

# Channel ACTION ALERT!

**NO:** TC-043      **PRODUCT:** E5\_N-HT Temperature Cont  
**DATE:** May 2011      **TYPE:** Product Release

## E5\_N-HT Programmable Temperature Controllers with Ramp/Soak Capability Expand Omron's Standard Line

Omron Industrial Automation has expanded the E5\_N temperature controller offering with E5\_N-HT programmable temperature controllers.

They are available in ¼ DIN (E5AN-HT), 1/8 DIN (E5EN-HT) and 1/16 DIN (E5CN-HT) sizes to meet most panel design needs. The E5\_N-HT platform features many upgrades such as: Ramp/Soak capabilities, infrared communication port and flexible contact output with logic operations (AND.OR, and delays).

These controllers can replace existing E5\_K-T series controllers.



### Features and Benefits

- 60ms high-speed sampling period allows “±0.1%PV” high precision, and “0.01°C display” five-digit PV/SV display can satisfy a wide range of customer needs.
- Every model of E5\_N-HT series now features the new programmable control function allowing a total of 8 programs to be stored with up to 32 segments in each program. This function can support a wide range of applications including applications that require a variety of temperature settings, such as incremental heating and environmental testing. Functions can be programmed by using CX-Thermo Support Software.
- Front panel infrared programming port (with the exception of E5CN-H and E5CN-HT), allows users to upload parameters without having to use serial communication or open the control panel. This time saving feature allows users to program the controller within minutes and not have to cause unnecessary down time to production lines.
- The new LCD display provides a wider viewing angle and an improved contrast ratio. Visibility remains stable regardless of the light intensity level at the application. This high visibility enables the operator to make instantaneous decisions by confirming the heat of an object and the status value of the equipment even when standing far away from the worksite.

### Target Market/Applications

**Sterilization equipment for Food and Pharmaceuticals**



Environmental chamber

**Industrial Ovens**



Curing (plastics, concrete)

**Scientific Equipment**



Heat treating, plating (metal)

# Selling Information

## Available Models

### E5AN-HT (1/4 DIN)

Size	Case color	Power supply voltage	Control method	Auxiliary output	Control output 1/2	Heater burnout	Optional functions			Model
							Event inputs	Transfer output	RSP	
1/4 DIN 96 × 96 × 78 (W × H × D)	Black	100 to 240 VAC	Basic	2	Control Output Unit × 2	1	2		4 to 20-mA input	E5AN-HTAA2HBM-500
					Control Output Unit × 2	2	2	4 to 20-mA output	4 to 20-mA input	E5AN-HTAA2HHBFM-500
				Control Output Unit × 2		2	4 to 20-mA output	4 to 20-mA input	E5AN-HTAA3BFM-500	
			Valve	2	Relay outputs × 2		2		4 to 20-mA input	E5AN-HTPRR2BM-500
					Relay outputs × 2		2	4 to 20-mA output	4 to 20-mA input	E5AN-HTPRR2BFM-500
				Control Output Unit × 2	1	2		4 to 20-mA input	E5AN-HTAA2HBMD-500	
		24 VAC/VDC	Basic	2	Control Output Unit × 2	2	2	4 to 20-mA output	4 to 20-mA input	E5AN-HTAA2HHBFMD-500
					Control Output Unit × 2		2	4 to 20-mA output	4 to 20-mA input	E5AN-HTAA3BFMD-500
				Control Output Unit × 2		2	4 to 20-mA output	4 to 20-mA input	E5AN-HTPRR2BMD-500	
			Valve	2	Relay outputs × 2		2		4 to 20-mA input	E5AN-HTPRR2BMD-500
					Relay outputs × 2		2	4 to 20-mA output	4 to 20-mA input	E5AN-HTPRR2BFMD-500

### E5EN-HT (1/8 DIN)

Size	Case color	Power supply voltage	Control method	Auxiliary output	Control output 1/2	Heater burnout	Optional Functions			Model
							Event inputs	Transfer output	RSP	
1/8 DIN 48 × 96 × 78 (W × H × D)	Black	100 to 240 VAC	Basic	2	Control Output Unit × 2	1	2		4 to 20-mA input	E5EN-HTAA2HBM-500
					Control Output Unit × 2	2	2	4 to 20-mA output	4 to 20-mA input	E5EN-HTAA2HHBFM-500
				Control Output Unit × 2		2	4 to 20-mA output	4 to 20-mA input	E5EN-HTAA3BFM-500	
			Valve	2	Relay outputs × 2		2		4 to 20-mA input	E5EN-HTPRR2BM-500
					Relay outputs × 2		2	4 to 20-mA output	4 to 20-mA input	E5EN-HTPRR2BFM-500
				Control Output Unit × 2	1	2		4 to 20-mA input	E5EN-HTAA2HBMD-500	
		24 VAC/VDC	Basic	2	Control Output Unit × 2	2	2	4 to 20-mA output	4 to 20-mA input	E5EN-HTAA2HHBFMD-500
					Control Output Unit × 2		2	4 to 20-mA output	4 to 20-mA input	E5EN-HTAA3BFMD-500
				Control Output Unit × 2		2	4 to 20-mA output	4 to 20-mA input	E5EN-HTPRR2BMD-500	
			Valve	2	Relay outputs × 2		2		4 to 20-mA input	E5EN-HTPRR2BMD-500
					Relay outputs × 2		2	4 to 20-mA output	4 to 20-mA input	E5EN-HTPRR2BFMD-500





### E5CN-HT (1/16 DIN)




Size	Case Color	Power supply voltage	Auxiliary output	Control output 1	Model
1/16 DIN 48 × 48 × 78 (W × H × D)	Black	100 to 240 VAC	2	Relay output	E5CN-HTR2M-500
				Voltage output (for driving SSR)	E5CN-HTQ2M-500
				Current output	E5CN-HTC2M-500
				Linear voltage output	E5CN-HTV2M-500
		24 VAC/VDC	2	Relay output	E5CN-HTR2MD-500
				Voltage output (for driving SSR)	E5CN-HTQ2MD-500
				Current output	E5CN-HTC2MD-500
				Linear voltage output	E5CN-HTV2MD-500

## Documentation

Description	Media	Publication number
E5AN-HT/E5EN-HT Data Sheet	PDF only	<a href="#">CSM E5ANHT E5ENHT DS E 1 1</a>
E5CN-HT Data Sheet	PDF only	<a href="#">CSM E5CN-HT DS E 1 1</a>
E5CN-HT Brochure	PDF only	<a href="#">H171-E1-01</a>
Users Manual for E5AN-HT/E5EN-HT/E5CN-HT	PDF only	<a href="#">H169-E1-01</a>
Communications Manual for E5_N-HT	PDF only	<a href="#">H170-E1-01</a>

## Competitor Comparison

	OMRON E5_N-HT	EuroTherm 32xx	EuroTherm 24xx	Watlow EZ ZONE PM
Appearance				
Basic Spec. comparison	<ul style="list-style-type: none"> <li>• 8 programs x 32 segments</li> <li>• High-speed sampling period: 60ms</li> <li>• High precision: <math>\pm 0.1\%PV</math></li> </ul>	<ul style="list-style-type: none"> <li>• 1 programs x 8 segments</li> <li>• Sampling period: 250ms</li> <li>• Precision: <math>\pm 0.25\%PV</math></li> </ul>	<ul style="list-style-type: none"> <li>• 1 programs x 8 segments</li> <li>• 1 programs x 16 segments</li> <li>• 4 programs x 16 segments</li> <li>• 20 programs x 16 segments</li> <li>• Sampling period: 110ms</li> <li>• Precision: <math>\pm 0.2\%PV</math></li> </ul>	<ul style="list-style-type: none"> <li>• 1 programs x 40 segments to 4 programs x 10 segments</li> <li>• Sampling period: 100ms</li> <li>• Precision: <math>\pm 0.1\%FS</math> (Thermocouple)</li> </ul>

	OMRON E5_N-HT	SHIMADEN FP93	JUMO Dicon401/501
Appearance			
Basic Spec. comparison	<ul style="list-style-type: none"> <li>• 8 programs x 32 segments</li> <li>• High-speed sampling period: 60ms</li> <li>• High precision: <math>\pm 0.1\%PV</math></li> </ul>	<ul style="list-style-type: none"> <li>• 1 programs x 40 segments</li> <li>• 4 programs x 10 segments</li> <li>• Sampling period: 250ms</li> <li>• Precision: <math>\pm 0.3\%FS</math></li> </ul>	<ul style="list-style-type: none"> <li>• 1 programs x 100 segments to 10 programs x 10 segments</li> <li>• Sampling period: 210ms</li> <li>• Precision: <math>\pm 0.25\%FS</math> (Thermocouple)</li> </ul>