



TS1 Series Thermostats

For use with fan coil units (FCU) in international markets



Carrier's TS1 Series thermostats provide flexible temperature control for office buildings, hotels, and dorm rooms. They feature a simple push-button interface for controlling space temperature, fan speed, and operating mode. With support for BACnet MS/TP and Modbus RTU protocols, they integrate easily into building automation systems (BAS), including the i-Vu® system. Available in multiple configurations to support specific fan coil equipment requirements and ventilation strategies, they can be used in both single-zone and multi-zone buildings.



Features/Benefits

- **Energy Management with 7-day Scheduling:** Supports multi-period, 7-day scheduling, leveraging the keycard AI/DI input to automatically adjust setpoints for energy efficiency based on room occupancy.
- **Versatile Installation for Broad Application:** Supports 2-pipe and 4-pipe fan coil units, 3-speed Permanent Split Capacitor (PSC) or 0-10V Electronically Commutated Motor (ECM) fan control, and 0-10V or ON/OFF valve control. Can operate stand-alone or as part of a BAS using the BACnet MS/TP or Modbus RTU protocol.
- **Security and Policy Compliance:** Designed to prevent unauthorized access and tampering via configurable button and menu lockout options.
- **Comfort Management & Intelligent Control:** Features integrated temperature sensor and an intuitive push button interface for controlling space temperature, fan speed, and heating/cooling/ventilation modes.
- **Enhanced Reliability and Reduced Service Calls:** Settings are battery backed and retained after power outages. Built-in diagnostics provide clear alarm/fault codes in case of sensor malfunction.
- **Maximize Design Flexibility and System Integrity:** Enables customized solutions using the AI/DI input terminals to support an analog input (for remote temperature sensing) or a dry contact input (for a third party keycard or interlocks).

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Part Numbers and Features

Part Number	FCU Type	Fan Type	Valve Type	Protocol	Color
TS1-2-P-XW	2 pipe	Permanent Split Capacitor (PSC) Fan	ON/OFF or 0-10V	Standalone	White
TS1-4-P-XW	4 pipe	PSC fan	ON/OFF or 0-10V	Standalone	White
TS1-2-E-XW	2 pipe	Electronically Commutated (EC) Fan	ON/OFF or 0-10V	Standalone	White
TS1-4-E-XW	4 pipe	EC fan	ON/OFF or 0-10V	Standalone	White
TS1-2-P-MW	2 pipe	PSC fan	ON/OFF or 0-10V	Modbus	White
TS1-4-P-MW	4 pipe	PSC fan	ON/OFF or 0-10V	Modbus	White
TS1-2-E-MW	2 pipe	EC fan	ON/OFF or 0-10V	Modbus	White
TS1-4-E-MW	4 pipe	EC fan	ON/OFF or 0-10V	Modbus	White
TS1-2-P-BW	2 pipe	PSC fan	ON/OFF or 0-10V	BACnet	White
TS1-4-P-BW	4 pipe	PSC fan	ON/OFF or 0-10V	BACnet	White
TS1-2-E-BW	2 pipe	EC fan	ON/OFF or 0-10V	BACnet	White
TS1-4-E-BW	4 pipe	EC fan	ON/OFF or 0-10V	BACnet	White

Specifications

Product Type	FCU Thermostat
Application Options	2-pipe FCU or 4-pipe FCU, PSC, or ECM fan motor, 0-10V or ON/OFF valve control
Communication	Standalone, Modbus RTU, or BACnet MS/TP (EIA-485 A, B wiring terminals), with baud rates up to 115,200 bps Recommended Max. of 32 devices
Power Requirements	Supply: AC 90–240VAC (L,N), 50/60Hz Max. Load Current: < 5 A (Resistive) , < 2 A (Inductive) Consumption: < 1W
Wiring Termination	Max cable 2.5 mm ² per terminal
Display	Backlit LCD with Metric Units (°C)
Input	AI - Remote Temperature Sensor (low voltage) DI - Keycard Accessory (Dry Contact Input)
Outputs	L, M, H, Valve, 0-10V (2-Pipe, PSC/AC Fan) L, M, H, C-Valve, H-Valve, 0-10V, 0-10V (4-Pipe, PSC/AC Fan) 0-10V (EC Fan), Valve, 0-10V (2-Pipe, ECM Fan) 0-10V (EC Fan), C-Valve, H-Valve, 0-10V, 0-10V (4-Pipe, ECM Fan) Minimum Load = 0.5 ohms Maximum Load = <5A (resistive), <2A (inductive) Supports line voltage (90-240VAC) for fan speed and valve control.
Environmental Operating Range	0°C to 50°C, Humidity: 5–85% RH (non-condensing)
Compliance	CE mark, LVD 2014/35/EU, EMC 2014/30/EU, RoHS 2011/65/EU, REACH #1907/2006
Enclosure	PC+ABS UL94-5 Fire Retardant, IP30 rated, 86(H) × 86(W) × 16.75(D) mm
Scheduling	7-day/multiple periods per day
Temperature Sensor	Accuracy: ±1°C Range: 5°C to 35°C
Humidity Sensor	Accuracy: ±5% Range: 0 - 100%
Display Resolution	±0.5°C
Setpoint Range	5°C–35°C
Mounting	Standard 60 mm wall box mounting

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Dimensions - mm (in)

