OMRON

Digital Temperature Controllers

E5□C Series

Leading innovation in temperature controllers

- Compact design with high performance
- Intuitive and user-friendly interface
- High-Quality Display

Industry-leading Solutions

Control panels are the heart of manufacturing. Improving the efficiency, process and design of the control panel ultimately leads to a more reliable and productive manufacturing process. OMRON has developed an innovative solution to drastically reduce wiring time, downsize, and offer exceptional vibration resistant connections for your panel.
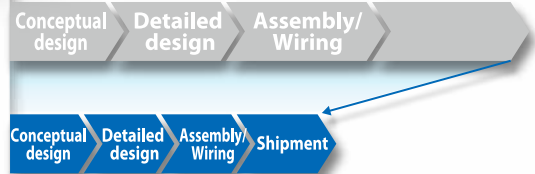
Less wiring time required

Greater vibration resistance

Push-in Plus Technology

Maintenance-free terminal connections

Process

Conceptual design | Detailed design | Assembly/ Wiring

Conceptual design | Detailed design | Assembly/ Wiring | Shipment

Panels

People

Leading Innovation in Temperature Controllers

NEW

E5CC-U
Plug-in models
48 X 48 mm
(1/16 DIN)

NEW

E5CC-B
Push-In Plus
terminal block
48 X 48 mm
(1/16 DIN)

E5EC-B
Push-In Plus
terminal block
48 X 96 mm
(1/8 DIN)

E5DC-B
Push-In Plus
terminal block
width: 22.5 mm

E5DC
DIN rail mount
width: 22.5 mm

E5DC-B
Push-In Plus
terminal block
width: 22.5 mm

E5GC
Screw
terminal block/
Screw-less clamp
terminal block
48 X 24 mm
(1/32 DIN)

E5CC
Screw terminal
block
48 X 48 mm
(1/16 DIN)

E5EC
Screw terminal
block
48 X 96 mm
(1/8 DIN)

E5AC
Screw terminal block
96 X 96 mm
(1/4 DIN)

Compact design with high performance

- Downsized to improve panel space.
- 50 ms sampling period for fast and precise regulation
- Unique 2-PID control provides greater control stability

Intuitive and user-friendly interface

- Designed for quick setup and operation.

High Quality Display

- Wide viewing angle and high-contrast LCD for high visibility.

Certified for main safety
standards.

UL
CERTIFIED * CE

*CSA conformance evaluation by UL.

A wide range of temperature controllers to handle various control panel/equipment sizes

Reduction in panel space

The temperature control body depth has been reduced by 33% from the previous design allowing the controller to fit in the tightest spaces.

Small size doesn't sacrifice visibility

Even with the E5GC's 48 x 24 size, OMRON's high contrast display provides crystal clear temperature controller information to the operator.
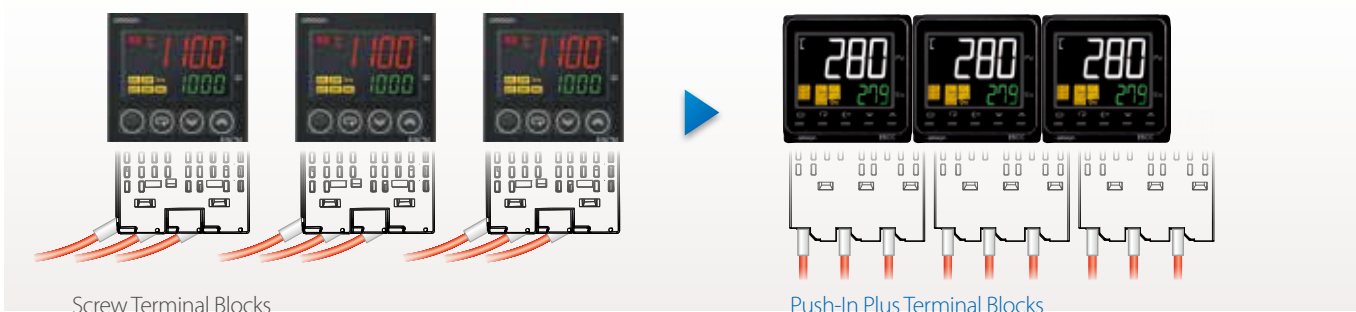
E5CC
E5EC
E5AC

60 mm

E5GC

10.5 mm

*In comparison with the E5CN.

Save in-panel space with the ultra-slim E5DC-body

At 22.5mm wide, the E5DC can save a great amount of DIN space when grouped together.

E5DC-B
E5DC

Streamlining the wiring

With Push-In Plus technology, wiring is streamlined to improve cleanliness and functionality of the routing.

E5CC-B
E5EC-B

Screw Terminal Blocks

Push-In Plus Terminal Blocks

Improving the Push-in Plus Offering

The new E5DC-B Series Temperature Controller is the latest model to offer Push-In Plus Technology.

This model is not only space-saving for easy installation in control panel but also reduces wiring work.

NEW
E5DC-B

Eliminate wires with interconnection ports

The E5DC-B's modular body features interconnection ports that allow up to 16 units to be grouped together.

NEW
E5DC-B

Removable Terminal block allows for quick and easy replacement

The removable terminal block eliminates the need to rewire the temperature controller when replaced or serviced.

E5DC-B
E5DC

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

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

Greater efficiency in design, assembly and operation

Design

Reduce PLC Programming

STEP 1 Wire RS-485 communications.

STEP 2 Set the communications addresses and the communications types in the Temperature Controllers.

STEP 3 Set the communications settings in the PLC to agree with those in the Temperature Controllers.

COMMUNICATIONS START

- In addition to PLC integration, each temperature controller can copy each other's settings and functionality
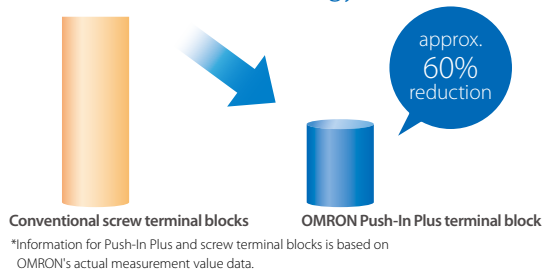
Assembly and Wiring

Save time and effort in wiring
Just Insert Wires: No Tools Required
Now you can use Push-In Plus technology to reduce the time and work involved in wiring.

Greatly Reduce Wiring Work with Push-In Plus technology

approx. **60%** reduction

Conventional screw terminal blocks   OMRON Push-In Plus terminal block

*Information for Push-In Plus and screw terminal blocks is based on OMRON's actual measurement value data.

Maintenance Free Terminal Connections
Screw terminals require re-tightening. Push-In Plus terminal blocks are maintenance-free.

Temperature Sensors
OMRON's E52 Temperature Sensors are available with ferrules to help simplify wiring

**E5CC-B
E5EC-B
E5DC-B**

Easy to Insert
OMRON's Push-In Plus terminal blocks are as easy as inserting to an earphone jack. They help reduce the work load and improve wiring quality.

Exceptional Vibration Resistance
Push-In Plus terminals offer a higher clamping force compared to screw terminals. This offers an exceptional vibration resistant connection that prevents loose wiring.

IEC standard (cable diameter)	Push-In Plus terminal block	Screw terminal block
20 N min. (AWG20,0.5 mm^2)	**125 N**	112 N

*Information for Push-In Plus and screw terminal blocks is based on OMRON's actual measurement value data.

Setup, Adjustment, and Operation

CX-Thermo Special Setup Software (Sold Separately) Effectively Reduces Work from Setup to Adjustment and Operation.

You can perform the following operations with the CX-Thermo.
- Setting and saving parameters
- Logging, browsing, and exporting data
- Printing parameter lists, and more

*USB-Serial Conversion Cable (Sold Separately)

Also, power is supplied through the Bus Power, so you do not have to wire the power supply to set parameters.

Innovating usability

High Quality Display

Big white readings provide superior visibility in low light and far distances.

Life Size

E5CC

High-contrast displays enable easier confirmation regardless of ambient lighting conditions.

A wide viewing angle was achieved with the LCDs to enable easy confirmation of the PV.

Quick and easy setup

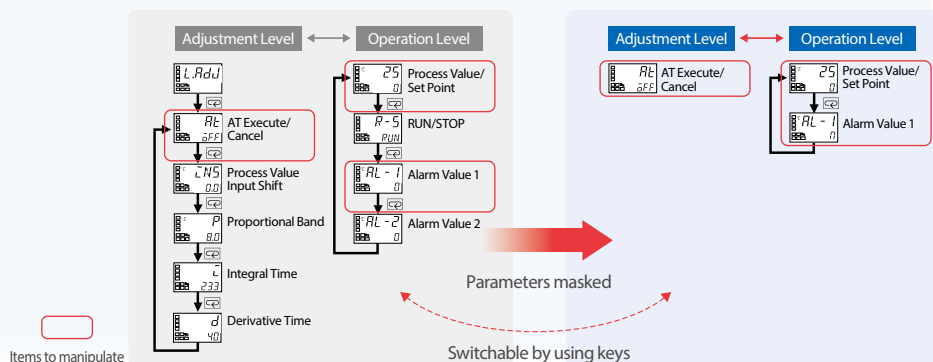Functions are provided to reduce work in operating and changing settings for the Controllers.

Just press the shift key (<<PF) to move the digit. This simplifies numeric entry at worksite.

《PF

Just press the shift key to move the digit.

CX-Thermo Functions

Use parameter masks to display only the required parameters. The time required to change settings, such as for changeovers, is greatly reduced.

Adjustment Level ⟷ Operation Level		Adjustment Level ⟷ Operation Level

L.AdJ

At / oFF AT Execute/Cancel

CNS / 0.0 Process Value Input Shift

P / 8.0 Proportional Band

L / 233 Integral Time

d / 40 Derivative Time

25 / 0 Process Value/Set Point

r-S / RUN RUN/STOP

AL-1 / 0 Alarm Value 1

AL-2 / 0 Alarm Value 2

At / oFF AT Execute/Cancel

25 / 0 Process Value/Set Point

AL-1 / 0 Alarm Value 1

Parameters masked

Switchable by using keys

Items to manipulate

Product lineup

Size / Terminal type	48 X 24 mm (1/32 DIN)	48 X 48 mm (1/16 DIN)	48 X 96 mm (1/8 DIN)	96 X 96 mm (1/4 DIN)	DIN 22.5-mm width
Push-In Plus terminal block		E5CC-B	E5EC-B		E5DC-B NEW
Screw terminal block	E5GC*□	E5CC	E5EC	E5AC	E5DC
Plug-in models		E5CC-U			

*Screwless clamp terminal blocks also available.
Refer to the E5□C Series Datasheet (Cat. No. H177) for details.

Related Products

Product Name	E52
Type	Temperature sensor
Description	Pt100, K, J, R, types available