NEW

OMRON

E5_C-T Programmable Temperature Controller (Digital Controller)

Easy-to-read, simple and dependable Program control

» Set Up to 8 Programs with 32 Segments Each.

» High-contrast display

» Easy set-up and operation with a Special Software

realizing

Highly Visible White PV (Process Value) Display and Three-level-Display

Easier Confirmation

Easy-to-read White Characters with Largest Display Size in the Industry*1

White characters on a black background combine with the largest display size in the industry to achieve superior visibility.
You can quickly and reliably check the PV from wide viewing angles, with natural light or in the subdued lighting condtions.

*1. According to OMRON investigation, November 2013.

Life Size
*E5AC-T

Character Height (White PV)
E5AC-T (shown on the left): 25 mm
E5EC-T: 18 mm
E5CC-T: 15.2 mm

Three-level Display that is easy to understand.*2

You can display the PV (white) and the SV (green) along with the program progression (PRG and SEG (yellow)). These are all visible simultaneously so that you don't have to switch the display.

*2. Excluding the E5CC-T.

The program and segment numbers are displayed to show program progression.

Program No. (0 to 7)
Segment No. (00 to 31)

Special Setup Software for Easy Setup

Commission Machines Even Faster

USB Bus Power Eliminates the Need for a Power Supply

Even if you don't connect a power supply to the Controller, power is supplied from the computer.

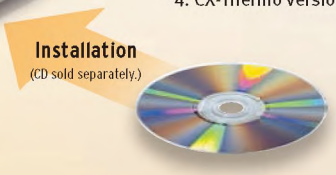
USB-Serial Conversion Cable*3 E58-CIFQ2

*3. The E58-CIFQ2-E Communications Conversion Cable is also required to supply power to the E5EC-T/E5AC-T from the front panel.

CX-Thermo*4 Special Setup Software for Easy Setup

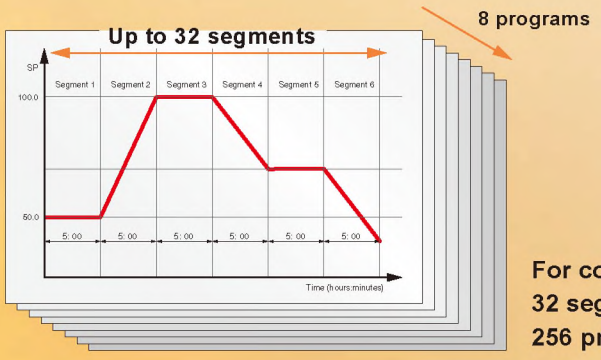
Just use computer key operations to easily achieve complex setups.
You can greatly reduce the required setup work.

*4. CX-Thermo version 4.61 or higher is required.



Up to 8 Programs with 32 Segments Each

A Wide Range of Applications



For complex temperature control, you can set up to 32 segments in each program, for a total of 256 program segments.

Dependable Basic Performance

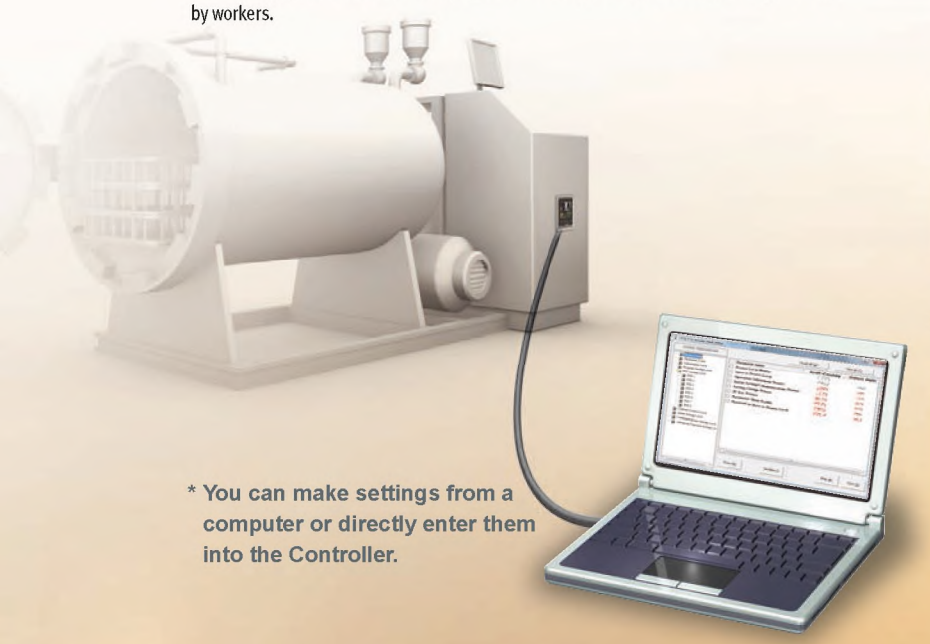
- High-speed sampling period at 50 ms
- Control period of 0.1 s or 0.2 s.
- Universal input on all models
- Programless communications
- Number of event inputs
  E5CC-T: 4 max.
  E5EC-T/E5AC-T: 6 max.
- Number of auxiliary outputs
  E5CC-T: 3
  E5EC-T/E5AC-T: 4

Easier Operation at Worksite

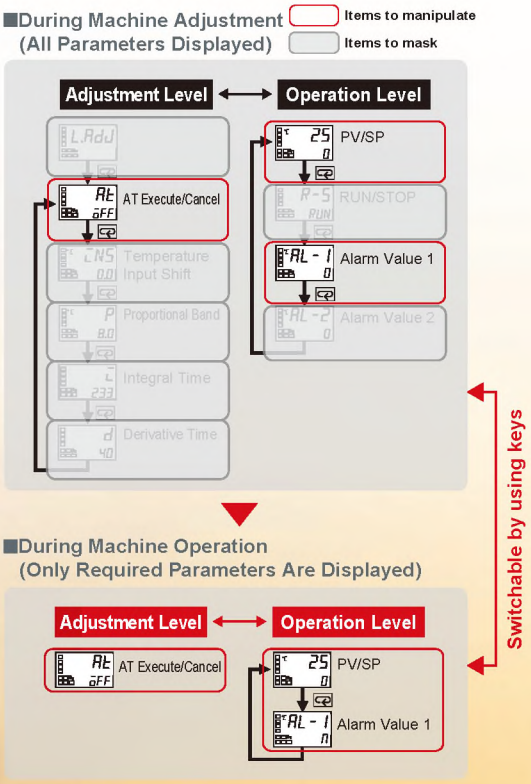
Parameter Mask Function

Prevent Incorrect Settings and Operating Mistakes

You can hide the parameters that do not need to be displayed depends on the worksite.
You can easily make the settings from a computer with the CX-Thermo Special Setup Software.
Unnecessary parameters are not displayed at worksite, which prevents operating mistakes by workers.



* You can make settings from a computer or directly enter them into the Controller.



Shift Key

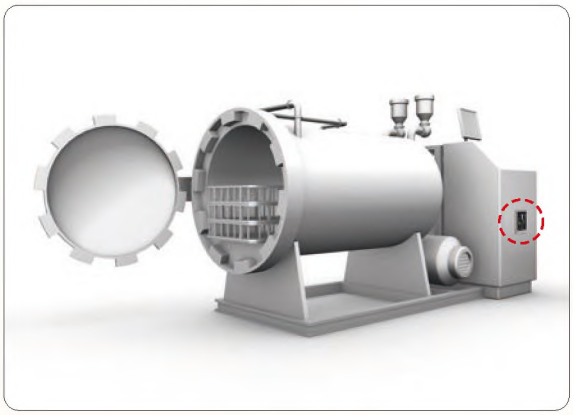
Reduce Setting work to Enter Values

For example, to set 100°C, it was previously necessary to increment one degree at a time with a key, but with the shift key («PF), you can instantly change the digit. This simplifies numeric entry at worksite, where many parameter settings are required for program control.

Just press the shift key to move the digit.

Applications

Sterilization Equipment for Food and Pharmaceuticals

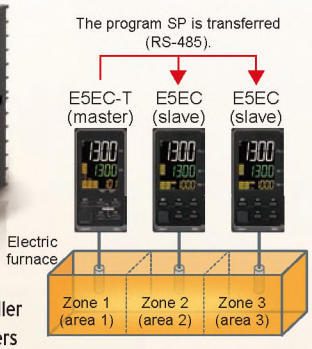


Device Configuration

One E5AC-T Controller

A wide variety of control is possible with the six event inputs and four auxiliary outputs.

Electric Furnace

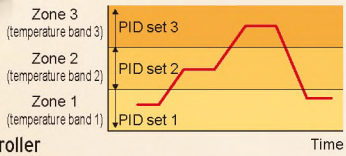


Device Configuration

One E5EC-T Controller
Two E5EC Controllers

You can easily achieve zone (area) control with component communications. RUN/RESET status of master TC and slave TC link to achieve consistent furnace temperatures in order to improve productivity and reduce lead time.

Laboratory Instruments and Desktop Testing Apparatus



Device Configuration

One E5CC-T Controller

You can use automatic PID set selection function to easily handle a controlled object, whose characteristics vary in each temperature zone.

Model Number Legend and Standard Models

Model Number Legend

●Models with Screw Terminals

E5CC-T□□ 3□5M-□□□ (Example: E5CC-TRX3A5M-000)

①②③④⑤⑥

Model	① Control outputs 1 and 2	② No. of auxiliary outputs	③ Power supply voltage	④ Terminal type	⑤ Input type	⑥ Options	Meaning	
E5CC-T							48 × 48 mm Programmable Type	
							Control output 1	**Control output 2**
	RX						Relay output	None
	QX						Voltage output (for driving SSR)	None
*1	CX						Linear current output *2	None
	QQ						Voltage output (for driving SSR)	Voltage output (for driving SSR)
	CQ						Linear current output *2	Voltage output (for driving SSR)
		3					3 (one common)	
			A				100 to 240 VAC	
			D				24 VAC/DC	
				5			Screw terminals (with cover)	
					M		Universal input	

	⑥ Options	HB alarm and HS alarm	Communications	Event inputs	Transfer output
	000	—	—	—	—
*1	001	1	—	2	—
*1	003	2 (for 3-phase heaters)	RS-485	—	—
	004	—	RS-485	2	—
	005	—	—	4	—
	006	—	—	2	Provided.

*1. Options with HB and HS alarms (001, and 003) cannot be selected if a linear current output 1 is selected for the control output.
*2. The Linear current output cannot be used as a transfer output.

Optional Products (Order Separately)

USB-Serial Conversion Cable

Model
E58-CIFQ2

CX-Thermo Support Software

Model
EST2-2C-MV4

Note: CX-Thermo version 4.61 or higher is required for the E5CC-T. For the system requirements for the CX-Thermo, refer to information on the EST2-2C-MV4 on the OMRON website (www.ia.omron.com).

Model Number Legend and Standard Models

Model Number Legend

●Models with Screw Terminals

E5EC-T□□ 4□5M-□□□ (Example: E5EC-TRX4A5M-000)
①　②③④⑤　⑥

E5AC-T□□ 4□5M-□□□ (Example: E5AC-TRX4A5M-000)
①　②③④⑤　⑥

Model	① Control outputs 1 and 2	② No. of auxiliary outputs	③ Power supply voltage	④ Terminal type	⑤ Input type	⑥ Options	Meaning	
E5EC-T							48 × 96 mm Programmable Type	
E5AC-T							96 × 96 mm Programmable Type	
							Control output 1	**Control output 2**
	RX						Relay output	None
	QX						Voltage output (for driving SSR)	None
*2	CX						Linear current output	None
	QQ						Voltage output (for driving SSR)	Voltage output (for driving SSR)
	QR						Voltage output (for driving SSR)	Relay output
	RR						Relay output	Relay output
*2	CC						Linear current output	Linear current output
*2	CQ						Linear current output	Voltage output (for driving SSR)
*3	PR						Position-proportional relay output	Position-proportional relay output
		4					4 (auxiliary outputs 1 and 2 with same common and auxiliary outputs 3 and 4 with same common)	
			A				100 to 240 VAC	
			D				24 VAC/DC	
				5			Screw terminals (with cover)	
					M		Universal input	

Option selection conditions *1									
	Control outputs 1 and 2								
	For RX, QX, QQ, QR, RR, or CQ	For CX or CC	For PR			**HB alarm and HS alarm**	**Communications**	**Event inputs**	**Transfer output**
	Selectable	Selectable	Selectable		000	—	—	—	—
		Selectable	Selectable		004	—	RS-485	2	—
		Selectable			005	—	—	4	—
	Selectable				008	1	RS-485	2	—
	Selectable				010	1	—	4	—
	Selectable				019	1	—	6	Provided.
		Selectable			021	—	—	6	Provided.
		Selectable	Selectable		022	—	RS-485	4	Provided.

*1. The options that can be selected depend on the type of control output.
*2. The linear current output cannot be used as a transfer output.
*3. Models with Position-proportional Control are scheduled for release in May 2014.

Optional Products (Order Separately)

USB-Serial Conversion Cable

Model
E58-CIFQ2

Communications Conversion Cable

Model
E58-CIFQ2-E

Note: Always use this product together with the E58-CIFQ2. This Cable is used to connect to the front-panel Setup Tool port.

CX-Thermo Support Software

Model
EST2-2C-MV4

Note: CX-Thermo version 4.61 or higher is required for the E5EC-T/E5AC-T. For the system requirements for the CX-Thermo, refer to information on the EST2-2C-MV4 on the OMRON website (www.ia.omron.com).

Main Specifications

Model	E5CC-T	E5EC-T	E5AC-T
Size (mm)	Front panel: 48 × 48, Depth: 60	Front panel: 48 × 96, Depth: 60	Front panel: 96 × 96, Depth: 60
Sensor input	All models: Thermocouple, platinum resistance thermometer, ES1B Infrared Temperature Sensor, or analog input (voltage/current); switchable.		
Indication accuracy (at the ambient temperature of 23°C)	Thermocouple: (±0.3% of indication value or ±1°C, whichever is greater) ±1 digit max. Platinum resistance thermometer: (±0.2% of indication value or ±0.8°C, whichever is greater) ±1 digit Analog input: ±0.2% FS ±1 digit max. CT input: ±5% FS ±1 digit max.	Thermocouple: (±0.3% of indication value or ±1°C, whichever is greater) ±1 digit max. *1 Platinum resistance thermometer: (±0.2% of indication value or ±0.8°C, whichever is greater) ±1 digit Analog input: ±0.2% FS ±1 digit max. CT input: ±5% FS ±1 digit max. Potentiometer input: ±5% FS ±1 digit max.	
Input sampling period	50 ms		
Control output	Relay output,Voltage output (for driving SSR), Linear current output (depends on model)	Relay output,Voltage output (for driving SSR), Linear current output (depends on model), Position-proportional relay output (depends on model)	
Event input	2 or 4 (depends on model)	2 or 4 or 6 (depends on model)	
	You can assign one of the following: Program switching, switching between run and reset status, switching between automatic and manual operation, invert direct/reverse operation, switching between program SP mode and fixed SP mode, 100% AT execute/cancel, 40% AT execute/cancel, 100% execute/cancel for all PID sets, 40% execute/cancel for all PID sets, setting change enable/disable, communications write enable/disable, alarm latch cancel, hold/clear hold, advance, and wait enable/disable.		
Auxiliary output	3	4	
	You can assign one of the following: control output, alarm, HB alarm, HS alarm, input error (S.ERR), integrated alarm, RUN status, program end, stages, time signals, or work bit.		
Transfer output	1 (only on models with a transfer output)		
	You can assign one of the following: SP, Set point during SP ramp SP, PV, MV, or valve opening.		
Terminal size	M3		
Approved standards			

Program Control

Number of programs (patterns)		8
Number of segments (steps)		32
Segment setting method		Time setting (Segment set with set point and time.)
		Slope setting (Segment set with segment type, set point, slope, and time.)
Segment times		0 h 0 min to 99 h 59 min
		0 min 0 s to 99 min 59 s
Alarm setting		Set separately for each program.
Reset operation		Select either stopping control or fixed SP operation.
Startup operation		Select continuing, resetting, manual operation, or run mode.
PID sets	Number of sets	8
	Setting method	Set separately for each program (automatic PID group selection also supported).
Alarm SP function		Select from ramp SP and target SP.
Program status control	Segment operation	Advance, segment jump, hold, and wait
	Program operation	Program repetitions and program links
Wait operation	Wait method	Waiting at segment ends
	Wait width setting	Same wait width setting for all programs
Time signals	Number of outputs	2
	Number of ON/OFF operations	1 each per output
	Setting method	Set separately for each program.
Program status output		Program end output (pulse width can be set), run output, stage output
Program startup operation	PV start	Select from segment 1 set point, slope-priority PV start
	Standby	0 h 0 min to 99 h 59 min
		0 day 0 h to 99 day 23h
Operation end operation		Select from resetting, continuing control at final set point, and fixed SP control.
Program SP shift		Same program SP shift for all programs