OMRON

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

realizing

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.

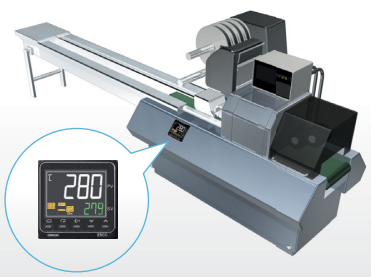
A compact body with large display characters for easy reading even from a distance. This helps to reduce human error.

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)

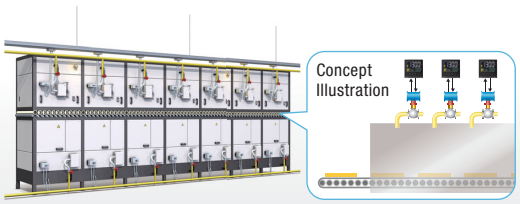


High-speed PID control: Sampling period of 50 ms
Upper/lower limit alarms: Two auxiliary outputs

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

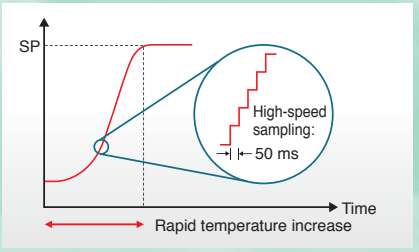
Tens digit setting

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.

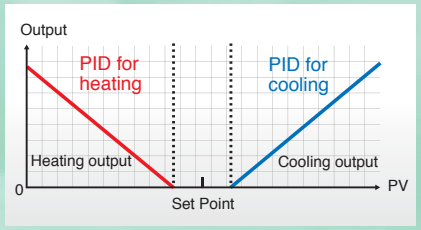
Sampling period:50ms

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.

step1 Wire RS-485 communications.

step2 Set the communications address and the communications type in the Temperature Controllers.

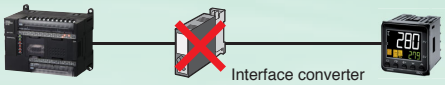
step3 Set the communications settings in the PLC to agree with those in the Temperature Controllers.

↓

Communications start.

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)



More Convenient Operations

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

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.)**

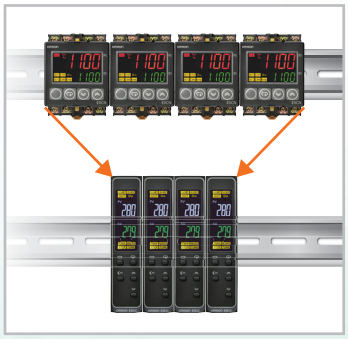
Contributes to Machine Downsizing

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

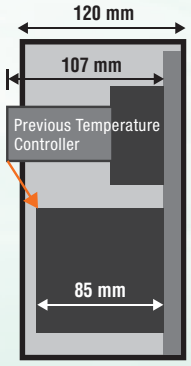
Previously

E5DC
Requires only half the space.

Control panel



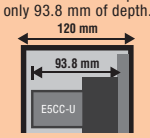
The E5DC has a short body of only 85 mm in depth for easy mounting in control panels with 120-mm depths.



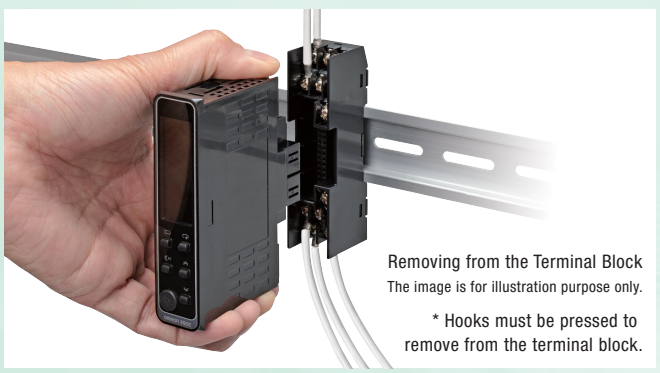
Previously

E5DC
Requires only 85 mm of depth.

And the E5CC-U combined with the P2CF-11 requires only 93.8 mm of depth.



Removable Terminal Block for Easy Mounting and Replacement.

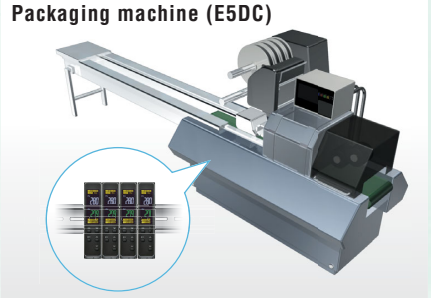


Removing from the Terminal Block
The image is for illustration purpose only.

* Hooks must be pressed to remove from the terminal block.

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 48×48mm

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					24 VAC/VDC	E5CC-RX2DSM-800
Voltage output						E5CC-QX2DSM-800
Linear current output						E5CC-CX2DSM-800
Relay output			One	Two	100 to 240 VAC	E5CC-RX2ASM-801
Voltage output						E5CC-QX2ASM-801
Relay output					24 VAC/VDC	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					24 VAC/VDC	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

E5CC-U 48×48mm

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 48×96mm

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	One	Two	100 to 240 VAC	E5EC-RR2ASM-808
Voltage output	Relay output						E5EC-QR2ASM-808
Relay output	Relay output					24 VAC/VDC	E5EC-RR2DSM-808
Voltage output	Relay output						E5EC-QR2DSM-808
Relay output	Relay output		—		Four	100 to 240 VAC	E5EC-RR2ASM-810
Voltage output	Relay output						E5EC-QR2ASM-810
Relay output	Relay output					24 VAC/VDC	E5EC-RR2DSM-810
Voltage output	Relay output						E5EC-QR2DSM-810
Linear current output	Relay output		RS-485	—	Two	100 to 240 VAC	E5EC-CR2ASM-804
Linear current output	Relay output					24 VAC/VDC	E5EC-CR2DSM-804
Relay output (Open)*	Relay output (Close)*	—	—	—	—	100 to 240 VAC	E5EC-PR0ASM-800
Relay output (Open)*	Relay output (Close)*	Two					E5EC-PR2ASM-800
Relay output (Open)*	Relay output (Close)*		RS-485		Two		E5EC-PR2ASM-804

* Position proportional control model.

E5AC 96×96mm

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					E5AC-RX3DSM-800
Voltage output	—						E5AC-QX3DSM-800
Linear current output	—						E5AC-CX3DSM-800
Relay output	—		RS-485	One	Two	100 to 240 VAC	E5AC-RX3ASM-808
Voltage output	—						E5AC-QX3ASM-808
Relay output	—					24 VAC/VDC	E5AC-RX3DSM-808
Voltage output	—						E5AC-QX3DSM-808
Relay output	—		—		Four	100 to 240 VAC	E5AC-RX3ASM-810
Voltage output	—						E5AC-QX3ASM-810
Relay output	—					24 VAC/VDC	E5AC-RX3DSM-810
Voltage output	—						E5AC-QX3DSM-810
Linear current output	—		RS-485	—	Two	100 to 240 VAC	E5AC-CX3ASM-804
Linear current output	—					24 VAC/VDC	E5AC-CX3DSM-804
Relay output (Open)*	Relay output (Close)*	—	—	—	—	100 to 240 VAC	E5AC-PR0ASM-800
Relay output (Open)*	Relay output (Close)*	Two					E5AC-PR2ASM-800
Relay output (Open)*	Relay output (Close)*		RS-485		Two		E5AC-PR2ASM-804

* Position proportional control model.

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
						E5DC-RX0AUM-815
Voltage output						E5DC-QX0ASM-815
						E5DC-QX0AUM-815
Linear current output *1						E5DC-CX0ASM-815
						E5DC-CX0AUM-815
Relay output					24 VAC/VDC	E5DC-RX0DSM-815
						E5DC-RX0DUM-815
Voltage output						E5DC-QX0DSM-815
						E5DC-QX0DUM-815
Linear current output *1						E5DC-CX0DSM-815
						E5DC-CX0DUM-815
Relay output	Two	–		–	100 to 240 VAC	E5DC-RX2ASM-800
						E5DC-RX2AUM-800
Voltage output						E5DC-QX2ASM-800
						E5DC-QX2AUM-800
Linear current output *1						E5DC-CX2ASM-800
						E5DC-CX2AUM-800
Relay output					24 VAC/VDC	E5DC-RX2DSM-800
						E5DC-RX2DUM-800
Voltage output						E5DC-QX2DSM-800
						E5DC-QX2DUM-800
Linear current output *1						E5DC-CX2DSM-800
						E5DC-CX2DUM-800
Relay output		RS-485	Detection for Single-phase heater		100 to 240 VAC	E5DC-RX2ASM-802
						E5DC-RX2AUM-802
Voltage output						E5DC-QX2ASM-802
						E5DC-QX2AUM-802
Linear current output *1			–			E5DC-CX2ASM-815
						E5DC-CX2AUM-815
Relay output			Detection for Single-phase heater		24 VAC/VDC	E5DC-RX2DSM-802
						E5DC-RX2DUM-802
Voltage output						E5DC-QX2DSM-802
						E5DC-QX2DUM-802
Linear current output *1			–			E5DC-CX2DSM-815
						E5DC-CX2DUM-815
Relay output		–	Detection for Single-phase heater	One	100 to 240 VAC	E5DC-RX2ASM-817
						E5DC-RX2AUM-817
Voltage output						E5DC-QX2ASM-817
						E5DC-QX2AUM-817
Linear current output *1			–			E5DC-CX2ASM-816
						E5DC-CX2AUM-816
Relay output			Detection for Single-phase heater		24 VAC/VDC	E5DC-RX2DSM-817
						E5DC-RX2DUM-817
Voltage output						E5DC-QX2DSM-817
						E5DC-QX2DUM-817
Linear current output *1			–			E5DC-CX2DSM-816
						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.

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