

# Digital Temperature Controllers

# E5CN-T



## 1/16 DIN Size Controllers with 3-Color Display

- Fast sampling rate (250 ms) and short control period (0.5 s minimum) improves response
- Password protected settings limit access to prevent tampering
- Easy setting and monitoring using 11-segment negative transmissive LCD display
- 3-color display can indicate changes in PV status to make monitoring more informative
- Temperature controllers accept thermocouple, infrared and platinum RTD inputs
- Improved PID algorithm for tight control and high accuracy
- Optional software enables fast and easy controller setup and monitoring via PC
- Software also offers "cloning" capability and enhanced security features through "parameter lockout" feature
- Built-in PC communication port reduces costs and simplifies installation
- Option units include event input, communications, 1-phase and 3-phase heater burnout, and a second control output



- Water-resistant front panel rated NEMA 4X/IP66
- Relay, long-life relay, voltage and current outputs
- Compact: measures 48 H x 48 W x 78 D mm
- 3-year warranty

## Specifications

- Thermocouple inputs: Types K, J, T, L, E, U, N, R, S, B
- Platinum RTD inputs: Pt100 and JPt100
- Omron infrared temperature sensor input: 10° -70° C, 60° - 120° C, 115° -165° C, 160° -260° C
- Voltage input: 0 to 50 mV
- Relay output: SPST-NO, 3 A at 250 VAC
- 100,000 electrical operations (standard)
- 1 million operations (long-life relay)
- Voltage output: 12 VDC ±15% for SSR, 21 mA max. load with short-circuit protection
- Current output: 4-20 mA DC, 600 Ω max., approx. 2600 resolution
- Voltage pulse output is for driving an external SSR


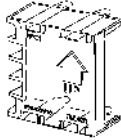

## Temperature Controllers

Temperature inputs	Accuracy	Voltage	Alarm outputs	Control outputs	Model
Thermocouple, Platinum RTD, Omron infrared temperature sensor, Voltage	Thermocouple: ±0.5% of indicated value or ±1° C (whichever is greater), ±1 digit max.	100-240 VAC, 50/60 Hz	0	Relay	E5CN-RMT-500 AC100-240
				Voltage	E5CN-QMT-500 AC100-240
				Current	E5CN-CMT-500 AC100-240
			2	Relay	E5CN-R2MT-500 AC100-240
				Voltage	E5CN-Q2MT-500 AC100-240
				Current	E5CN-C2MT-500 AC100-240
	Platinum RTD: ±0.5% of indicated value or ±1° C (whichever is greater), ±1 digit max.	24 VAC, 50/60 Hz, 24 VDC	0	Long-life Relay	E5CN-Y2MT-500 AC100-240
				Relay	E5CN-RMT-500 AC/DC24
				Voltage	E5CN-QMT-500 AC/DC24
			2	Current	E5CN-CMT-500 AC/DC24
				Relay	E5CN-R2MT-500 AC/DC24
				Voltage	E5CN-Q2MT-500 AC/DC24
			Current	E5CN-C2MT-500 AC/DC24	

## Option Units for E5CN-T

Functions	Recommended additional parts	Model
Communications (RS-485) + Heater burnout + SSR failure detection	Current transformer for heater burnout detection: 50 A load (E54-CT1 or E54-CT3)	E53-CNH03N
Communications (RS-485)	—	E53-CN03N
Event inputs (two) + Heater burnout + SSR failure detection	Current transformer for heater burnout detection: 50 A load (E54-CT1 or E54-CT3)	E53-CNHBN
Event inputs (two)	—	E53-CNBN
Communications (RS-485) + 3-phase heater burnout + SSR failure detection	Use two current transformers for heater burnout detection: 50 A load (E54-CT1 or E54-CT3)	E53-CNHH03N
Communications (RS-485) + Control output 2 (voltage output)	—	E53-CNQ03N
Control output 2 (voltage output) + Heater burnout + SSR failure detection	Current transformer for heater burnout detection: 50 A load (E54-CT1 or E54-CT3)	E53-CNQHN

## Accessories

Functions	Appearance	Specification	Model
Current transformers (CT)		50 A current load, 5.8 mm dia. hole	E54-CT1
		50 A current load, 12 mm dia. hole	E54-CT3
Finger protection terminal cover		Replacement part for controllers with “-500” in the part number	E53-COV10
Panel mounting adapter		Converts 72 x 72 mm panel cutout to 48 x 48 mm cutout	Y92F-45

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To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

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