New Value For Control Panels

Control Panels: The Heart of Manufacturing Sites.
Evolution in control panels results in large evolution in production facilities.
And if control panel design, control panel manufacturing processes, and human interaction with them are innovated, control panel manufacturing becomes simpler and takes a leap forward.
OMRON will continue to achieve a control panel evolution and process innovation through many undertakings starting with the shared Value Design for Panel *1 concept for the specifications of products used in control panels.

*1 Value Design for Panel
Our shared Value Design for Panel (herein after referred to as "Value Design") concept for the specifications of products used in control panels will create new value to our customer's control panels.
Combining multiple products that share the Value Design concept will further increase the value provided to control panels.

The Leading Temperature Controllers in the Control Panel Evolution

E5CC-U
Plug-in models
48 × 48 mm

E5CC-B
Push-In Plus
terminal block
48 × 48 mm

E5EC-B
Push-In Plus
terminal block
48 × 96 mm

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

E5DC
DIN
Track-mounting Type
width: 22.5 mm

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

E5GC
Screw terminal block/
Screw-less clamp
terminal block
48 × 24 mm

E5CC
Screw terminal
block
48 × 48 mm

E5EC
Screw terminal
block
48 × 96 mm

E5AC
Screw terminal block
96 × 96 mm

Greater downsizing and higher performance in control panels and other equipment

• A wide range of lineup to handle various control panel/equipment sizes.
• Advanced control performance to help increase equipment speed and yield.

Greater efficiency from designing to assembly and operations

• Saves your work in each process from designing to operation of control panels and other equipment.

Innovating control panel and equipment usability

• Wide viewing angle and high-contrast LCD for high visibility.
• Reduces the workload of entering set values on-site.

Certified for main safety standards.

*CSA conformance evaluation by UL.

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

Save Space with a Compact Body That's Only 60 mm in Depth

A short body that's 77% of our previous model has been achieved.
This makes the Controller applicable in tight spaces with limited depth.

E5CC
E5EC
E5AC

60 mm

*In comparison with
the E5CN.

Help Reduce Panel Space

Even with the 48 × 24 size, OMRON has achieved a PV display character height of over 10 mm and dual displays for the present value and set point.
This enables compact panels that are easy to read.

Equal Operability as On-panel Controllers Plus Space-saving Layouts inside Control Panels

The unified operability of the E5[]C Series in a DIN Track-mounting Controller that is 22.5 mm wide.
You can achieve space-saving layouts in control panels.

Push-In Plus technology Enables Horizontal Group Mounting Easily

With Push-In Plus technology, wiring is performed from the back, which facilitates using horizontal group mounting, to achieve compact panel surfaces.

Space-saving 22.5 mm Wide Design Saves Reduce wiring work

The lineup has been expanded to include the 22.5 mm wide in-panel E5DC model with Push-In Plus Terminal Block.
This model is not only space-saving for easy installation in control panel but also reduces wiring work.

Reduce Crossover Wiring with Horizontal Connection Structure

Simply connect the device to enable power line and communication cable, reducing the amount of wiring work required. (Maximum connectable units: 16 devices)

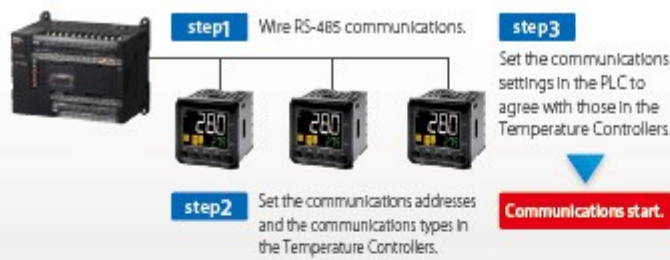**Removable Terminal Block for Easy Mounting and Replacement**

The removable terminal block means wiring does not need to be removed during maintenance, making mounting and replacement simple.

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

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

Greater efficiency from designing to assembly and operation

Programless Communications Eliminates the Time to Create Communications Program with the PLC.

step1 Wire RS-485 communications.

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

Communications start.

step2 Set the communications addresses and the communications types in the Temperature Controllers.

- In addition to communications with PLCs, you can share target temperatures and copy parameter settings with other E5□C series Controllers.

Assembly and Wiring

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

E5CC-B
E5EC-B
E5DC-B

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.

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.

No Retightening Required
Tightening screws is necessary for screw terminal blocks, but with Push-In Plus terminal blocks, there is no need for retightening.

Held Firmly in Place
Even though less insertion force is required, the wires are held firmly in place. The advanced mechanism design technology and manufacturing technology produced a spring that ensures better workability and reliability.

Temperature Sensors
Temperature Sensors with Ferrules are also available to help reduce the time and work involved in wiring.

IEC standard (cable diameter)	Push-In Plus terminal block	Screw terminal block
20 N min. (AWG20,0.5 mm²)	**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 control panel and equipment usability

Easy Display Confirmation On-site.

Big white characters on a black background achieve superior visibility. Operator movement distances are minimized to help increase work efficiency.

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.

Reduces the workload of entering set values on-site.

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.

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

L.AdJ

At / OFF — AT Execute/ Cancel

In5 / 0.0 — Process Value Input Shift

P / 8.0 — Proportional Band

i / 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

Items to manipulate

Parameters masked

Switchable by using keys

Adjustment Level ↔ Operation Level

At / OFF — AT Execute/ Cancel

25 / 0 — Process Value/ Set Point

AL-1 / 0 — Alarm Value 1