

Electronic Thermostat E5L

Ideal for Simple Built-in Control.

- A high switching capacity of 10 A at 250 VAC enables direct load switching.
- A sensor is provided to enable immediate application.
- Sockets with finger protection (PTF14A-E), without finger protection (PTF14A) and Socket with Push-In Plus technology (PTF-14-PU-L) can be used.
- Simple operation and settings. Even simpler with digital models.



Model Number Structure

Model Number Legend

E5L-□□
1 2

- | | |
|-----------------------------------|--------------------------|
| 1. Setting and Indication Methods | 2. Set temperature |
| A: Analog setting, no display | –30-20 : –30 to +20°C |
| C: Digital setting, display | 0-50 : 0 to +50°C |
| | 0-100 : 0 to +100°C |
| | 100-200 : +100 to +200°C |

Ordering Information

Electronic Thermostats

E5L-A□

Size	Type	Control method	Control output	Model
45 × 35 mm	Plug-in	ON/OFF operation	Relay	E5L-A -30-20
				E5L-A 0-50
				E5L-A 0-100
				E5L-A 100-200

E5L-C□

Size	Type	Control method	Control output	Model
45 × 35 mm	Plug-in	ON/OFF operation	Relay	E5L-C -30-20
				E5L-C 0-100
				E5L-C 100-200

Note: The E5L-C is not available with a set temperature range of 0 to 50°C.

Options (Order Separately)

Mounting Brackets

Model
Y92H-10

Note: This Mounting Brackets is provided with the Electronic Thermostat.

Sockets

Type	Model
Front-connecting Socket	PTF14A
	PTF14A-E
	PTF-14-PU-L

E5L

Ratings and Characteristics

Ratings

Item	Model	E5L-A□	E5L-C□
Power supply voltage		100 to 240 VAC, 50/60 Hz	
Operating voltage range		85% to 110% of the rated supply voltage	
Power consumption		Approx. 3 VA	
Inputs		Element-interchangeable thermistor	
Control method		ON/OFF control	
Control output		SPDT contacts, 250 VAC, 10 A, $\cos\phi = 1$ (resistive load)	SPST-NO contacts, 250 VAC, 10 A, $\cos\phi = 1$ (resistive load)
Setting method		Analog setting	Digital settings using keys on front panel
Indication method		No display	LCD digital display (character height: 12 mm)
Other functions			- Setting protection (key protection) - Input shift - Direct/reverse operation
Ambient temperature		-10 to 55°C (with no icing or condensation)	
Ambient humidity		25% to 85%	
Storage temperature		-25°C to 65°C (with no icing or condensation)	

Note: Do not use the output from an Inverter as the power supply.

Characteristics

Item	Model	E5L-A□	E5L-C□
Indication accuracy		---	$\pm(1^\circ\text{C} + 1 \text{ digit}) \text{ max.}^{*1}$
Setting accuracy		---	$\pm(1^\circ\text{C} + 1 \text{ digit}) \text{ max.}^{*1}$
Hysteresis		-30 to 20°C models: Approx. 0.5 to 2.5°C (variable) 0 to 50°C models: Approx. 0.5 to 4°C (variable) 0 to 100°C models: Approx. 0.5 to 4°C (variable) 100 to 200°C models: Approx. 0.7 to 4°C (variable)	1 to 9°C (in increments of 1°C)
Repeat accuracy		1% FS max.	---
Minimum scale (standard scale)		-30 to 20°C models and 0 to 50°C models: 5°C 0 to 100°C models and 100 to 200°C models: 10°C	---
Influence of temperature		---	$\pm((1\% \text{ of PV or } 2^\circ\text{C, whichever is greater}) + 1 \text{ digit}) \text{ max.}$
Influence of voltage		---	
Influence of EMS. (at EN61326-1)		---	
Sampling period		---	2 s
Insulation resistance		100 M Ω max. (at 500 VDC)	
Dielectric strength		2,810 VAC, 50/60 Hz for 1 min (between charged terminals and uncharged metallic parts, between power supply terminals and input terminals, between power supply terminals and output terminals, and between input terminals and output terminals)	
Vibration (malfunction)		Frequency of 10 to 55 Hz, 0.5-mm double amplitude for 10 min each in X, Y, and Z directions	
Vibration (destruction)		Frequency of 10 to 55-Hz, 0.75-mm double amplitude for 2 h each in X, Y, and Z directions	
Shock (malfunction)		150 m/s ² , 3 times each in 6 directions	100 m/s ² , 3 times each in 6 directions
Shock (destruction)		300 m/s ² , 3 times each in 6 directions	
Electrical life expectancy (control output relay)		100,000 operations min (at maximum applicable load)	
Memory protection		---	Non-volatile memory (100,000 write operations)
Weight (Thermostat)		Approx. 80 g (Thermostat only)	
Degree of protection		Front panel: IP40, Terminals: IP00	
Approved standards		---	
Conformed standards		EN 61010-1 (IEC 61010-1), Pollution Degree 2, Overvoltage Category II	
EMC Directives		EMI: Radiated EMI: Conducted EMI: EMS: Electrostatic discharge immunity: Electromagnetic field strength immunity: Burst noise immunity: Conducted disturbance immunity: Surge immunity: Voltage dip and power interruption immunity:	EN61326-1*2 EN55011 Group1 ClassA EN55011 Group1 ClassA EN61326-1*2 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-6 EN61000-4-5 EN61000-4-11

*1. The accuracy of the accessory thermistor is not included.

*2. Industrial electromagnetic environment (EN/IEC 61326-1 Table 2)