

TC-9102 Series

Terminal Controller



Description

The TC-9102 Terminal Controller is an electronic device for digital control of fan coil unit applications. Four controller models offer a competitive advantage for those projects that require a Direct Digital Control (DDC) fan coil application.

You can easily configure point inputs and outputs for control of the fan coil as either a standalone controller or connected to the Metasys Network through a Network Control Module (NCM), through the Companion System, or through the Facilitator System.

Features

- HVAC PRO for Windows is easy to configure and commission
- N2 Bus communication for facility-wide control efficiency

- compact size makes it ideal for space limited installation
- On/Off, 3-speed, and proportional speed fan for maximum comfort and control
- Internal relays; no additional relays required for motors up to and including 1/8 hp
- N2 opto-isolation minimizes electronic noise
- wall-mounted thermostat with setpoint dial and occupancy button on cover provide user-friendly adjustment
- choose between standalone operation or networking capabilities

To Order

See the selection chart on the next page.

Specifications

TC-9102 Terminal Controller	
Supply Voltage	24 VAC, -15% to +10%, 50-60 Hz
Power Consumption	3 VA Controller and Room Command Module
Ambient Operating Conditions	0 to 50°C (32 to 122°F); 10 to 90% RH non-condensing
Ambient Storage Conditions	-40 to 70°C (-40 to 158°F); 10 to 90% RH non-condensing
Terminations	Terminal block for one 1.5 mm ² (18 AWG) (maximum) cable and 2.5 mm ² (14 AWG) for fan terminal block; Rated for 4 lb-in maximum torque
Serial Interfaces	Optically isolated RS-485 interface for N2 Bus connection; 9600 baud
Controller Addressing	1 to 255 selectable on DIP switches (6) and jumpers (2)
Mounting	DIN rail or surface (two brackets supplied with controller)
Housing	Material ABS + polycarbonate, self extinguishing UL94 V0
	Protection IP30 (IEC529)
Dimensions (H x W x D)	Standard Terminals: 118 x 108 x 31 mm (4.65 x 4.25 x 1.22 in.) Allow an extra 0.43 in. for Communications terminal
Inputs	Room Temperature Sensor NTC Thermistor; 32° to 105°F (0° to 40°C);
	Remote Setpoint 10K ohm potentiometer
	3-speed Fan Override 10K ohm potentiometer
	Occupancy Button Momentary contact
	Window Contact Closed (<1K ohm) = window closed
	Occupancy Sensor Closed (<1K ohm) = occupied
Outputs	Heating/Cooling Control:
	Analog 0 to 10 VDC, maximum 10 mA
	2 DAT Triacs rated at 24 VDC, maximum 0.5A (maximum 1 mA leakage current)
	2 PAT Triacs rated at 24 VDC, maximum 0.5A (maximum 1 mA leakage current)
	2-stage On/Off Triacs rated at 24 VDC, maximum 0.5A (maximum 1 mA leakage current)
	PWM (Europe only) For solenoid valves with Power Driver Module (VA-7400-8950) only
	Fan Control:
	On/Off Relay contact rated at 125/250 VAC, maximum 3A, 1/8 hp
	3-speed Relay contact rated at 125/250 VAC, maximum 3A, 1/8 hp
	Proportional 0 to 10 VDC, maximum 10 mA
Standards Compliance	CSA C22.2 No. 205, FCC Part 15, Subpart B, Class A, IEEE 446, IEEE 472, IEEE 587 Category A, UL 916
Agency Listings	UL Listed and CSA Certified as part of the Metasys Network

TC-9102 Series Terminal Controller (Continued)

Selection Chart

Points	Rating	Code Number TC-9102-0221 FA-TC9102-0221	Code Number TC-9102-0331 FA-TC9102-0331	Code Number TC-9102-0332 FA-TC9102-0332
		Fan: On/Off Heat/Cool: 0 to 10 VDC	Fan: On/Off Heat/Cool: Incremental ^(a)	Fan: 3-speed Heat/Cool: Incremental ^(a)
Analog Inputs: Zone Temperature Remote Setpoint Fan Override (-0332 only)	32 to 105°F (NTC) 0 to 10K ohms (Potentiometer) 0 to 10K ohms (Potentiometer)	2 inputs	2 inputs	3 inputs
Binary Inputs: Window Contact Occupancy Sensor Occupancy Button on Thermostat	<1K ohms <1K ohms <1K ohms	3 inputs	3 inputs	3 inputs
Analog Outputs Heat/Cool (2-proportional) Fan	10 mA at 10 VDC maximum 10 mA at 10 VDC maximum	2 outputs	0 outputs	0 outputs
Binary Outputs: Heat/Cool (4-incremental) Fan	0.5 Amperes at 24 VAC 3 Amperes at 120/250 VAC	1 output	5 outputs	7 outputs

(a) 2-stage, PAT, or DAT heating / cooling control options available. Both heating / cooling use the same option.