

## Complete solution for Temperature Control

On-panel and in-panel scalable solutions



With one of the world's largest selections of compact temperature control solutions, we offer the perfect-fit for your application. Additionally we offer a selection of Pt100 and thermocouple sensors and full solid state relays/ heater diagnostics, which means you can have one supplier for all of your temperature control solution requirements.

- Accurate and fast temperature control
- Fast development and set-up time
- Logging and trending options
- 2-PID algorithm for fast ramp-up and no overshoot

#### For more information:

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## Scalable regulation solutions

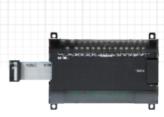












# On-panel control - simple & flexible

#### Using for example: E5CC + NB HMI

This solution handles your process in the familiar, classic way, but with modern temperature control. It gives you easy connection and shares control parameters with the NB HMI to add logging and trending functionality or more advanced alarming, especially when controlling more then one temperature control loop.

- $\bullet$  Typically used where 1 to 3 loops are needed.
- Modularity: 1 loop.
- E5CC menu is entirely customizable, and you can select those parameters necessary for your application via the CX-Thermo software
- Logic operation enables you to create totally new temperature control functionality.

# In-panel dedicated control - easy & space saving

#### Using for example: E5DC + CP1 PLC/NB HMI

Here you achieve accurate temperature control via our dedicated temperature controllers from the E5\_C range. This type of regulation is ideal for when you just want temperature control, so little or no logic is needed.

- Typically used where 1 to 10 loops are needed.
- Modularity: 1 loop.
- Components can be replaced quickly, thanks to socket mounting.
- This solution also saves space as the E5DC is only 22.5mm in size, but still has display and setting keys.
- You can also use another E5DC as backup.
- Easy connection and sharing of parameters with NB HMI or CP1 PLC without programming.

### In-panel PLC integrated control – more control, still easy

#### Using for example: CP1 PLC with temperature sensing I/O and 2-PID Function Block

Another option is "integrated control", achieved with a control (I/O) system. This solution features the CP1 PLC with temperature control PID Function Block.

- Typically used where more than 10 loops are needed.
- Modularity: 2/4 loops.
- $\bullet \text{Using CP1 for temperature control is ideal when you need a PLC for other control tasks. Simply connect}\\$
- a thermocouple sensor to your I/O unit and use our PID Function Block to regulate the temperature.
- The NB HMI shows the temperature values, alarms and control recipes for the process, it can also show process data history and trends.
- With the CP1W-TS003 you can use four thermocouple inputs in total, or two thermocouple and two analogue inputs.
- $\bullet \ \, \text{With the CP1W-TS004 you can control up to 12 thermocouple inputs with a single unit.}$









#### **Accurate and fast temperature control**

Take advantage of our world-leading and unique 2-PID control. Auto-tuning makes it possible with just the touch of a button.

#### Fast development and set-up time

Thanks to flexible products and functions, such as the thermocouple and analogue I/O in the CP1W-TS003, you will save space, time and therefore costs. Also, you can use our standard temperature control Function Block or simply connect the temperature controllers without programming. This saves you hours of programming work.

#### Logging and trending options

When you use an HMI, you can easily see all temperature control real-time data and more historical data is also available in trend graphs to help improve alarm handling and process diagnostics.



## Opportunity to standardize your control panels

Using our in-panel temperature control solutions in combination with an HMI touch panel, you can change the number of temperature control loops without having to change the mounting holes on the control panel screen. So your new panel design and production become faster.



#### Easy logic: from simple to advanced

Our latest E5\_C products provide simple and fast logic control. But when your application demands more logic functionality, choose the CP1 PLC and connect to the E5\_C without any programming. Simply wire and configure settings to read/write the parameters from temperature control to PLC memory.





## Temperature Control facts

Omron is the world's preferred supplier for temperature controllers

# Worldwide every 30 seconds an Omron temperature controller is sold. 24/7

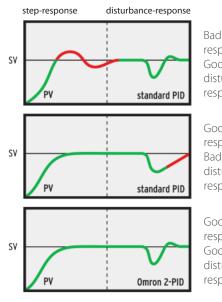
## 270,000 hours

## Reliability is in our DNA

Our Production is of the highest quality standard and the MTBF (Mean Time Before Failure) on for example the E5CC at 270,000 hours is exceptionally high

## 2-PID Control

All Omron PID controllers utilise our unique high standard 2-PID algorithm, providing both good step response and good disturbance response, this ensures accurate temperature control.



Bad step response / Good disturbance response

Good step response / Bad disturbance response

Good step response / Good disturbance response

Would you like to know more?

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