

Ordering Information

■ Digital Controllers

When your order, specify the power supply voltage.

Standard Controllers (100 to 240 VAC)

Size	Control type	Control mode	Outputs (control/transfer)	Optional functions			Model
				Auxiliary outputs (SUB)	Event inputs	Serial communi- cations	
96 × 96 mm	Basic control (1 loop)	Single-loop standard control Single-loop heating and cooling control	2 points: Pulse voltage and Pulse voltage/current	4	2	No	E5AR-Q4B
			2 points: Current and Current				E5AR-C4B
			2 points: Pulse voltage and Pulse voltage/current				E5AR-Q43B-FLK
			2 points: Current and Current				E5AR-C43B-FLK
			2 points: Pulse voltage and Pulse voltage/current		6	RS-485	E5AR-Q43DB-FLK
			2 points: Current and Current				E5AR-C43DB-FLK
			4 points: Pulse voltage and Pulse voltage/current and Current (2 points)				E5AR-QC43DB-FLK
	2-loop control	2-loop standard control Single-loop heating and cooling control Single-loop cascade control Single-loop control with remote SP Single-loop proportional control	2 points: Pulse voltage and Pulse voltage/current	4	4	RS-485	E5AR-Q43DW-FLK
			2 points: Current and Current				E5AR-C43DW-FLK
		2-loop standard control 2-loop heating and cooling control Single-loop cascade control Single-loop control with remote SP Single-loop proportional control	4 points: Pulse voltage (2 points) and Pulse voltage/current (2 points)				E5AR-QQ43DW-FLK
	4-loop control	4-loop standard control 2-loop heating and cooling control	4 points: Current output (4 points)	4	4	RS-485	E5AR-CC43DWW-FLK
			4 points: Pulse voltage (2 points) and Pulse voltage/current (2 points)				E5AR-QQ43DWW-FLK
	Position-proportional control (1 loop)	Single-loop position-proportional control (See note.)	Relay output (1 open, 1 close)	4	4	No	E5AR-PR4DF
			Relay output (1 open, 1 close) and 1 current (transfer) output			RS-485	E5AR-PRQ43DF-FLK

Note: Can be switched between close control and floating control.

Standard Controllers (24 VAC/DC)

Size	Control type	Control mode	Outputs (control/transfer)	Optional functions			Model
				Auxiliary outputs (SUB)	Event inputs	Serial communi- cations	
96 × 96 mm	Basic control (1 loop)	Single-loop standard control Single-loop heating and cooling control	2 points: Pulse volt- age and Pulse volt- age/current	4	2	No	E5AR-Q4B
			2 points: Current and Current				E5AR-C4B
			4 points: Pulse volt- age and Pulse volt- age/current and Current (2 points)		6	RS-485	E5AR-QC43DB-FLK
	2-loop control	2-loop standard control 2-loop heating and cooling control Single-loop cascade control Single-loop control with remote SP Single-loop proportional control	4 points: Pulse volt- age (2 points) and Pulse voltage/current (2 points)	4	4	RS-485	E5AR-QQ43DW-FLK
	4-loop control	4-loop standard control 2-loop heating and cooling control	4 points: Current out- put (4 points)	4	4	RS-485	E5AR-CC43DWW- FLK
	Position-pro- portional con- trol (1 loop)	Single-loop position-proportional control (See note.)	Relay output (1 open, 1 close)	4	4	No	E5AR-PR4DF
			Relay output (1 open, 1 close) and 1 current (transfer) output			RS-485	E5AR-PRQ43DF-FLK

Note: Can be switched between close control and floating control.

DeviceNet-compatible Controllers (100 to 240 VAC)

Size	Control type	Control mode	Outputs (control/transfer)	Optional functions			Model
				Auxiliary outputs (SUB)	Event inputs	DeviceNet communi- cations	
96 × 96 mm	Basic control (1 loop)	1 loop for standard control Single-loop heating and cooling control	2 points: Pulse volt- age and Pulse volt- age/current	4	2	Yes	E5AR-Q4B-DRT
			2 points: Current and Current				E5AR-C4B-DRT
			4 points: Pulse volt- age and Pulse volt- age/current and Current (2 points)				E5AR-QC4B-DRT
	2-loop control	2-loop standard control 2-loop heating and cooling control Single-loop cascade control Single-loop control with remote SP Single-loop proportional control	4 points: Pulse volt- age (2 points) and Pulse voltage/cur- rent (2 points)	4	None	Yes	E5AR-QQ4W-DRT
	4-loop control	4-loop standard control 2-loop heating and cooling control	4 points: Current (4 points)	4	None	Yes	E5AR-CC4WW-DRT
	Position-pro- portional con- trol (1 loop)	Single-loop position-proportional control (See note.)	Relay output (1 open, 1 close)	4	None	Yes	E5AR-PR4F-DRT
			Relay output (1 open, 1 close) and 1 current (transfer) output				E5AR-PRQ4F-DRT

Note: Can be switched between close control and floating control.

DeviceNet-compatible Controllers (24 VAC/DC)

Size	Control type	Control mode	Outputs (control/transfer)	Optional functions			Model
				Auxiliary outputs (SUB)	Event inputs	DeviceNet communi- cations	
96 × 96 mm	Basic control (1 loop)	1 loop for standard control Single-loop heating and cooling control	2 points: Pulse volt- age and Pulse volt- age/current	4	2	Yes	E5AR-Q4B-DRT
			2 points: Current and Current				E5AR-C4B-DRT
			4 points: Pulse volt- age and Pulse volt- age/current and Current (2 points)				E5AR-QC4B-DRT
	2-loop control	2-loop standard control 2-loop heating and cooling control Single-loop cascade control Single-loop control with remote SP Single-loop proportional control	4 points: Pulse volt- age (2 points) and Pulse voltage/cur- rent (2 points)	4	None	Yes	E5AR-QQ4W-DRT
	4-loop control	4-loop standard control 2-loop heating and cooling control	4 points: Current (4 points)	4	None	Yes	E5AR-CC4WW-DRT
	Position-pro- portional con- trol (1 loop)	Single-loop position-proportional con- trol (See note.)	Relay output (1 open, 1 close)	4	None	Yes	E5AR-PR4F-DRT
			Relay output (1 open, 1 close) and 1 current (transfer) output				E5AR-PRQ4F-DRT

Note: Can be switched between close control and floating control.

Inspection Results

The Inspection Report can be ordered at the same time as the Digital Controller using the following model number.

Inspection Report (Sold Separately)

Descriptions	Model
Inspection Report for E5AR	E5AR-K

Accessories (Order Separately)**Terminal Cover (Sold Separately)**

Descriptions	Model
Terminal Cover for E5AR	E53-COV14

Unit Label Sheet

Model
Y92S-L1

Rubber Packing

Model
Y92S-P4

Note: The Rubber Packing is provided with the Digital Controller.

Specifications

■ Ratings

Item		Supply voltage (See note 1.)	100 to 240 VAC, 50/60 Hz	24 VAC, 50/60 Hz; 24 VDC
Operating voltage range		85% to 110% of rated supply voltage		
Power consumption		22 VA max. (with maximum load)		15 VA/10 W max. (with maximum load)
Sensor input (See note 2.)		Thermocouple: K, J, T, E, L, U, N, R, S, B, W Platinum resistance thermometer: Pt100 Current input: 4 to 20 mA DC, 0 to 20 mA DC (including remote SP input) Voltage input: 1 to 5 VDC, 0 to 5 VDC, 0 to 10 VDC (including remote SP input) (Input impedance: 150 Ω for current input, approx. 1 MΩ for voltage input)		
Control output	Voltage (pulse) output	12 VDC, 40 mA max. with short-circuit protection circuit (E5AR-QQ□WW-□: 21 mA max.)		
	Current output	0 to 20 mA DC, 4 to 20 mA DC; load: 500 Ω max. (including transfer output) (Resolution: Approx. 54,000 for 0 to 20 mA DC; Approx. 43,000 for 4 to 20 mA DC)		
	Relay output	Position-proportional control type (open, closed) N.O., 250 VAC, 1 A (including inrush current)		
Auxiliary output		Relay Output N.O., 250 VAC, 1 A (resistive load)		
Potentiometer input		100 Ω to 2.5 kΩ		
Event input	Contact	Input ON: 1 kΩ max.; OFF: 100 kΩ min.		
	No-contact	Input ON: Residual voltage of 1.5 V max.; OFF: Leakage current of 0.1 mA max.		
		Short-circuit: Approx. 4 mA		
Remote SP input		Refer to the information on sensor input.		
Transfer output		Refer to the information on control output.		
Control method		2-PID or ON/OFF control		
Setting method		Digital setting using front panel keys or setting using serial communications		
Indication method		7-segment digital display and single-lighting indicator Character Height PV: 12.8 mm; SV: 7.7 mm; MV: 7.7 mm		
Other functions		Depends on model.		
Ambient operating temperature		-10 to 55°C (with no icing or condensation) For 3 years of assured use: -10 to 50°C (with no icing or condensation)		
Ambient operating humidity		25% to 85%		
Storage temperature		-25 to 65°C (with no icing or condensation)		

Note 1: The supply voltage (i.e., 100 to 240 VAC or 24 VAC/VDC) depends on the model. Be sure to specify the required type when ordering.

Note 2: The Controller is equipped with multiple sensor input. Temperature input or analog input can be selected with the input type setting switch. There is basic insulation between power supply and input terminals, power supply and output terminals, and input and output terminals.

Note 3: Do not use an inverter output as the power supply. (Refer to *Safety Precautions for All E5□R Models*.)

■ Input Ranges

Platinum Resistance Thermometer, Thermocouple, Current, or Voltage Input

Input type	Platinum Resistance Thermometer		Thermocouple													Current		Voltage		
Name	Pt100		K		J		T	E	L	U	N	R	S	B	W (W/Re 5-26)	[mA]	[V]			
Temperature Range (°C)	2300											1700.0	1700.0	1800.0	2300.0	20 to 4	20 to 0	5 to 1	5 to 0	10 to 0
	1800																			
	1300		1300.0								1300.0									
	900	850.0			850.0				850.0											
	800																			
	700																			
	600																			
	500			500.0																
	400				850.0															
	300																			
200		150.00																		
100																				
0																				
-100																				
-200	-200.0	-150.00	-200.0	-20.0	-100.0	-20.0	400.0	400.0	600.0	850.0	400.0	1300.0	1700.0	1800.0	2300.0					
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 The shaded area indicates the setting status at the time of purchase.