

Temperature Controllers E5CSV


CSM_E5CSV_DS_E_7_2

Easy Setting Using DIP Switch and Simple Functions in DIN 48 × 48 mm-size Temperature Controllers

- Easy setting using DIP switch.
- Models with two alarms added to Series, ideal for temperature alarm applications.
- Universal-input (thermocouple/platinum resistance thermometer) models also available.
- Clearly visible digital display with character height of 13.5 mm.
- Models available with black in addition to white cases.
- RoHS compliant.



For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

 Refer to *Safety Precautions for All Temperature Controllers*.

Refer to *E5CS/E5CSV Operation* for operating procedures.

Model Number Structure

■ Model Number Legend

Models with Terminal Blocks

E5CSV-□□□□-□
1 2 3 4 5

1. Control Outputs

R: Relay
Q: Voltage for driving SSR

2. Alarm Outputs

Blank: No alarm
1: 1 alarm
2: 2 alarms

3. Input

KJ: Thermocouple
P: Platinum resistance thermometer
T: Thermocouple/platinum resistance thermometer (universal-input)

4. Power Supply Voltage

Blank: 100 to 240 VAC
D: 24 VAC/VDC

5. Case Color

Blank: Black
W: Light gray

Note: A functional explanation is provided here for illustration, but models are not necessarily available for all possible combinations. Refer to *Ordering Information* when ordering.

Examples

- Relay control output, without alarm, thermocouple input, light gray case: E5CSV-RKJ-W
- Relay control output, one alarm output, platinum resistance thermometer input, black case: E5CSV-R1P-W

Ordering Information

■ List of Models

**Case Color: Light Gray, Thermocouple or Platinum Resistance Thermometer,
Power Supply Voltage: 100 to 240 VAC**

Size	Type	Control modes	Alarms	Outputs	Model with thermocouple	Model with platinum resistance thermometer
E5CSV 48 × 48mm	Terminal block	ON/OFF or PID	1	Relay	E5CSV-R1KJ-W	E5CSV-R1P-W
				Voltage (for driving SSR)	E5CSV-Q1KJ-W	E5CSV-Q1P-W

Case Color: Light Gray, Thermocouple, Power Supply Voltage: 24 VAC/VDC

Size	Type	Control modes	Alarms	Outputs	Model with thermocouple
E5CSV 48 × 48mm	Terminal block	ON/OFF or PID	1	Relay	E5CSV-R1KJD-W

Case Color: Light Gray, Universal-input, Power Supply Voltage: 100 to 240 VAC

Size	Type	Control modes	Alarms	Outputs	Model with universal-input (thermocouple or platinum resistance thermometer)
E5CSV 48 × 48mm	Terminal block	ON/OFF or PID	0	Relay	E5CSV-RT
				Voltage (for driving SSR)	E5CSV-QT
			1	Relay	E5CSV-R1T
				Voltage (for driving SSR)	E5CSV-Q1T
			2 (See note.)	Relay	E5CSV-R2T
				Voltage (for driving SSR)	E5CSV-Q2T

Note: There is no alarm output 2 mode switch. The default setting for alarm output 2 is for the upper limit alarm mode. To change the setting, change the alarm type for alarm output 2 in initial setting level 5. For details, refer to the "E5CSV/E5CS-U Digital Temperature Controller User's Manual" (Cat. No. H140-E1-01).

Case Color: Black, Universal-input, Power Supply Voltage: 24 VAC/VDC

Size	Type	Control modes	Alarms	Outputs	Model with universal-input (thermocouple or platinum resistance thermometer)
E5CSV 48 × 48mm	Terminal block	ON/OFF or PID	0	Relay	E5CSV-RTD
				Voltage (for driving SSR)	E5CSV-QTD
			1	Relay	E5CSV-R1TD
				Voltage (for driving SSR)	E5CSV-Q1TD
			2 (See note.)	Relay	E5CSV-R2TD
				Voltage (for driving SSR)	E5CSV-Q2TD

Note: There is no alarm output 2 mode switch. The default setting for alarm output 2 is for the upper limit alarm mode. To change the setting, change the alarm type for alarm output 2 in initial setting level 5. For details, refer to the "E5CSV/E5CS-U Digital Temperature Controller User's Manual" (Cat. No. H140-E1-01).

■ Accessories (Order Separately)

Protective Cover

Type	Model
Hard Protective Cover	Y92A-48B

Terminal Cover

Model
E53-COV10

Terminal Cover

(For Controllers after the design change scheduled for October 2010)

Model
E53-COV17

Note: The E53-COV10 Terminal Cover cannot be mounted to Controllers that are manufactured after the design change scheduled for October 2010

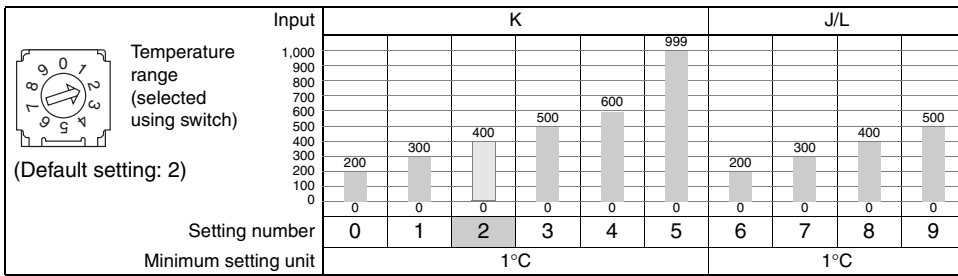
Rubber Packing

Model
Y92S-29

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

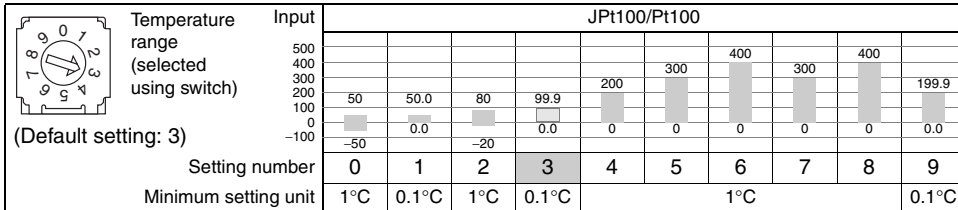
Temperature Range

Thermocouple Input Models



The shaded value indicates the default setting status.

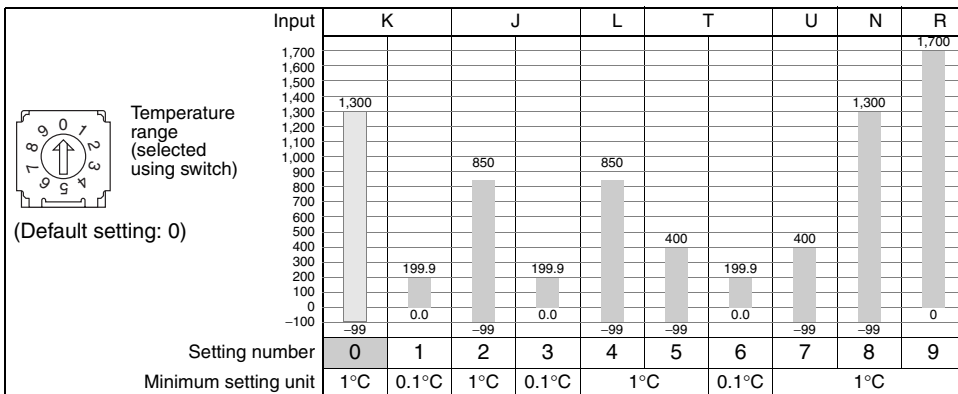
Platinum Resistance Thermometer Input Models



The shaded value indicates the default setting status.

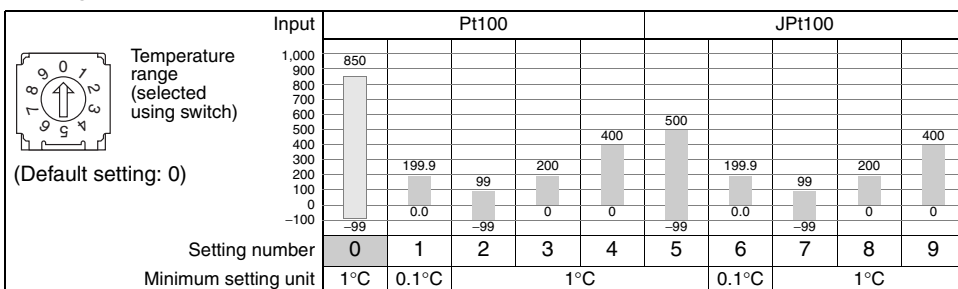
Universal-input (Thermocouple/Platinum Resistance Thermometer) Models

Using Thermocouple Sensors, Control Mode Switch 5: OFF



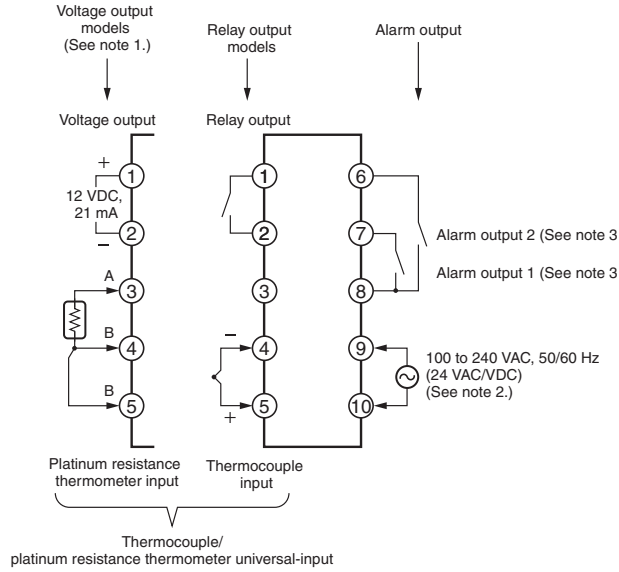
The shaded value indicates the default setting status.

Using Platinum Resistance Thermometers, Control Mode Switch 5: ON



The shaded value indicates the default setting status.

External Connection Diagram



- Note:**
1. The voltage output (12 VDC, 21 mA) is not electrically isolated from the internal circuits. When using a grounding thermocouple, do not connect output terminals 1 or 2 to ground. Otherwise, unwanted current paths will cause measurement errors.
 2. Models with 100 to 240 VAC and 24 VAC/VDC are separate. Models using 24 VDC have no polarity.
 3. The number of alarm outputs depends on the model.

Nomenclature

E5CSV Models with Terminal Blocks

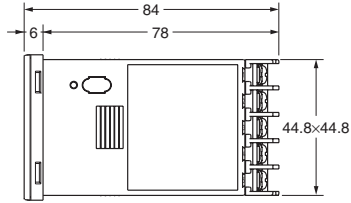
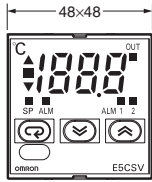
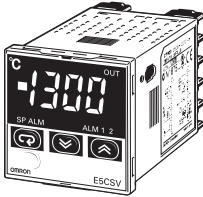


Dimensions

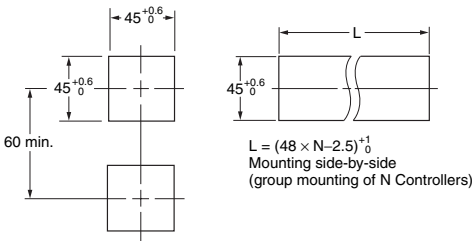
Note: All units are in millimeters unless otherwise indicated.

Controller

E5CSV

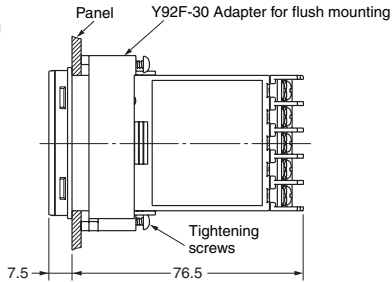
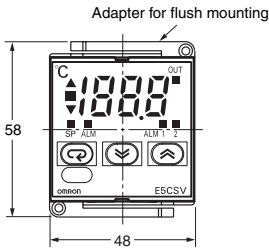
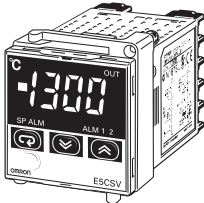
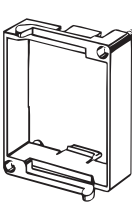


Panel Cutout Dimensions



Note: Terminals cannot be removed.

E5CSV + Adapter for Flush Mounting (Provided)



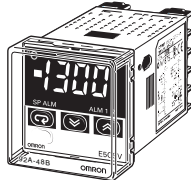
Note: 1. The recommended panel thickness is 1 to 4 mm.
2. Group mounting is possible in one direction only.

Accessories (Order Separately)

Hard Protective Cover

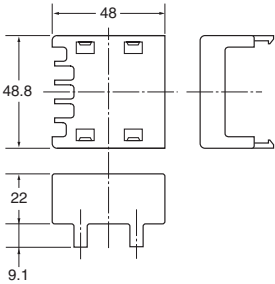
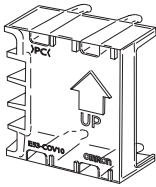
The Y92A-48B Protective Cover (hard type) is available for the following applications.

- To protect the set from dust and dirt.
- To prevent the panel from being accidentally touched causing displacement of set values.
- To provide effective protection against water droplets.

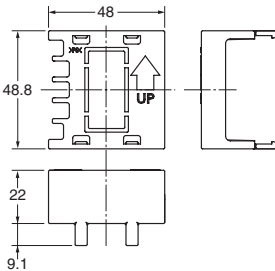
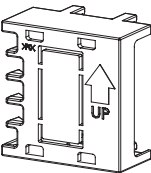


Terminal Cover

E53-COV10



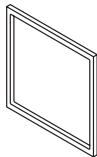
E53-COV17



(For Controllers after the design change scheduled for October 2010)

Rubber Packing

Y92S-29 (for DIN48 x 48)



Order the Rubber Packing separately if it becomes lost or damaged. The Rubber Packing can be used to achieve an IP66 degree of protection for models with terminal blocks.

(Deterioration, shrinking, or hardening of the rubber packing may occur depending on the operating environment. Therefore, periodic replacement is recommended to ensure the level of waterproofing specified in NEMA4. The time for periodic replacement depends on the operating environment. Be sure to confirm this point at your site. Consider one year a rough standard. OMRON shall not be liable for the level of water resistance if the customer does not perform periodic replacement.)
The Rubber Packing does not need to be attached if a waterproof structure is not required.

Safety Precautions

Refer to *Safety Precautions for All Temperature Controllers*.
Refer to *E5CS/E5CSV Operation* for operating procedures.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

In the interest of product improvement, specifications are subject to change without notice.

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- Systems, machines, and equipment that could present a risk to life or property.

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Product specifications and accessories may be changed at any time based on improvements and other reasons.

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DIMENSIONS AND WEIGHTS

Dimensions and weights are nominal and are not to be used for manufacturing purposes, even when tolerances are shown.

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2012.8

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