THERMOSTATS 2021

The power behind **your mission**

Johnson Controls

THERMOSTATS

ELECTRIC FANCOIL THERMOSTATS

SMART THERMOSTAT CONTROLLERS

ANALOG ROOM CONTROLLERS

ELECTRIC
FANCOIL THERMOSTATS

T125-E

STAND-ALONE FANCOIL THERMOSTATS

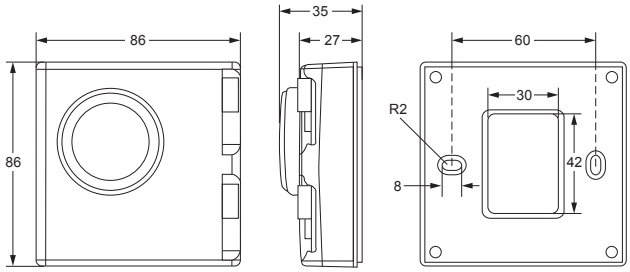
T125 electric fan coil thermostats are designed to control heating, cooling, or air conditioning unit in commercial, industrial and residential installation.

Typical application includes the control of fan coil units, packaged terminal air conditioners and combination heating and cooling equipment. As part of the system that consists of a two-way or three-way valve and a multi-speed line voltage fan.

FEATURES

- 220 V power supply
- Heating and Cooling mode
- 2-4 pipes configuration
- 3-speed fan override
- 86 x 86 mm room enclosures
- Temperature dial ranges 10 to 30°C
- Relay output max. 5A

DIMENSIONS *(in mm)*



ORDERING INFORMATION

CODES	BUILT-IN NTC	SETPOINT RANGE	2 PIPES (HEATING OR COOLING)	4 PIPES (HEATING AND COOLING)	OUTPUTS	
					PAT	ON/OFF
T125BAC-JS0-E	■	10 to 30°C	■	---	■	■
T125FAC-JS0-E			---	■	---	■

ELECTRIC
FANCOIL THERMOSTATS

T7600

MODBUS® FANCOIL THERMOSTATS

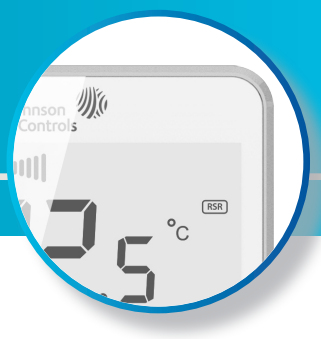
The T7600 Series Modbus® LCD thermostats are designed to control heating and cooling through air conditioning unit in commercial and residential application.

Typical applications include the control of fancoil units, floor heating, packaged terminal air conditioners and combination of heating and cooling equipment. As part of the system, T7600 series thermostat can control 2-way or 3-way valve and multiplespeed line voltage fan or ECM fan.

T7600 with its large LCD screen displays the working mode (cooling, heating, air venting, floor heating), fan speed, indoor temperature and set point.

FEATURES

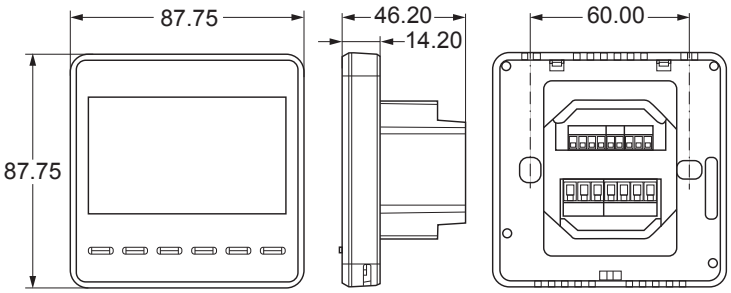
- Flush mount for a stylish appearance
- Large screen backlighted with timeout
- Stand Alone or Communicating in Modbus® RTU
- 2 or 4-pipes ON/OFF or Proportional
- Multispeed Fan or Proportional Fan speed (ECM)
- Customizable display can show actual temperature or setpoint only
- Protected against misuse in public spaces
- Configurable inputs
- Function, On/Off Timer, ESP filter control



ELECTRIC FANCOIL THERMOSTATS

T7600 - MODBUS® FANCOIL THERMOSTATS

DIMENSIONS *(in mm)*



ORDERING INFORMATION

CODES	POWER	MODE	INPUT	VALVES OUTPUTS	FAN CONTROLS	OPERATING CONDITION	COMM
T7601-TF20-9JS0	100-240 VAC 50/60 Hz	2 or 4-pipe On/Off 2-pipe three wires On/Off 2-pipe with floor heating 2-pipe with TiO2/ESP filter 2-pipe proportional (AO) Water source heat pump	**Input 1:** Remote Sensor or Autochangeover [1] **Input 2 Configurable:** Occupancy, SP reduction Dew point alarm Shut off Filter alarm	2 x SPST Relay 2.2A @ 240 VAC	ECM AO = 0 to 10 V Configurable with Cut-off relay	0 to 40°C 10 - 90 RH% non condensing	Modbus®
T7600-TF21-9JS0		Two pipe proportional (AO) Four pipe proportional (AO)		2 x AO 0 to 10 V (100 K Ohms)	3 x SPST Relay 2.2A @ 240 VAC		
T7600-TF20-9JS0		Two or four pipe On/Off Two pipe three wires On/Off Two pipe with floor heating Two pipe with TiO2/ESP filter Water source heat pump		2 x SPST Relay 2.2A @ 240 VAC	3 x SPST Relay 2.2A @ 240 VAC		
T7600-TB21-9JA0		Two pipe Proportional with Feedback	**Input 1:** Remote Sensor or Autochangeover [1] **Input 2 Configurable:** Occupancy, SP reduction Dew point alarm Shut off Filter alarm **Input 3:** AI for Valve Motor feedback to BMS	1 x AO 0 to 10 V (100 K Ohms)	3 x SPST Relay 2.2A @ 240 VAC		

Note

1 Input 1 can be used for remote temperature monitoring or in two pipe system to determine the seasonal changeover. Requires a 10K NTC JC Type II.

ELECTRIC
FANCOIL THERMOSTATS

T9000

STAND-ALONE, MODBUS®, BACNET® FANCOIL THERMOSTATS

With a frameless large touch screen, the T9000 Series Thermostats can display ambient temperature clearly and intuitively. The buttons are sensitive and very user-friendly.

The futuristic and hi-tech exterior design is loved by users from high-end office buildings, hotels, private hospitals, and high-end residential buildings.

The service life of the relay is designed to be turned on / off for 100,000 times. The eco-friendly shell materials meet the CE standard for flame retardants. High-quality materials and components ensure that the thermostats are safe, eco-friendly and reliable. The PCB was produced with a high-standard gold depositing procedure, to ensure better electrical performance, more sensitive touch, and more durable.

The thermostats have been certified by multiple industry standards, including CE, RCM, REACH, RoHS, BTL, WEEE and GB, to ensure stable performance.

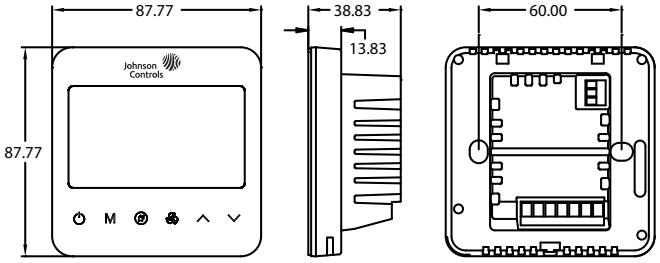
FEATURES

- **Modern Technology sense design**
  Touch, Frameless, Larger Screen Red Dot Design Award, quality for good design.
- **Energy Saving and Efficient**
  The T9000 Series Touch Screen Thermostats can be used to control ECM motors far better than industry standards, as they can reduce the motor's energy consumption by 30-50%.
- **Diverse Application Scenarios**
  Each of the T9000 Series Touch Screen Thermostats supports multiple application scenarios. They can control multiple types of equipment, including the 2-pipe fan coil unit (FCU) / 4-pipe FCU; the water source heat pumps; the simple air handling units (AHUs), boilers and floor heating systems; the 3-speed motors and ECM motors; the 2-wiring / 3-wiring on / off valves, modulating control valves and floor heating valves; as well as other air purification units (e.g. TiO2 / ESP).
- **High quality**
  High quality spec component selection, Relays 100k on/off times life cycle. No need to open thermostat, 3 step installation. Multi-certification CE, BTL, high quality component and material.
- **Smart, Optimize Control**
  Adopting 32-bit high-performance MCU to ensure more accurate control and more powerful functions. BACnet® and Modbus® protocols that can be seamlessly connected to the building automation system, to achieve the best room climate control.

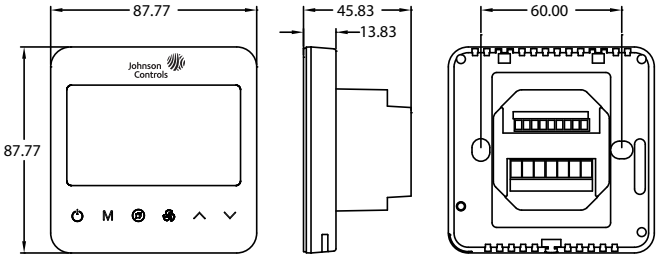
ELECTRIC FANCOIL THERMOSTATS

T9000 - STAND-ALONE, MODBUS®, BACNET® FANCOIL THERMOSTATS

DIMENSIONS *(in mm)*



T9200



T9600 - T9800

ORDERING INFORMATION

CODES	DESCRIPTION	COLOR
T9200-TB21-1JS0	Touch screen Standalone Thermostat, 2 or 4 Pipe FCU Application, On/Off Valve Control with ECM fan, 100-240 VAC	Black
T9200-TF20-1JS0	Touch screen Standalone Thermostat, 2 or 4 Pipe FCU Application, On/Off Valve Control with 3 speed fan speed control, 100-240 VAC	Black
T9600-TF20-1JS0	Touch screen Modbus Thermostat, 2 or 4 Pipe FCU Application, On/Off Valve Control with 3 speed fan speed control, 100-240 VAC	Black
T9600-TF21-1JS0	Touch screen Modbus Thermostat, 2 or 4 Pipe FCU application, Proportional Valve Control with 3 speed fan speed control , 100-240 VAC	Black
T9601-TF20-1JS0	Touch screen Modbus Thermostat, 2 or 4 Pipe FCU application, ON/OFF & Proportional Valve Control, EC motor fan speed control, 100-240 VAC	Black
T9603-T000-1JF0	Touch screen Modbus Thermostat, floor heating application, 100-240 VAC	Black
T9800-TF20-1JS0	Touch screen BACnet® Thermostat, 2-pipe FCU / 4-pipe FCU / 3-speed motors / ON/OFF valves control, 100-240VAC	Black
T9800-TF21-1JS0	Touch screen BACnet® Thermostat, 2-pipe FCU / 4-pipe FCU/ 3-speed motors / ECM fan, ON/OFF valves control, 24 VAC	Black
T9800-TB21-1JA0	Touch screen BACnet® Thermostat 2-pipe FCU, Proportional valve; 3 speed fan, 100-240VAC	Black

Note

T9200 series back plate is NOT compatible with most of the European electrical boxes. Carefully assess installation constrains before ordering.

SMART THERMOSTAT CONTROLLERS

TEC3000

STAND-ALONE, BACnet® MS/TP OR N2 NETWORKED

The TEC3000 Color Series Thermostat Controllers are stand-alone and field-selectable BACnet® MS/TP or N2 networked devices that provide on/off, floating, and proportional control of the following:

- Local hydronic reheat valves
- Pressure-dependent VAV equipment with or without local reheat
- Two- or four-pipe fan coils
- Cabinet unit heaters
- Other zoning equipment using an on/off, floating, or 0 to 10 VDC proportional control input
- Single- or two-stage control of unitary rooftop units (RTUs)
- Single- or two-stage control of RTUs with economizers
- Single- or two-stage control of heat pumps
- Single- or two-stage control of heat pumps with economizers

FEATURES

- **Two configurable binary inputs -** Provide additional inputs for advanced functions such as remote night setback, service or filter alarms, motion detector, and window status.
- **Field-Selectable BACnet® MS/TP or N2 Networked Communication (TEC36xx-1x-000 Models) -** Simplifies the upgrade from N2 networked communication to BACnet® MS/TP networked communication without changing hardware.
- **USB port configuration -** Rapidly clone the configuration between like units through simple backup and restore features from a USB drive to reduce installation time.
- **Programmable in seven languages -** Provides English, Spanish, French, German, Italian, Dutch, Portuguese (requires a downloadable language pack)
- **Backlit full-color liquid crystal display (LCD) -** Offers an intuitive color backlit display that makes setup and operation quick and easy. The new display features on all models and offers real-time control status of the environment in easy-to-read, plain text messages with an adjustable backlight that brightens during user interaction.
- **Configurable touchscreen UI -** Facility managers can limit the user interaction with the thermostat controller display based on specific energy policies.
- **Various models available -** Offers models in modern black (*hex #2d2926 or RAL 9017*) or white (*hex #F4F5F0 or RAL 9016*) highgloss designs with or without the Johnson Controls logo.

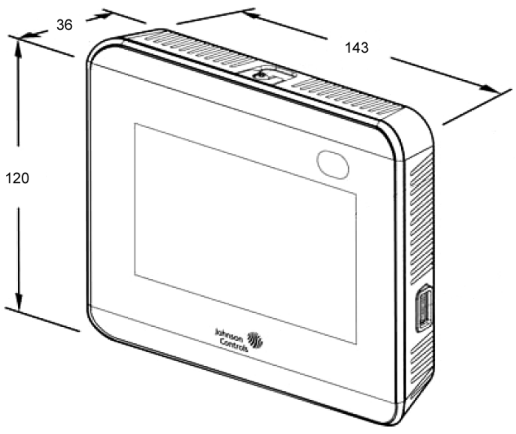
SMART THERMOSTAT CONTROLLERS

TEC3000 - STAND-ALONE, BACnet® MS/TP OR N2 NETWORKED

FEATURES

- **End-of-line switch -** Simplifies the layout and installation of communication buses.
- **Mobile Access Portal (MAP) Gateway compatibility (MAP Release 4.0 or later) -** View the equipment and control the conditions through your mobile devices.
- **Onboard occupancy sensor (TEC3031-1x-000 and TEC3xx3-1x-000 Models) -** Provides energy savings in high-energy usage commercial buildings without additional installation time or cost.
- **Integral humidity sensor -** Monitors space humidity on all models. Activates dehumidification control on two-pipe fan coil units with reheat and four-pipe fan coil units with or without reheat.
- **Multiple fan configurations for fan coil equipment types -** Provide fieldselectable single-speed, multi-speed, and variable-speed fan control capabilities.
- **Full line of remote TE-6300 Series Temperature Sensors -** Support a wide usage commercial buildings without additional installation time or cost.
- **Built-in schedule object -** Allows all wireless and wired models of thermostat controllers to be scheduled as stand-alone devices; allows wireless and BACnet® MS/TP models to be defined and adjusted through the building automation system.
- **Optimal start -** Allows each thermostat controller to anticipate the heating or cooling needs of a space by starting the equipment early enough to reach the setpoint at the beginning of the scheduled occupancy.
- **Auto-tuned control loops -** Reduce commissioning time, eliminate change-ofseason recommissioning, and reduce wear and tear of the mechanical devices.
- **Load shed -** Commands a load shed input to offset the heating and cooling setpoints by a fixed amount on networked models. The change rate of the setpoints is adjustable. The load shed feature is in place to help satisfy the California Title 24 requirements that are defined in joint appendix JA5, section JA5.2.4 for demand signal response. The trigger for this event is defined in another controller and passed through the network command.

DIMENSIONS *(in mm)*



SMART THERMOSTAT CONTROLLERS

TEC3000 - STAND-ALONE, BACnet® MS/TP OR N2 NETWORKED

ORDERING INFORMATION

CODES	CONTROL OUTPUT	COLOR	JCI LOGO
TEC3312-13-000	Stand-alone thermostat, FCU/VAV, ON/OFF or Floating, Dehumidification, Full color	■	■
TEC3312-14-000	Stand-alone thermostat, FCU/VAV, ON/OFF or Floating, Dehumidification, Full color	□	■
TEC3313-14-000	Stand-alone thermostat, FCU/VAV, ON/OFF or Floating, Occupancy & Dehumidification, Full color	□	■
TEC3322-13-000	Stand-alone thermostat, FCU/VAV, 0-10VDC Proportional, Dehumidification, Full color	■	■
TEC3322-14-000	Stand-alone thermostat, FCU/VAV, 0-10VDC Proportional, Dehumidification, Full color	□	■
TEC3323-14-000	Stand-alone thermostat, FCU/VAV, 0-10VDC Proportional, Occupancy & Dehumidification, Full color	□	■
TEC3330-13-000	Stand-alone thermostat, RTU/heat pump with Economizer, Full color	■	■
TEC3330-14-000	Stand-alone thermostat, RTU/heat pump with Economizer, Full color	□	■
TEC3331-14-000	Stand-alone thermostat, RTU/heat pump with Economizer, Occupancy Sensor, Full color	□	■
TEC3612-13-000	MS/TP or N2 Thermostat, MSTP or N2, FCU/VAV, ON/OFF or Floating, Dehumidification, Full color	■	■
TEC3612-14-000	MS/TP or N2 Thermostat, FCU/VAV, ON/OFF or Floating, Dehumidification, Full color	□	■
TEC3613-14-000	MS/TP or N2 Thermostat,, FCU/VAV, ON/OFF or Floating, Occupancy & Dehumidification, Full color	□	■
TEC3622-13-000	MS/TP or N2 Thermostat, FCU/VAV, 0-10VDC Proportional, Dehumidification, Full color	■	■
TEC3622-14-000	MS/TP or N2 Thermostat, FCU/VAV, 0-10VDC Proportional, Dehumidification, Full color	□	■
TEC3623-14-000	MS/TP or N2 Thermostat, FCU/VAV, 0-10VDC Proportional, Occupancy & Dehumidification, Full color	□	■
TEC3630-13-000	MS/TP or N2 Thermostat, RTU/heat pump with Economizer, Full color	■	■
TEC3630-14-000	MS/TP or N2 Thermostat, RTU/heat pump with Economizer, Full color	□	■
TEC3631-14-000	MS/TP or N2 Thermostat, RTU/heat pump with Economizer, Occupancy Sensor, Full color	□	■

ANALOG
ROOM CONTROLLERS

TC-8900 / PM-8900

ROOM THERMOSTATS

TC-8900 is a family of analogue controllers designed for control of fan coils with 2-pipe, 2-pipe with change-over, 2-pipe with electrical coil or 4-pipe configurations.

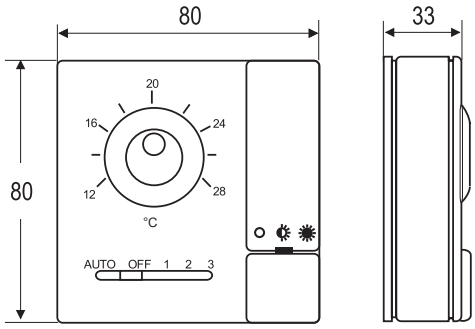
For applications without fan speed control the family includes stand alone units (TC-890x), local controllers (TC-893x) with remote setpoint module (ES-8930) and local controllers (TC-894x) with central setpoint module (ES-8940).

For applications with fan speed control the family includes the PM-8900 power modules in connection with TC-894x with or without central setpoint module (ES-8940).

FEATURES

- 2-pipe, 2-pipe with change-over, 2-pipe with electrical coil or 4-pipe configurations with and without 3-speed fan override
- 80 x 80 mm room enclosures
- Temperature dial ranges 12 to 28°C, +/-
- 24 VAC power supply for the TC-8900 controls, 230 VAC in connection the the PM-8900 power module

DIMENSIONS *(in mm)*



ORDERING INFORMATION

TC-890x STAND ALONE CONTROLLERS

CODES	BUILT-IN NTC K10 SENSING ELEMENT	SETPOINT RANGE	INPUT 0...10 V	FAN OUTPUT	OUTPUTS PAT	OUTPUTS 0...10 V	OUTPUTS DAT	OUTPUTS ON/OFF
TC-8903-1131-WK	■	12 to 28°C	---	---	1	---	---	---
TC-8901-2131-WK					---	2	---	---
TC-8904-2131-WK					---	---	2	---
TC-8906-2131-WK					---	---	---	2
TC-8903-1132-WK	---				1	---	---	---
TC-8901-2132-WK					---	2	---	---
TC-8904-2132-WK					---	---	2	---
TC-8906-2132-WK					---	---	---	2
TC-8903-1151-WK	■	0 to 40°C			1	---	---	---
TC-8903-1152-WK	---				1	---	---	---
TC-8903-1183-WK		0...100%	■		1	---	---	---
TC-8901-2183-WK					---	2	---	---

TC-893x LOCAL CONTROLLERS WITH ES-8930-3031-WK REMOTE SETPOINT MODULE

CODES	BUILT-IN NTC K10 SENSING ELEMENT	SETPOINT RANGE	FAN OUTPUT	OUTPUTS PAT	OUTPUTS 0...10 V	OUTPUTS DAT	OUTPUTS ON/OFF
TC-8933-1112-W	---	---	---	1	---	---	---
TC-8931-2112-W				---	2	---	---
TC-8934-2112-W				---	---	2	---
TC-8936-2112-W				---	---	---	2
ES-8930-3031-WK	■	12 to 28°C		---	---	---	---

ORDERING INFORMATION

TC-894x LOCAL CONTROLLERS WITH ES-8940 CENTRAL SETPOINT MODULE

CODES	BUILT-IN NTC K10 SENSING ELEMENT	SETPOINT RANGE	FAN OUTPUT	OUTPUTS			
				PAT	0...10 V	DAT	ON/OFF
TC-8943-1141-WK	■	+/-	---	1	---	---	---
TC-8941-2141-WK				---	2	---	---
TC-8944-2141-WK				---	---	2	---
TC-8946-2141-WK				---	---	---	2
ES-8940-4130-WK	---	12 to 28°C		---	---	---	---

TC-894x LOCAL CONTROLLERS WITH ES-8940 CENTRAL SETPOINT MODULE

CODES	BUILT-IN NTC K10 SENSING ELEMENT	SETPOINT RANGE	FAN OUTPUT	OUTPUTS	POWER MODULE CODES	CONFIGURATION
TC-8902-1031-WK	■	12 to 28°C	3 Speed	1 x 0...10 VDC 1 x DAT 230 V 1 x DAT 24 V	PM-8902-0500 PM-8905-0300 PM-8905-0500	2-pipe with change over
TC-8907-1031-WK				1 x Relay 3A 230 V/24 V	PM-8907-0300	
TC-8902-2031-WK				2 x 0...10 VDC 2 x DAT 230 V 2 x DAT 24 V	PM-8902-0500 PM-8905-0300 PM-8905-0500	4-pipe
TC-8907-2031-WK				2 x Relay 3A 230 V/24 V	PM-8907-0300	
TC-8902-1032-WK	---			1 x 0...10 VDC 1 x DAT 230 V 1 x DAT 24 V	PM-8902-0500 PM-8905-0300 PM-8905-0500	2-pipe with change over
TC-8907-1032-WK				1 x Relay 3A 230 V/24 V	PM-8907-0300	
TC-8902-2032-WK				2 x 0...10 VDC 2 x DAT 230 V 2 x DAT 24 V	PM-8902-0500 PM-8905-0300 PM-8905-0500	4 pipe
TC-8907-2032-WK				2 x Relay 3A 230 V/24 V	PM-8907-0300	
TC-8942-2041-WK (only in connection with ES-8940-4130-WK)	■	+/- on local controller TC-89, 12 to 28°C on ES-8940 central setpoint module		2 x 0...10 VDC 2 x DAT 230 V 2 x DAT 24 V	PM-8902-0500 PM-8905-0300 PM-8905-0500	
TC-8947-2041-WK (only in connection with ES-8940-4130-WK)				2 x Relay 3A 230 V/24 V	PM-8907-0300	