

## E5\_C TEMPERATURE CONTROLLER

High performance with simplicity

SimpleType



**New Models with  
Communications and  
Other Features**

» Easy set-up and operation

» High-contrast display

» DIN-Track mounting type joined the lineup

# The New E5CC, E5CC-U, E5EC, E5AC, and E5DC Next-generation Digital Controllers with Advanced Designs and Easy Operation

**White PV display and new LCD with greatly improved visibility.\***

\*100 times higher contrast ratio than the E5□Z.



**A compact body with large display characters for easy reading even from a distance. This helps to reduce human error.**



The white LCD display is easy to read in the subdued lighting conditions.



The display remains easy to read even from wide viewing angles.

**The E5CC, E5EC, and E5AC cover a wide range of applications.**

## Packaging machine (E5CC)



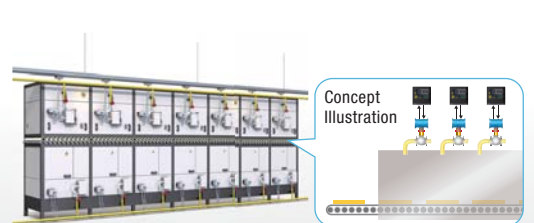
High-speed PID control: Sampling period of 50 ms  
Upper/lower limit alarms: Two auxiliary outputs

## Molding machine (E5EC)



Heating/cooling control: Independent PID control  
Upper/lower limit alarms: Two auxiliary outputs

## Continuous Combustion furnaces (E5EC/E5AC)



Motor-operated valve control: Position-proportional control  
(Floating control is also possible.)

# SimpleType



## Save space!

The compact and space-saving design of the new E5CC/E5EC/E5AC controller generation requires less space behind the panel (60 mm), allowing quick snap-mounting and easy installation even under very cramped conditions.\*

\*Excluding E5CC-U and E5DC

## Save Time!

The E5CC/E5CC-U/E5EC/E5AC/E5DC series is extremely easy to operate using the instrument's five front keys.



Five front keys



Units digit setting

Push the shift key



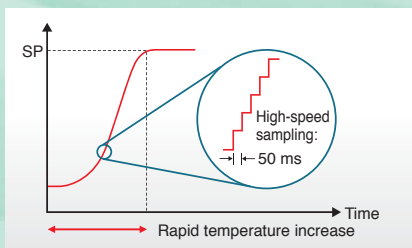
Tens digit setting

## Smart!

With key features like simplicity in operation, Omron's patented PID control, and 50ms sampling period, the E5CC/E5CC-U/E5EC/E5AC/E5DC sets a new standard in fast and precise temperature regulation.

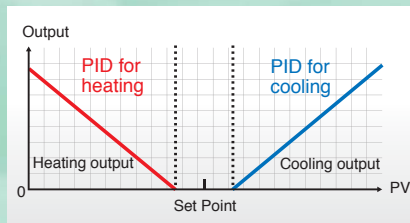
### Sampling period:50ms

Sampling Rate Sufficient to Handle Rapid Increases in Temperature



### Independent heating/cooling PID

The heating and cooling PID can each be set individually. Also, autotuning (AT) will automatically set the PID constants.



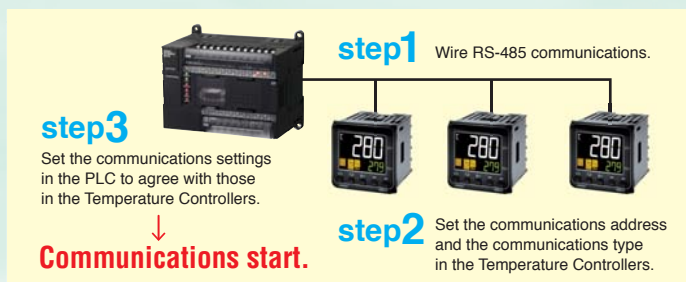
### Setting change protection

You can disable key operations to help prevent incorrect setting change.



A key icon is displayed when setting change protection is enabled.

## Easy connections to a PLC with programless communications.



**More Convenient Operations**

The parameters can be copied from the master Temperature Controller to slave Temperature Controllers.

### Advantages

- The amount of work to set up the system is greatly reduced. PLC programming and memory are not required for communications.
- Communications even with multiple Temperature Controllers are automatically executed by the Temperature Controllers.
- Interface converters are not required, which reduces costs.
- Number of connected Digital Temperature Controllers: 32 max. (Up to 16 for the FX Series)



Master Temperature Controller can share RUN/STOP operations and set points with slave Temperature Controllers. Slope and offsets can be set for the set point.

Note: A Temperature Controller with version 1.1 or higher is required.  
A Temperature Controller with version 2.1 or higher is required for the FX Series.



# The New E5DC with DIN-Track Mounting Capability Joins the E5\_C Series, Next-generation Temperature Controllers. The E5DC Inherits the Features of the E5\_C Series.

- Provides the unified design, operability, and functions of the E5\_C Series.
- Width of 22.5 mm and mounts to DIN Track.
- On-panel mounting is also possible. (Mounting Adapter required; sold separately.)

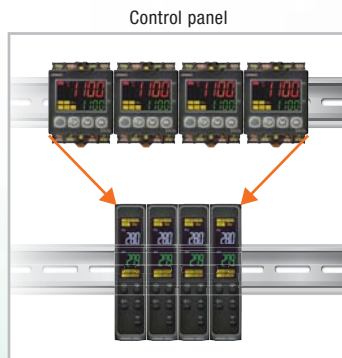


## Contributes to Machine Downsizing

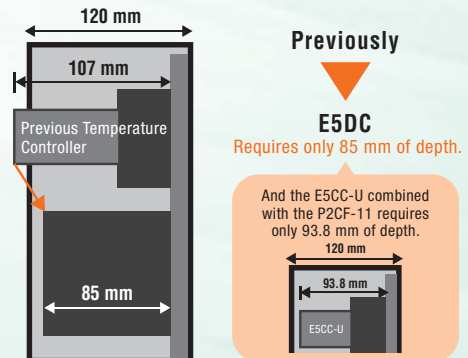
The E5DC is only 22.5 mm wide and enables to install multi channel controls in limited space.

Previously

**E5DC**  
Requires only half the space.



The E5DC has a short body of only 85 mm in depth for easy mounting in control panels with 120-mm depths.

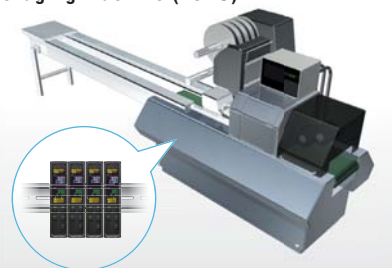


## Removable Terminal Block for Easy Mounting and Replacement.



## The E5DC cover a wide range of applications.

### Packaging machine (E5DC)



High-speed PID control: Sampling period of 50 ms  
Upper/lower limit alarms: Two auxiliary outputs

# Ordering Information

## Simple Type E5□C-□□□□□□-8□□

### E5CC 48x48mm

Control output 1	Auxiliary output	Communications	Heater burnout	Event inputs	Power supply voltage	Model		
Relay output	Two	-	-	-	100 to 240 VAC	E5CC-RX2ASM-800		
Voltage output						E5CC-QX2ASM-800		
Linear current output						E5CC-CX2ASM-800		
Relay output						E5CC-RX2DSM-800		
Voltage output					E5CC-QX2DSM-800			
Linear current output					E5CC-CX2DSM-800			
Relay output					100 to 240 VAC	One	Two	E5CC-RX2ASM-801
Voltage output								E5CC-QX2ASM-801
Relay output		E5CC-RX2DSM-801						
Voltage output		E5CC-QX2DSM-801						
Relay output		RS-485	-	-	100 to 240 VAC	E5CC-RX2ASM-802		
Voltage output						E5CC-QX2ASM-802		
Relay output						E5CC-RX2DSM-802		
Voltage output						E5CC-QX2DSM-802		
Linear current output			-	-	Two	100 to 240 VAC	E5CC-CX2ASM-804	
Linear current output						24 VAC/VDC	E5CC-CX2DSM-804	

Note: Draw-out-type models of the E5CC-800 are available. Ask your OMRON representative for details.

### E5CC-U 48x48mm

Control output	Auxiliary output	Communications	Heater burnout	Event inputs	Power supply voltage	Model
Relay output	Two	-	-	-	100 to 240 VAC	E5CC-RW2AUM-800
Voltage output						E5CC-QX2AUM-800
Relay output					24 VAC/VDC	E5CC-RW2DUM-800
Voltage output						E5CC-QX2DUM-800

### E5EC 48x96mm

Control output 1	Control output 2	Auxiliary output	Communications	Heater burnout	Event inputs	Power supply voltage	Model			
Relay output	-	Two	-	-	-	100 to 240 VAC	E5EC-RX2ASM-800			
Voltage output	-						E5EC-QX2ASM-800			
Linear current output	-						E5EC-CX2ASM-800			
Relay output	Relay output						E5EC-RR2ASM-800			
Voltage output	Relay output						E5EC-QR2ASM-800			
Linear current output	Relay output						E5EC-CR2ASM-800			
Relay output	-					24 VAC/VDC	-	-	E5EC-RX2DSM-800	
Voltage output	-								E5EC-QX2DSM-800	
Linear current output	-								E5EC-CX2DSM-800	
Relay output	Relay output								E5EC-RR2DSM-800	
Voltage output	Relay output								E5EC-QR2DSM-800	
Linear current output	Relay output								E5EC-CR2DSM-800	
Relay output	Relay output		RS-485	-	-	100 to 240 VAC	E5EC-RR2ASM-808			
Voltage output	Relay output						E5EC-QR2ASM-808			
Relay output	Relay output						E5EC-RR2DSM-808			
Voltage output	Relay output					E5EC-QR2DSM-808				
Relay output	Relay output					-	One	Four	100 to 240 VAC	E5EC-RR2ASM-810
Voltage output	Relay output								E5EC-QR2ASM-810	
Relay output	Relay output		E5EC-RR2DSM-810							
Voltage output	Relay output		RS-485	-	-	24 VAC/VDC	E5EC-QR2DSM-810			
Linear current output	Relay output						E5EC-CR2ASM-804			
Linear current output	Relay output						E5EC-CR2DSM-804			
Relay output (Open)*	Relay output (Close)*		Two	-	-	-	100 to 240 VAC	E5EC-PR0ASM-800		
Relay output (Open)*	Relay output (Close)*							E5EC-PR2ASM-800		
Relay output (Open)*	Relay output (Close)*	E5EC-PR2ASM-800								
Relay output (Open)*	Relay output (Close)*	RS-485						Two	E5EC-PR2ASM-804	

\* Position proportional control model.

Note: Draw-out-type models of the E5EC-800 are available. Ask your OMRON representative for details.

### E5AC 96x96mm

Control output 1	Control output 2	Auxiliary output	Communications	Heater burnout	Event inputs	Power supply voltage	Model				
Relay output	-	One	-	-	-	100 to 240 VAC	E5AC-RX1ASM-800				
Voltage output	-						E5AC-QX1ASM-800				
Linear current output	-						E5AC-CX1ASM-800				
Relay output	-						Three	E5AC-RX3ASM-800			
Voltage output	-							E5AC-QX3ASM-800			
Linear current output	-							E5AC-CX3ASM-800			
Relay output	-	One	-	-	-	24 VAC/VDC	E5AC-RX1DSM-800				
Voltage output	-						E5AC-QX1DSM-800				
Linear current output	-						E5AC-CX1DSM-800				
Relay output	-						Three	RS-485	One	Two	E5AC-RX3DSM-800
Voltage output	-										E5AC-QX3DSM-800
Linear current output	-										E5AC-CX3DSM-800
Relay output	-	Three	-	-	-	100 to 240 VAC	E5AC-RX3ASM-808				
Voltage output	-						E5AC-QX3ASM-808				
Relay output	-						E5AC-RX3DSM-808				
Voltage output	-					-	-	Four	100 to 240 VAC	E5AC-QX3DSM-808	
Relay output	-								E5AC-RX3ASM-810		
Voltage output	-								E5AC-QX3ASM-810		
Relay output	-	RS-485	-	-	Two	24 VAC/VDC	E5AC-QX3DSM-810				
Voltage output	-					E5AC-CX3ASM-804					
Linear current output	-					E5AC-CX3DSM-804					
Relay output (Open)*	Relay output (Close)*	Two	-	-	-	100 to 240 VAC	E5AC-PR0ASM-800				
Relay output (Open)*	Relay output (Close)*						E5AC-PR2ASM-800				
Relay output (Open)*	Relay output (Close)*						E5AC-PR2ASM-800				
Relay output (Open)*	Relay output (Close)*						RS-485	Two	E5AC-PR2ASM-804		

\* Position proportional control model.

Note: Draw-out-type models of the E5AC-800 are available. Ask your OMRON representative for details.

# Ordering Information

Simple Type E5□C-□□□□□□-8□□

E5DC-800 22.5×96mm

Control output	Auxiliary output	Communications	Heater burnout	Event inputs	Power supply voltage	Model *2		
Relay output	-	RS-485	-	-	100 to 240 VAC	E5DC-RX0ASM-815		
Voltage output						E5DC-RX0AUM-815		
Linear current output *1						E5DC-QX0ASM-815		
Relay output						E5DC-QX0AUM-815		
Voltage output						E5DC-CX0ASM-815		
Linear current output *1						E5DC-CX0AUM-815		
Relay output	-	-	-	-	24 VAC/VDC	E5DC-RX0DSM-815		
Voltage output						E5DC-RX0DUM-815		
Linear current output *1						E5DC-QX0DSM-815		
Relay output						E5DC-QX0DUM-815		
Voltage output						E5DC-CX0DSM-815		
Linear current output *1						E5DC-CX0DUM-815		
Relay output	Two	-	-	-	100 to 240 VAC	E5DC-RX2ASM-800		
Voltage output						E5DC-RX2AUM-800		
Linear current output *1						E5DC-QX2ASM-800		
Relay output						E5DC-QX2AUM-800		
Voltage output						E5DC-CX2ASM-800		
Linear current output *1						E5DC-CX2AUM-800		
Relay output		RS-485	-	-	-	100 to 240 VAC	E5DC-RX2DSM-800	
Voltage output							E5DC-RX2DUM-800	
Linear current output *1							E5DC-QX2DSM-800	
Relay output			-	-	-	-	24 VAC/VDC	E5DC-QX2DUM-800
Voltage output								E5DC-CX2DSM-800
Linear current output *1								E5DC-CX2DUM-800
Relay output	-	-	-	-	100 to 240 VAC	E5DC-RX2ASM-802		
Voltage output						E5DC-RX2AUM-802		
Linear current output *1						E5DC-QX2ASM-802		
Relay output						E5DC-QX2AUM-802		
Voltage output						E5DC-CX2ASM-815		
Linear current output *1						E5DC-CX2AUM-815		
Relay output		-	-	-	-	24 VAC/VDC	E5DC-RX2DSM-802	
Voltage output							E5DC-RX2DUM-802	
Linear current output *1							E5DC-QX2DSM-802	
Relay output			-	-	-	-	100 to 240 VAC	E5DC-QX2DUM-802
Voltage output								E5DC-CX2DSM-815
Linear current output *1								E5DC-CX2DUM-815
Relay output	-	-	-	-	24 VAC/VDC	E5DC-RX2ASM-817		
Voltage output						E5DC-RX2AUM-817		
Linear current output *1						E5DC-QX2ASM-817		
Relay output						E5DC-QX2AUM-817		
Voltage output						E5DC-CX2ASM-816		
Linear current output *1						E5DC-CX2AUM-816		
Relay output		-	-	-	-	100 to 240 VAC	E5DC-RX2DSM-817	
Voltage output							E5DC-RX2DUM-817	
Linear current output *1							E5DC-QX2DSM-817	
Relay output			-	-	-	-	24 VAC/VDC	E5DC-QX2DUM-817
Voltage output								E5DC-CX2DSM-816
Linear current output *1								E5DC-CX2DUM-816

\*1. The control output can be used as a simple transfer output for the Digital Temperature Controllers manufactured in July 2014 or later.

\*2. Option 000 can be selected only if two auxiliary outputs are selected.

Options 002 and 017 can be selected only if the control output is a relay output or voltage output and two auxiliary outputs are selected.

Option 015 cannot be selected if the control output is a relay output or voltage output and two auxiliary outputs are selected.

Options 016 can be selected only if the control output is a linear current output and two auxiliary outputs are selected.

Note: Refer to the E5CC/E5CC-U/E5EC/E5AC/E5DC Symple Type Datasheet (Cat. No. H179) for details.

Refer to the E5CC/E5CC-U/E5EC/E5AC/E5DC Standard Type Datasheet (Cat. No. H177) for details.

## OMRON Corporation Industrial Automation Company

Tokyo, JAPAN

Contact: [www.ia.omron.com](http://www.ia.omron.com)

### OMRON (CHINA) CO., LTD.

Room 2211, Bank of China Tower,  
200 Yin Cheng Zhong Road,  
PuDong New Area, Shanghai, 200120, China  
Tel: (86) 21-5037-2222/Fax: (86) 21-5037-2200

### OMRON ASIA PACIFIC PTE. LTD.

No. 438A Alexandra Road # 05-05/08(Lobby 2),  
Alexandra Technopark, Singapore 119967  
Tel: 65-6835-3011/Fax: 65-6835-2711

### OMRON TAIWAN ELECTRONICS INC.

6F, Home Young Bldg., No.363,  
Fu-Shing N.Road, Taipei, Taiwan R.O.C  
Tel: (886) 2-2715-3331/Fax: (886) 2-2712-6712

## Authorized Distributor:

© OMRON Corporation 2011-2014 All Rights Reserved.

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

CSM\_1\_9\_1115

Cat. No. H178-E1-06

Printed in Japan

0614(1111)