E5_N/E5_N-H
Digital Temperature Controllers

The E5_N Series Brings Simplicity to the Worksite

» Displays precisely show the current status to onsite operators.

» Best-selling Temperature Controllers, from model selection to operation and maintenance.

» The 48 × 24 mm-sized E5GN has renewed with remarkable ease of use that E5_N series offers.
Easiest to Use at the Worksite.
The Temperature Controllers of Choice with Over 3 Million Sold Worldwide.

These Temperature Controllers are easy to use in essentially every way, including displays with superior readability to visually show onsite status, as well as for model selection, operation, and maintenance. And the all-new E5GN Temperature Controllers at only 48 × 24 mm support even more applications.

The E5_N Series Brings Simplicity to the Worksite

Quickly Readable Status
The display section precisely shows the current status to onsite operators.

Multifunction Displays Support Rapid Judgments
Switch PV Display Colors
Easily Recognize the PV
Changes in the color of the PV show the current status.
You can select between different patterns for color combinations.

PV and SV Status Displays
Easily See the Current Status
If a certain status occurs, the status will be displayed alternating with the PV or SV.

Displayable Status
- Manual
- Stop
- Alarms
- Heater alarm

Display Example for Alarm 1

Three-level Displays
One More Display to Increase Operating Ease
More information is provided by the 3-level displays. Operating ease onsite is increased by eliminating the need to switch the display.

*Supported by the E5AN_E5GN

A 48 × 24-mm Model Joins the E5_N Series

The Easy Operation of the E5_N Series Packed into the Compact E5GN

The switchable PV display colors, PV/SV status displays, 11-segment characters, and other display features of the E5_N Series have been inherited by the E5GN. A universal input for both thermocouples and platinum resistance thermometers helps reduce stocks, and models are available with analog inputs and current outputs.

A Support Software port is provided on all models to simplify setting and maintenance by using the CX-Thermo* Support Software.

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*Supported by the E5AN_E5GN

New Screwless Clamp Terminals Reduce Wiring Work

Easy to Use Anywhere
Simplicity in the Workplace for Operation, Maintenance, and Model Selection

The following pages introduce the reason for the popularity of the E5_N Series.
PF Key for Direct Operation

You can allocate a function to the PF key to enable simple execution of autotuning, RUN/STOP switching, or other operations.

*Supported by the CX/Thermo.

Functions that can be executed directly
- RUN
- STOP
- RUN/STOP switching
- Auto/manual switching
- Monitor/setting items (5 maximum)

Easy Setting with Support Software

Setting parameters, making adjustments, or performing maintenance is easy with the CX-Thermo Support Software.

Main CX-Thermo Functions
- Editing settings
- Saving and copying settings
- Monitoring trends
- Fine-tuning
- Masking parameters

Simpler Menus with the Parameter Mask Function

The parameter mask function can be used to hide unused parameters and to prevent inadvertent changes on parameter settings and inadvertent operations.

Enable/Disable Parameter Masks with a Key Operation

A key operation on the Temperature Controller can be used to enable and disable the parameter masks that have been set. This enables displaying masked parameters in emergencies without the Support Software, to provide both operational simplicity and maintenance ease.

Control Output ON/OFF Counter for Easier Preventive Maintenance

The number of control output ON/OFF operations for relays or voltage outputs is counted. An alarm output and PV/SV status display can be produced when a set value is exceeded so that you know when maintenance is necessary for built-in relays or external output devices.

Reduced Work for Setting, Adjustment, and Operation

The E5_N Series for Smooth Operation

CX-Thermo

Designed for the Ultimate in Simplicity on the Work Site

Designed for Reliability The E5_N Series Meets Onsite Needs by Reducing Maintenance Work

Long-life Relay Outputs with Ten Times the Life

Models with long-life relay outputs are available for ten times the electrical life of normal relay outputs. With a life of one million operations, maintenance cycles can be lengthened and replacement work is greatly reduced.

Electrical Life of Outputs

| Models with Normal Relay Outputs | 10 times the life: One Million Operations! |
| Models with Long-life Relay Outputs | |

Reduction of Maintenance

*Long-life relay outputs are available on certain E5_N models. DC loads cannot be connected to these models.

More benefit from CX-Thermo

Reduced Work for Operation

Reduced Work for Settings and Adjustments

Maintenance Notification

Maintenance Schedule

Automatic Maintenance

Life Expectancy
Three Million Sold Worldwide.  
Peace of Mind with E5_N Series Global Service

Universal Input to Easily Handle Applications
Models with temperature inputs feature universal compatibility for both thermocouples and platinum resistance thermometers. The same Temperature Controller can be used even for applications that require different input sensors to simplify model selection. The reduced number of models also aids in standardization and stock reduction.

Safety Standard Compliance, Now Including Maritime Safety Standards
Safety standards include UL, CSA, CE Marking, and the Lloyd’s Register maritime standards for a wide range of applicability.  
*The E5GN is not certified for Lloyd’s Register standards.

Global Support for Peace of Mind
To meet expanding globalization, OMRON provides sales, technical consultation, and repair services around the globe. Three million models sold globally is proof that you’ll get reliable support to back up your global business efforts.

Sales Network with Approx. JBDU Centers in 80 Regions Worldwide

High Accuracy

$\pm 0.1\% PV$  
Thermocouple/Pt input: $\pm 0.1\%$ of PV  
Analog input: $\pm 0.1\%$ FS  
Achieve high-resolution temperature or humidity measurement, fluctuation detection, and logging in environmental testing devices and other equipment.

High-speed input Sampling

$60\text{ ms}$  
Enough Sampling Speed to Easily Handle Rapid Temperature Increases  
Perform stable control with high-speed response for rapid temperature increases of ceramic heaters and other devices.

Handle 5-digit K Thermocouples

$0.01^\circ \text{C}$ Display  
Five-digits 0.01°C PV/SV Displays to Make the Most of High Performance  
High-resolution displays to 0.01°C for Pt, K, J, and T. Enables high-precision temperature control.

Fully Universal Inputs

Handle essentially any application with fewer stock units.  
The same Temperature Controller accepts thermocouple, platinum resistance thermometer, and analog inputs. Handle a wide range of applications while increasing standardization and reducing stock quantities.

Logic Operations

Simple Logic Operations without a PLC  
Use external contacts or Controller status as inputs for AND/OR operations and combine them with timers. Define event input operation conditions and output to auxiliary outputs. The results are reduced wiring and less labor.

Temperature Profile Control

Achieve many types of control with the simple program and bank functions.  
Combining the SP ramp function with simple programming enables ramp/soak control. Add the bank function, and you can achieve temperature profile control with up to 16 segments.

Infrared Communications Port on Front Panel  
Communicate with a Computer from the Front Panel  
An infrared port has been provided on the front panel. Even after the Controller has been mounted in a panel, you can use the CX-Thermo Support Software from the front panel to reduce maintenance time.

*For details, refer to the E5_N/E5_N-H Datasheet.

Advanced Models

E5_N-H

These Advanced Models build on the platform of the easy-to-use, economic Basic Models to meet needs for high-speed, high-accuracy temperature and process control.

High-speed input Sampling

$60\text{ ms}$  
Enough Sampling Speed to Easily Handle Rapid Temperature Increases  
Perform stable control with high-speed response for rapid temperature increases of ceramic heaters and other devices.

Handle 5-digit K Thermocouples

$0.01^\circ \text{C}$ Display  
Five-digits 0.01°C PV/SV Displays to Make the Most of High Performance  
High-resolution displays to 0.01°C for Pt, K, J, and T. Enables high-precision temperature control.

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*For details, refer to the E5_N/E5_N-H Datasheet.
## A Complete Lineup of Basic Models and Advanced Models

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<td>0 or 2 auxiliary outputs</td>
<td>1 or 3 auxiliary outputs</td>
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*For detailed specifications, refer to the ES_N/ES_N-H Datasheet.*

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Cat. No. H164-E1-01

Printed in Japan 0909