

TEC with Expanded I/O Capability



Figure 1. TEC with Expanded I/O Capability.

The TEC with Expanded I/O Capability (Figure 1) controller is used only as a point expansion device, with no control application in effect. This controller is designed to reside on the Siemens control system.

Features

- I/O points assigned and changed locally or remotely
- Returns from power failure without operator intervention
- Plenum rated controller
- No calibration required, thereby reducing maintenance costs
- Secure Mode (P/N 540-863U) prevents unauthorized users from making changes to the controller through the HMI port or room sensor (supports FDA 21 CFR Part 11 compliance – guidelines for protection of electronic records)
- Application in P/N 540-863U includes a user-adjustable offset for the room temperature reading when required for validation purposes.

Applications

The TEC with Expanded I/O doesn't have any application control – only expanded I/O.

Secure Mode Features

Secure Mode

The TEC with Expanded I/O is also offered with an optional feature, Secure Mode (P/N 540-863U). Secure Mode prevents unauthorized users from making any changes to the controller through the HMI port or room sensor. This functionality allows the TEC to support FDA 21 CFR Part 11 compliance - guidelines for protection of electronic records.

Hardware

Controller Board

The TEC with Expanded I/O consists of an electronic controller assembly. This controller provides all wiring terminations for system and local communication and power. The cable from the room sensor (purchased separately) connects to an RJ-11 jack on the controller. All other connections are removable terminal blocks. The controller assembly is mounted on a plastic track that mounts directly on the terminal box. An optional enclosure (P/N 550-002) protects the controller assembly.

The controller interfaces with, but doesn't provide direct control of the following external devices:

- Temperature sensors (room, duct, immersion, and outside air)
- Service and commissioning tools

- Digital input devices (dry contacts from motion sensors, alarm contacts)
- Digital output devices (fan, stages of electric heat)

Room Sensor

The room sensor connection to the controller board consists of a quick-connect RJ-11 jack. This streamlines the installation and reduces the controller start-up time.

Terminal Box Controller Specifications

Power Requirements	
Operating Range	19.2 to 27.6 Vac 50 or 60 Hz
Power Consumption	60 VA maximum @ 24 Vac
Input	
Stat	1 room temperature sensor 1 set point (optional) 1 DI override
Digital	2 dry contacts
Configurable (AI or DI)	1 0-10V, 4-20mA or DI 2 100K Ohm or DI
Output	
Analog	3 0-10 V, 5 mA maximum
Digital	6 DO 24 Vac optically isolated solid state switch @ .5 amp
Controlled Temperature Accuracy, Heating, or Cooling	
	±1.5°F (0.9°C)
Dimensions	
	4-1/8" W x 11-1/4" L x 2" H (105 mm x 286 mm x 51 mm)
Weight	
	Approx. 3 lbs. (1.35 kg)
Communications	
Remote	LAN Trunk
Local	WCIS
Ambient Conditions	
Shipping & Storage Temperature	-13°F to 158°F (-25°C to 70°C)
Operating Temperature	32°F to 122°F (0°C to 50°C)
Humidity Range	5 to 95% rh (non-condensing)
Agency Listings	
UL Listing	UL 916 PAZX
CSA Certified	Canadian Standards c22.2 No. 205-M1983
FCC Compliance	

Product Ordering Information

Description	Product Part Numbers
TEC with Expanded I/O	540-863J
TEC with Expanded I/O with Secure Mode	540-863U

Document Information

Specification Sheet/Application Bulletin	Document Part Number
Room Temperature Sensors – Series 1000	149-312P25
Duct Temperature Sensor	149-134P25

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