E5GN • H8GN • K3GN
controllers & indicators

A lot more than just space saving!

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Do you need leading edge process control functionality? And is space one of the bottlenecks you encounter monitoring your production processes? Omron's process control series offers you a unique combination: state-of-the-art process control in compact, dust and waterproof housing of only 48 x 24 mm (1/32 DIN). In addition, combining the advantages of both LED and LCD display techniques ensures a crystal-clear readability under all conditions.

Standard features

- All models equipped with high-tech backlit LCD display
- All models come in compact housing
- Dust and waterproof casing (IP66)

your advantages
- *All process operation in one product concept*
- *Great visibility*
- *Save valuable space*
- *Guaranteed performance under severe conditions*

Crystal-clear display, dust and waterproof housing

This process control series comprises the E5GN Temperature Controller, the H8GN Counter/Timer combination and the K3GN Process Indicator. Measuring only 48 x 24 mm, this format is called 'G-format' process control series, and fits almost anywhere, meeting today's requirements of saving valuable space.

In spite of the G-format's size, night and day visibility is excellent - even at longer distances or from wider viewing angles. This series has been equipped with a high-tech backlit LCD display, making use of all the advantages LED and LCD displays offer. All three models come in a dust and waterproof casing (IP66), guaranteeing their performance under severe conditions.

Versatile communications capabilities

The E5GN, the H8GN and the K3GN share the same display design that gives access to identical, intuitive programming menus. We have also equipped this G-format series with versatile linking and communications capabilities, providing you with the possibility of monitoring the most intricate production processes. All three models can be serially linked up to 32 devices, computers or PLCs.

Remote programming is supported by SYS-Config, our software package featuring a user-friendly interface in which all parameters are at your fingertips - ready to be configured.

For process monitoring and visualization we have developed Cx-Supervisor. This is a powerful, yet easy to use software package that allows you to develop applications that unambiguously present process information to an operator.

Stand-alone and communications

- Uniform display design
- Intuitive programming structure
- Linking up to 32 devices
- User-friendly programming software

your advantages
- *Three models, one look and feel*
- *Save valuable programming time*
- *Monitor and control complex production processes*

RS232C   RS485

Up to 32 devices including computers

Omron converter*
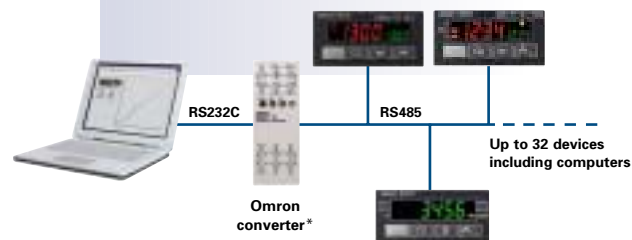
* K3SC: a compact converter that allows communication between RS-232C/USB and RS-422/485 devices.

E5GN
Temperature Controller

The E5GN is the first temperature controller that combines the compact G-format casing with a dual 4-digit display, showing the process value in red, the setpoint value in green and status indicators in orange.

Compact but comprehensive

- Highly accurate
- Auto-tuning or adaptive self-tuning
- Heat, cool or heat/cool control
- Double display

your advantages
- *Easy and rapid set-up*
- *Intuitive and advanced level set-up*
- *Razor sharp temperature control*

This allows you to monitor temperature and setpoint values at the same instance. Process stability is guaranteed due to PID with Feed Forward control. In auto-tuning or self-tuning mode, the E5GN will automatically set your correct PID values. This small controller can be used as heat, cool or heat/cool controller. To reduce the 'downtime' during a change of recipe, you can pre-program four different setpoints according to your needs. Depending on the load you have to switch, you can choose a relay output or a digital output. Also, the E5GN features a multi-functional alarm output offering 12 different modes.

H8GN
Counter/Timer Combination

We are the first in the world to introduce a dual display counter/timer combination in compact G-format housing.
The H8GN offers popular timing, counting and totalizing functions in one, and can also be equip-ped with serial communications capabilities.

A unique three-in-one package

- 4-digit preset counter with four out-put modes
- 4-digit timer with six functions
- 8-digit totalizer

your advantages
- *Timing, counting and totalizing in one device*
- *Advanced timing capabilities*
- *Pre-scalable count input*

This multi-functional device even offers six timing, four counting and 8-digit totalizing functions. The H8GN performs cyclic timing tasks and toggles between counting and totalizing functions, offering you the most comprehensive timer/counter combination available to date. You can pre-program four different setpoints, helping you to reduce 'downtime' when changing production settings. The pre-program values can be changed directly by using the front buttons. In counter mode you can set pre-scaled values from 0.001 to 9.999 so you can operate directly in litres, cm, Kg, etc.

K3GN
Process Indicator

The K3GN multi-function Process Indicator is versatile enough to be applied as a general-purpose Process Indicator, as a RPM tachometer or as a digital display for PCs or PLCs.
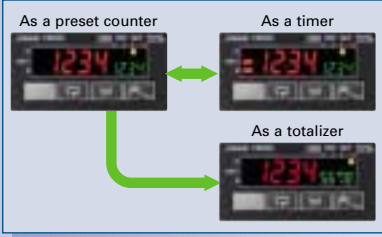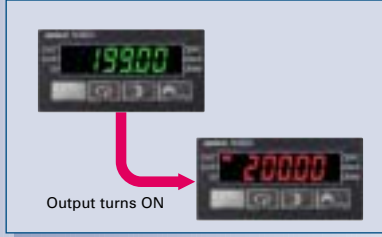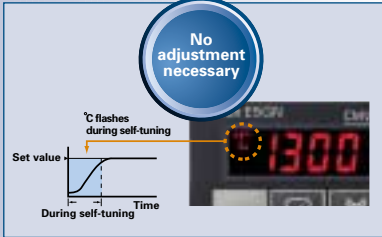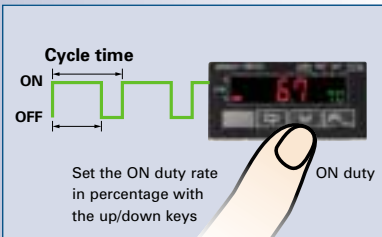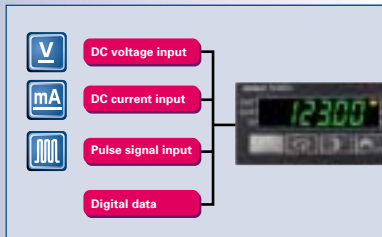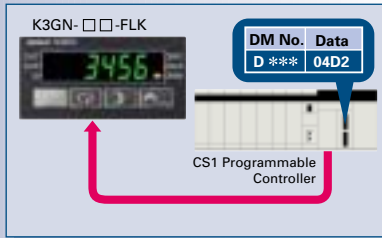
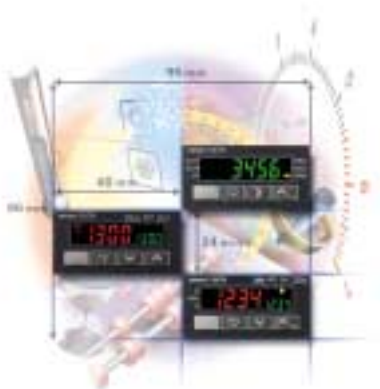The 5-digit display of K3GN can be programmed to change color, indicating process information according to your specifications. For example, you can set regular process information to show in green while errors are indicated in alarming red. The Process Indicator can be scaled from -19999 to 99999 according to your application's requirements. The K3GN Process Indicator can support three digital outputs. Two of which can be programmed as High/Low alarm and one as a 'PASS' signal, indicating that the process is under control. If high accuracy is important for your applications, the K3GN has an exceptional accuracy of ±0.1% of the indicated value.

MODEL	E5GN	H8GN	K3GN
Function	Temperature Controller	Counter/Timer	Process Indicator
Rated supply voltage	24 VAC/DC; 100 to 240 VAC	24 VDC	24 VDC
Display	7-segment digital display, negative backlit LCD. Character height: 7.0 mm for PV. Also equipped with status indications for process + product monitoring. Excellent read-out is guaranteed by leading zero suppression.		
Number of digits displayed	PV: 4 digits SV: 4 digits	PV: 4 digits; SV: 4 digits; totalizer count value: 8 digits	5 digits (-19999 to 99999)
Accuracy	± 0,5% ± 1 digit	± 0,03% startsignal ± 30 ms Power ON start ± 0,03% ±50 ms	± 0,1% full scale
Control output	Relay: SPST-NO (2 A/250 VAC); Voltage output: 12 VDC (PNP)	Relay: SPDT (3 A/250 VAC)	Relay: 2 SPST-NO (1 A/30 VDC) Transistor: 3 NPN or 3 PNP
Input type	Thermocouples: K, J, T, E, L, U, N, R, S, B or ES1A infrared sensors. Platinum resistance thermometer Pt100 or JPt100 Analog input: 0-50 mV	Contact or NPN open collector	Process voltage values, process current values, contact, NPN or PNP
Communication	Option: models with RS485		
Configuration	Intuitive programming through the front panel or via RS485 using SYS-config.		
Approved standards	UL, CSA; Conforms to EN61010-1 (IEC61010-1); Conforms to VDE 0106/P100; CE marking compliance		
Dimensions (W x H x D)	48 x 24 x 100 mm	48 x 24 x 80 mm	48 x 24 x 80 mm
Data sheet	Detailed specifications of these products are available on request or can be downloaded from our website: www.eu.omron.com		

A lot more than just space saving!

E5GN	H8GN	K3GN
Temperature Control/Monitoring	**Counting/Timing Control**	**Measurement Display/Monitoring**

Dual display

Double display on 48 x 24-mm panel

The double display on the 48 x 24 mm front panel allows simultaneous monitoring. Both are highly visible even at longer distance or from wider viewing angles.

Three in one package

As a preset counter

As a timer

As a totalizer

Switching between preset Counter and Timer is possible. While using the preset Counter, you can switch to the Totalizing function (8 digits).

Two color value

Output turns ON

You can program values in green or red. When an alarming situation arises this highly visible display will change to "alarming" red. In normal circumstances values are displayed in green.

Self-tuning and auto-tuning

No adjustment necessary

°C flashes during self-tuning

Set value

During self-tuning   Time

These two tuning options will help you to set the right PID values for the best control of your applications.

Percentage ON/OFF Flicker

Cycle time

ON
OFF

Set the ON duty rate in percentage with the up/down keys   ON duty

This function is available in the Timer mode. This will allow you to change the ON/OFF time by changing only the off time in a certain pre-programmed time period.

Multi-purpose use

V — DC voltage input
mA — DC current input
— Pulse signal input
Digital data

This Process Indicator accepts standard process- or pulse signals or display data. This enables you to display all required values.

Four pre-set, pre-progammable values

Enables presetting up to four set values and changing one to another with a simple operation on a front panel key. This feature helps to reduce the set-up time required to change between processes.

Digital data from PLC or PC

K3GN-□□-FLK

DM No.	Data
D ***	04D2

CS1 Programmable Controller

The model that is equipped with communications capability enables you to display data from PLCs or PCs directly.

Applicable market	Your benefits
Packaging machines	Valuable savings in cabinet space without loosing functionality
Food and beverage industry	Essential front protection (IP66/NEMA4)
Pharmaceutical / chemical	Vital accuracy and stability
Panel builders	Reduced set-up time by using SYS-Config
Machine builders	Complete set of functionality in one compact product concept
Packaging industry	Easy operation by one way of setting
Semi-conductor industry	Where communication is needed
Plastic machinery	One series that can control your temperature, watchdog function and counting the production or cycle time
Installers	A complete and universal series for all applications

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