Description

The TEC2145-2 Thermostat is an N2 networked device that provides control of two-pipe fan coils, cabinet unit heaters, or other equipment using a proportional 0 to 10 VDC control input and one-speed fan control. The technologically advanced TEC2145-2 Thermostat features a Building Automation System (BAS) N2 Bus communication capability that enables remote monitoring and programmability for efficient space temperature control.

The TEC2145-2 Thermostat features an intuitive user interface with backlit display that makes setup and operation quick and easy. The thermostat also employs a unique, Proportional-Integral (PI) time-proportioning algorithm that virtually eliminates temperature offset associated with traditional, differential-based thermostats.

Refer to the *TEC2145-2 N2 Networked Thermostat with Single Proportional Output and One-Speed Fan Control Product Bulletin (LIT-12011029)* for important product application information.

## Features

- BAS N2 open communication — provides compatibility with a proven communication network; N2 Bus is widely accepted by Heating, Ventilating, and Air Conditioning (HVAC) control suppliers
- 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
- proportional 0 to 10 VDC control — offers additional application flexibility by providing more advanced control signals
- override interface key — allows for easy access of temporarily overriding the unoccupied mode
- simplified setpoint adjustment — enables the user to change the setpoint by simply pressing the **UP/DOWN** arrow keys
- two binary inputs — provide additional inputs for advanced functions such as remote night setback, service or filter alarms, motion detector, and window status
- over 20 configurable parameters — enable the thermostat to adapt to any application, allowing installer parameter access without opening the thermostat cover
- discharge air sensor — monitors unit efficiency



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## Repair Information

If the TEC2145-2 Thermostat fails to operate within its specifications, replace the unit. For a replacement thermostat, contact the nearest Johnson Controls® representative.

## Selection Chart

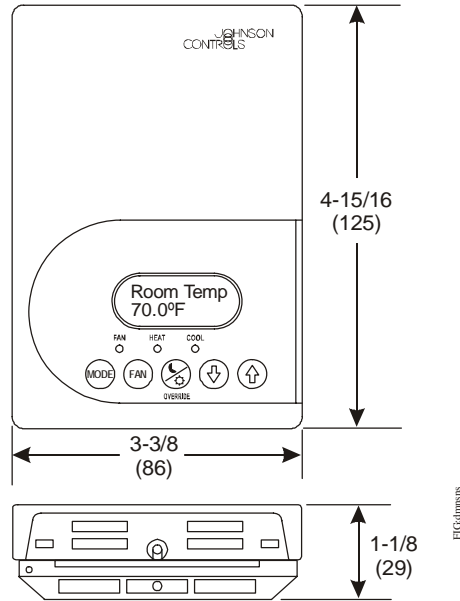
Code Number	Description	Applications
TEC2145-2	Networked N2 Bus, Two-Pipe, Proportional 0 to 10 VDC Control Output, and One-Speed Fan Control Thermostat	Control of Two-Pipe Fan Coils, Cabinet Unit Heaters, or Other Equipment Using a Proportional 0 to 10 VDC Control Input and One-Speed Fan Control

## Accessories

Code Number	Description
TE-6361P-1	Duct Mount Air Temperature Sensor
SEN-600-4 <sup>1</sup>	Indoor Air Temperature Sensor with Occupancy Override and Light-Emitting Diode (LED)
TE-636S-1	Strap-On Temperature Sensor

1. Remote indoor air temperature sensing cannot be accomplished using the SEN-600-4 with the TEC2145-2.

## TEC2145-2 N2 Networked Thermostat with Single Proportional Output and One-Speed Fan Control (Continued)



Thermostat Dimensions, in. (mm)

### Technical Specifications

TEC2145-2 N2 Networked Thermostat with Single Proportional Output and One-Speed Fan Control		
<b>Power Requirements</b>		19 to 30 VAC, 50/60 Hz, 2 VA (Terminals 4 and 5) at 24 VAC Normal, Class 2 or Safety Extra-Low Voltage (SELV)
<b>Analog Output Rating</b>		0 to 10 VDC into 2k ohm Resistance (Minimum)
<b>Fan Relay Output Rating</b>		30 VAC, 1.0 A Maximum, 3.0 A In-Rush
<b>Auxiliary Output Rating</b>	<b>Triac Output</b>	30 VAC, 1.0 A Maximum, 3.0 A In-Rush
<b>Digital Inputs</b>		Voltage-Free Contacts Across Terminal Scom to Terminals BI1, BI2, or UI3
<b>Wire Size</b>		18 AWG (1.0 mm Diameter) Maximum, 22 AWG (0.6 mm Diameter) Recommended
<b>Thermostat Measurement Range</b>		-40.0°F/-40.0°C to 122.0°F/50.0°C
<b>Temperature Sensor Type</b>		Local 10k ohm Negative Temperature Coefficient (NTC) Thermistor
<b>Resolution</b>		±0.2°F/±0.1°C
<b>Control Accuracy</b>		±0.9°F/±0.5°C at 70.0°F/21.0°C Typical Calibrated
<b>Control Range</b>	<b>Heating</b>	40.0°F/4.5°C to 90.0°F/32.0°C in 0.5° Increments
	<b>Cooling</b>	54.0°F/12.0°C to 100.0°F/38.0°C in 0.5° Increments
<b>Minimum Deadband</b>		2°F/1°C 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
	<b>Europe</b>	Industry Canada, ICES-003
	<b>Europe</b>	CE Mark, EMC Directive 89/336/EEC
	<b>Australia and New Zealand</b>	C-Tick Mark, Australia/NZ Emissions Compliant
<b>Shipping Weight</b>		0.75 lb (0.34 kg)