

Digital Temperature Controller

E5CC/E5CC-U (48 × 48 mm)

**Large White PV Display That's Easier to Read.
Easy to Use, from Model Selection to
Setup and Operation.**

**A Complete Range of I/O Capacities,
Functions, and Performance.
Handles More Applications.**

- The white PV display with a height of 15.2 mm improves visibility.
- High-speed sampling at 50 ms.
- Models are available with up to 3 auxiliary outputs, up to 4 event inputs, a transfer output, and a remote SP input to cover a wide range of applications.
- E5CC: Short body with depth of only 60 mm.
- Set up the Controller without wiring the power supply by connecting to the computer with a Communications Conversion Cable (sold separately). Setup is easy with the CX-Thermo (sold separately).
- Easy connections to a PLC with programless communications. Use component communications to link Temperature Controllers to each other.



48 × 48 mm
E5CC

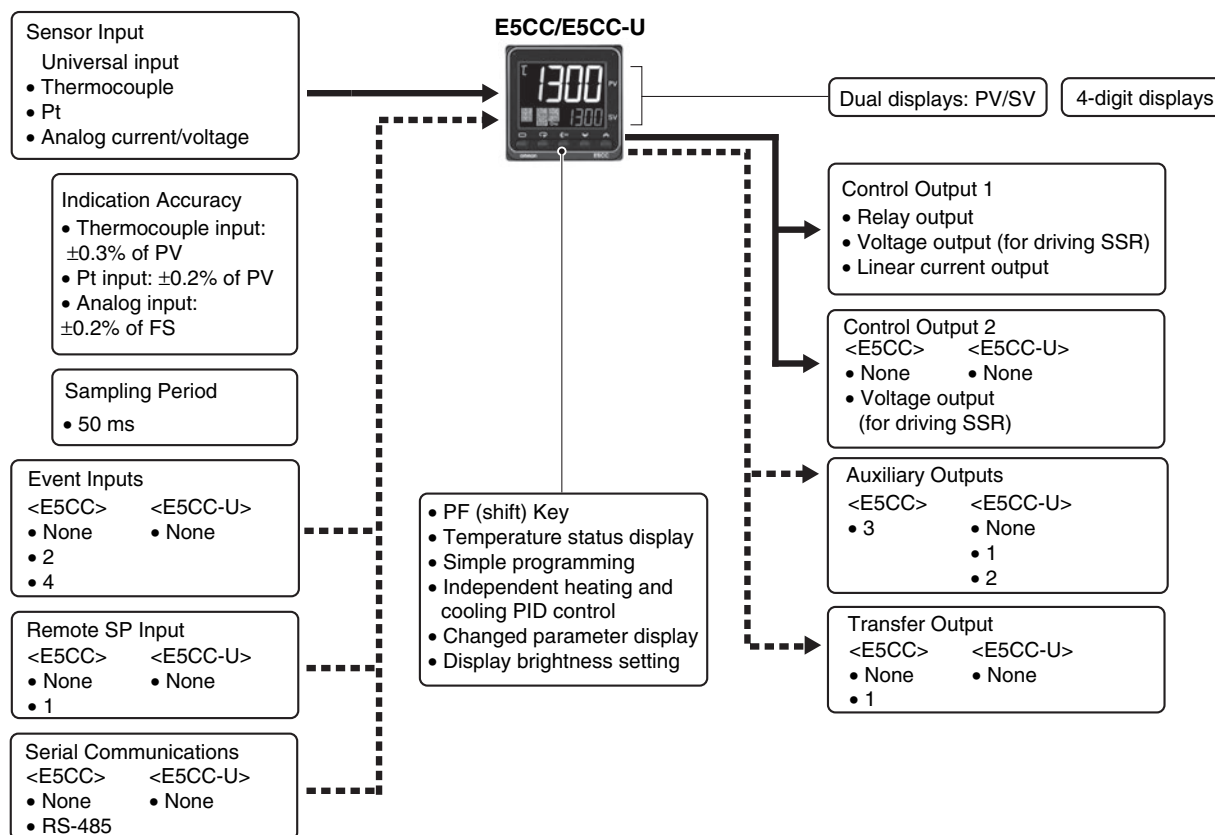


48 × 48 mm
E5CC-U

Refer to your OMRON website for the most recent information on applicable safety standards.

Refer to Safety Precautions on page 104.

Main I/O Functions



This datasheet is provided as a guideline for selecting products.

Be sure to refer to the following manuals for application precautions and other information required for operation before attempting to use the product.

E5□C Digital Temperature Controllers User's Manual (Cat. No. H174)

E5□C Digital Temperature Controllers Communications Manual (Cat. No. H175)

Model Number Legend and Standard Models

Model Number Legend

● Models with Screw Terminals

E5CC-□□ 3 □ 5 M-□□□ (Example: E5CC-RX3A5M-000)

① ② ③ ④ ⑤ ⑥

Model	①	②	③	④	⑤	⑥	Meaning					
	Control outputs 1 and 2	No. of auxiliary outputs	Power supply voltage	Terminal type	Input type	Options						
E5CC							48 × 48 mm					
*1 *3							Control output 1			Control output 2		
	RX						Relay output			None		
	QX						Voltage output (for driving SSR)			None		
	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					
								HB alarm and HS alarm	Communications	Event inputs	Remote SP Input	Transfer output
						*1	000	---	---	---	---	
							001	1	---	2	---	
						*1	003	2 (for 3-phase heaters)	RS-485	---	---	
						*3	004	---	RS-485	2	---	
							005	---	---	4	---	
							006	---	---	2	Provided.	
							007	---	---	2	Provided.	

*1. Options with HB and HS alarms (001 and 003) cannot be selected if a linear current output is selected for the control output.

*2. The control output cannot be used as a transfer output.

*3. Option 004 can be selected only when "CX" is selected for the control outputs.

Heating and Cooling Control

● Using Heating and Cooling Control

① Control Output Assignment

If there is no control output 2, an auxiliary output is used as the cooling control output.

If there is a control output 2, the two control outputs are used for heating and cooling.

(It does not matter which output is used for heating and which output is used for cooling.)

② Control

If PID control is used, you can set PID control separately for heating and cooling.

This allows you to handle control systems with different heating and cooling response characteristics.

Model Number Legend

●Plug-in Models

E5CC-□□ □□ U M -000 (Example: E5CC-RW0AUM-000)

① ② ③ ④ ⑤ ⑥

Model	①	②	③	④	⑤	⑥	Meaning					
	Control outputs 1 and 2	No. of auxiliary outputs	Power supply voltage	Terminal type	Input type	Options						
E5CC							48 × 48 mm					
							Control output 1		Control output 2			
	RW						Relay output (SPDT)		None			
	QX						Voltage output (for driving SSR)		None			
	CX						Linear current output*		None			
		0					None					
		1					1					
		2					2 (one common)					
			A				100 to 240 VAC					
			D				24 VAC/DC					
				U			Plug-in model					
					M		Universal input					
								HB alarm and HS alarm	Communications	Event inputs	Remote SP Input	Transfer output
							000	---	---	---	---	---

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

List of Models

Control output	No. of auxiliary outputs	Options			Model	Model
		HB alarm and HS alarm	No. of event inputs	Communications	Power supply voltage	Power supply voltage
					100 to 240 VAC	24 VAC/DC
Relay output	---	---	---	---	E5CC-RW0AUM-000	E5CC-RW0DUM-000
	1				E5CC-RW1AUM-000	E5CC-RW1DUM-000
	2				E5CC-RW2AUM-000	E5CC-RW2DUM-000
Voltage output (for driving SSR)	---	---	---	---	E5CC-QX0AUM-000	E5CC-QX0DUM-000
	1				E5CC-QX1AUM-000	E5CC-QX1DUM-000
	2				E5CC-QX2AUM-000	E5CC-QX2DUM-000
Linear current output	---	---	---	---	E5CC-CX0AUM-000	E5CC-CX0DUM-000
	1				E5CC-CX1AUM-000	E5CC-CX1DUM-000
	2				E5CC-CX2AUM-000	E5CC-CX2DUM-000

Heating and Cooling Control

●Using Heating and Cooling Control

① Control Output Assignment

An auxiliary output is used as the cooling control output.

② Control

If PID control is used, you can set PID control separately for heating and cooling.

This allows you to handle control systems with different heating and cooling response characteristics.