



Universal compact digital process controllers

The E5_N-H series of process controllers take the proven concept of the general purpose E5_N series to a process level. Main features of the E5_N-H series are universal inputs, process outputs and options such as transfer output, remote set-point and setvalue programmer.

- Control mode: ON/OFF or 2-PID, Valve control on EN-H/AN-H
- Control output: relay, voltage (pulse), SSR, linear current and voltage
- Power supply: 100/240 VAC or 24 VDC/VAC
- Easy PC connection for parameter cloning, setting and tuning
- Clear and intuitive set-up and operation

Ordering information

Type	Input	Output	Fixed option	Alarms	Order code	
48x48 mm model (includes supply voltage indication)						
On-panel	Universal TC/PT/mV mA/V	Relay output	—	3 software alarms 2 SUB outputs	E5CN-HR2M-500 AC100-240	E5CN-HR2MD-500 AC/DC24
		Voltage (pulse)			E5CN-HQ2M-500 AC100-240	E5CN-HQ2MD-500 AC/DC24
		Current output			E5CN-HC2M-500 AC100-240	E5CN-HC2MD-500 AC/DC24
		Linear voltage output			E5CN-HV2M-500 AC100-240	E5CN-HV2MD-500 AC/DC24
		Relay output	SV programmer (8 programs of 32 segments)		E5CN-HTR2M-500 AC100-240	E5CN-HTR2MD-500 AC/DC24
		Voltage (pulse)			E5CN-HTQ2M-500 AC100-240	E5CN-HTQ2MD-500 AC/DC24
		Current output			E5CN-HTC2M-500 AC100-240	E5CN-HTC2MD-500 AC/DC24
		Linear voltage output			E5CN-HTV2M-500 AC100-240	E5CN-HTV2MD-500 AC/DC24

Note:

- Output and Alarm Relays: 3 A/250 VAC, electrical life: 100,000 operations
- Output voltage (pulse): 12 V, 21 mA (ie. to drive solid state relays)
- Linear current: 0(4) to 20 mA
- Linear voltage output: 0 to 10 V

Accessories

E5CN-H option boards

(One slot available in each instrument)

Option				Order code
Event inputs				E53-CNBN2
Event inputs	Control output 2 Voltage (for driving SSR)			E53-CNQBN2
Event inputs			Heater burnout/SSR failure/ Heater overcurrent detection	E53-CNHBN2
Event inputs		Transfer output		E53-CNBFN2
Communications RS-232C	Control output 2 Voltage (for driving SSR)			E53-CN01N2
Communications RS-232C				E53-CNQ01N2
Communications RS-232C			Heater burnout/SSR failure/ Heater overcurrent detection	E53-CNH01N2
Communications RS-485				E53-CN03N2
Communications RS-485	Control output 2 Voltage (for driving SSR)			E53-CNQ03N2
Communications RS-485			Heater burnout/SSR failure/ Heater overcurrent detection	E53-CNH03N2
Communications RS-485			3-phase heater burnout/SSR failure/ Heater overcurrent detection	E53-CNH03N2
	Control output 2 Voltage (for driving SSR)	Transfer output		E53-CNQFN2
	Control output 2 Voltage (for driving SSR)		Heater burnout/SSR failure/ Heater overcurrent detection	E53-CNQHN2
	Control output 2 Voltage (for driving SSR)		3-phase heater burnout/SSR failure/ Heater overcurrent detection	E53-CNQH03N2

Control method	Auxiliary output	Control output 1/2	Heater burnout	Transfer output	Order code (includes supply voltage indication)	
					96x96 mm model	48x96 mm model
Basic	2 alarm relays	none fitted, 2 slots	1-phase		E5AN-HAA2HBM-500 AC100-240	E5EN-HAA2HBM-500 AC100-240
		none fitted, 2 slots			E5AN-HAA2HBMD-500 AC/DC24	E5EN-HAA2HBMD-500 AC/DC24
		2 SSR output fitted			E5AN-HSS2HBM-500 AC100-240	E5EN-HSS2HBM-500 AC100-240
		2 SSR output fitted			E5AN-HSS2HBMD-500 AC/DC24	E5EN-HSS2HBMD-500 AC/DC24
		none fitted, 2 slots	3-phase	4 to 20 mA output	E5AN-HAA2HHBFM-500 AC100-240	E5EN-HAA2HHBFM-500 AC100-240
		none fitted, 2 slots			E5AN-HAA2HHBFMD-500 AC/DC24	E5EN-HAA2HHBFMD-500 AC/DC24
		2 SSR output fitted			E5AN-HSS2HHBFM-500 AC100-240	E5EN-HSS2HHBFM-500 AC100-240
		2 SSR output fitted			E5AN-HSS2HHBFMD-500 AC/DC24	E5EN-HSS2HHBFMD-500 AC/DC24
	3 alarm relays	none fitted, 2 slots	E5AN-HAA3BFM-500 AC100-240	E5EN-HAA3BFM-500 AC100-240		
		none fitted, 2 slots	E5AN-HAA3BFMD-500 AC/DC24	E5EN-HAA3BFMD-500 AC/DC24		
		2 SSR output fitted	E5AN-HSS3BFM-500 AC100-240	E5EN-HSS3BFM-500 AC100-240		
		2 SSR output fitted	E5AN-HSS3BFMD-500 AC/DC24	E5EN-HSS3BFMD-500 AC/DC24		
Valve controller	2 alarm relays	2 relay output fitted			E5AN-HPRR2BM-500 AC100-240	E5EN-HPRR2BM-500 AC100-240
					E5AN-HPRR2BMD-500 AC/DC24	E5EN-HPRR2BMD-500 AC/DC24
				4 to 20 mA output	E5AN-HPRR2BFM-500 AC100-240	E5EN-HPRR2BFM-500 AC100-240
					E5AN-HPRR2BFMD-500 AC/DC24	E5EN-HPRR2BFMD-500 AC/DC24
SV programmer (8 programs of 32 segments)	2 alarm relays	none fitted, 2 slots	1-phase		E5AN-HTAA2HBM-500	E5EN-HTAA2HBM-500 AC100-240
					E5AN-HTAA2HBMD-500	E5EN-HTAA2HBMD-500 AC/DC24
			3-phase	4 to 20 mA output	E5AN-HTAA2HHBFM-500	E5EN-HTAA2HHBFM-500
					E5AN-HTAA2HHBFMD-500	E5EN-HTAA2HHBFMD-500
	3 alarm relays		E5AN-HTAA3BFM-500	E5EN-HTAA3BFM-500		
			E5AN-HTAA3BFMD-500	E5EN-HTAA3BFMD-500		
SV programmer and valve controller	2 alarm relays	2 relay output fitted			E5AN-HTPRR2BM-500	E5EN-HTPRR2BM-500
					E5AN-HTPRR2BMD-500	E5EN-HTPRR2BMD-500
			4 to 20 mA output	E5AN-HTPRR2BFM-500	E5EN-HTPRR2BFM-500	
					E5AN-HTPRR2BFMD-500	E5EN-HTPRR2BFMD-500

Note: - All E5EN-H/AN-H have 2 event inputs
 - All E5EN-H/AN-H have Remote Setpoint 4 to 20 mA input

Specifications E5CN-H/EN-H/AN-H

Supply voltage	100 to 240 VAC 50/60 Hz or 24 VAC, 50/60Hz; 24 VDC
Sensor input	Thermocouple: K, J, T, E, L, U, N, R, S, B, W or PL II Platinum resistance thermometer: Pt100 or JPt100 Current input: 4 to 20 mA or 0 to 20 mA Voltage input: 1 to 5 V, 0 to 5 V or 0 to 10 V
Control mode	ON/OFF, 2-PID and valve (PRR)
Accuracy	Thermocouple: ($\pm 0.1\%$ of indicated value or $\pm 1^\circ\text{C}$, whichever is greater) $\pm$ digit max. *1 Platinum resistance thermometer: ($\pm 0.1\%$ of indicated value or $\pm 0.5^\circ\text{C}$, whichever is greater) ± 1 digit max. Analogue input: $\pm 0.1\%$ FS ± 1 digit max.
Auto-tuning	yes, 40% and 100% MV output limit selection. When using Heat/Cool: automatic cool gain adjustment
Self-tuning	yes
RS-232C/RS-422/RS-485	optional, CompoWayF or Modbus selectable
Event input	Optional (Standard 2 event input in EN-H/AN-H)
QLP port (USB connection PC)	yes
Ambient temperature	-10 to 55°C
IP Rating front panel	IP66
Sampling period	60 ms

E5AN-H/EN-H output option boards

(2 slots available in E5_N-HAA___-500 models:
 SS models have 2 fixed SSR output modules)

Option	Order code
Relay	E53-RN
Voltage (pulse) PNP 12 VDC	E53-QN
Voltage (pulse) NPN 12 VDC	E53-Q3
Voltage (pulse) PNP 24 VDC	E53-Q4
Linear 4 to 20 mA	E53-C3N
Linear 0 to 20 mA	E53-C3DN
Linear 0 to 10 V	E53-V34N
Linear 0 to 5 V	E53-V35N

E5AN-H/EN-H option boards

(one slot available in each instrument)

Option	Order code
RS-232C communications (CompoWay/F/Modbus)	E53-EN01
RS-422 communications (CompoWay/F/Modbus)	E53-EN02
RS-485 communications (CompoWay/F/Modbus)	E53-EN03
event input	E53-AKB

E5AN-H/EN-H series optional tools

Option	Order code
USB PC based configuration cable	E58-CIFQ1
PC based configuration and tuning software	EST2-2C-MV4

