

Channel ACTION ALERT!

NO: TC-037
DATE: October 2009

PRODUCT: E5GN Temperature Controller
TYPE: Discontinuation Notice

E5GN Temperature Controllers with Separate RTD and Thermocouple Models will be Discontinued Dec. 31, 2009

Omron is streamlining the 1/32 DIN size E5GN temperature controller line by introducing E5GN-T models that accept both Thermocouple and RTD inputs in a single unit. The E5GN with separate models for thermocouple and RTD input will be discontinued December 31, 2009 or until stock is depleted.

Discontinued Models/Suggested Replacement

Discontinued models	Suggested replacement
E5GN-RTC AC100-240	E5GN-RT AC100-240
E5GN-RP AC100-240	E5GN-RT-C AC100-240N6
E5GN-QTC AC100-240	E5GN-QT AC100-240
E5GN-QP AC100-240	E5GN-QT-C AC100-240N6
E5GN-R1TC AC100-240	E5GN-R1T AC100-240
E5GN-R1P AC100-240	E5GN-R1T-C AC100-240N6
E5GN-Q1TC AC100-240	E5GN-Q1T AC100-240
E5GN-Q1P AC100-240	E5GN-Q1T-C AC100-240N6
E5GN-R03TC-FLK AC100-240	E5GN-R103T-FLK AC100-240
E5GN-R03P-FLK AC100-240	E5GN-R103T-C-FLK AC100-240
E5GN-Q03TC-FLK AC100-240	E5GN-Q103T-FLK AC100-240
E5GN-Q03P-FLK AC100-240	E5GN-Q103T-C-FLK AC100-240
E5GN-RTC AC/DC24	E5GN-RTD AC/DC24
E5GN-RP AC/DC24	E5GN-RTD-C AC/DC24
E5GN-QTC AC/DC24	E5GN-QTD AC/DC24
E5GN-QP AC/DC24	E5GN-QTD-C AC/DC24
E5GN-R1TC AC/DC24	E5GN-R1TD AC/DC24
E5GN-R1P AC/DC24	E5GN-R1TD-C AC/DC24
E5GN-Q1TC AC/DC24	E5GN-Q1TD AC/DC24
E5GN-Q1P AC/DC24	E5GN-Q1TD-C AC/DC24
E5GN-R03TC-FLK AC/DC24	E5GN-R103TD-FLK AC/DC24
E5GN-R03P-FLK AC/DC24	E5GN-R103TD-C-FLK AC/DC24
E5GN-Q03TC-FLK AC/DC24	E5GN-Q103TD-FLK AC/DC24
E5GN-Q03P-FLK AC/DC24	E5GN-Q103TD-C-FLK AC/DC24

Important Differences

- » The model number is changed due to universal input types. The default value of Input Type parameter is modified from platinum resistance thermometer: Pt100 to thermocouple: K on the E5GN-[]P (models with platinum resistance thermometer). Change the setting of the Input Type to match the sensor that is used.
- » Wiring and terminal arrangement are changed due to the modification of the terminal block. Be sure to wire properly.

Detailed differences between new E5GN-T and E5GN-TC/E5GN-P models are shown on the following pages.

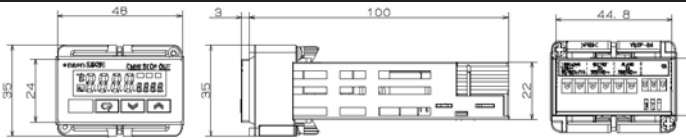
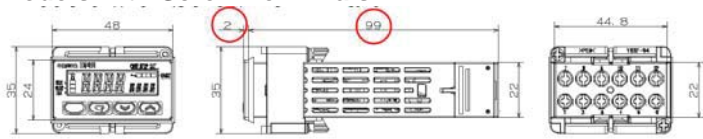
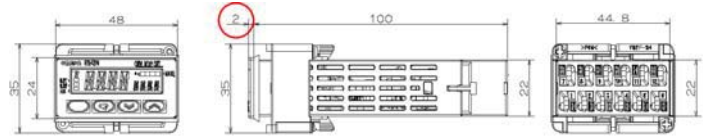
Detailed Differences Between Models

Differences are indicated in **red**.

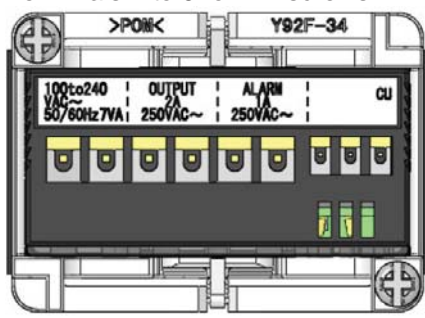
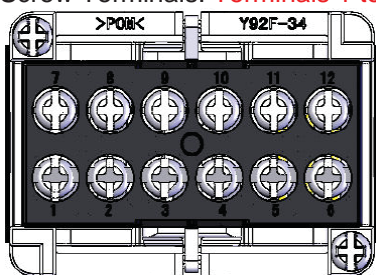
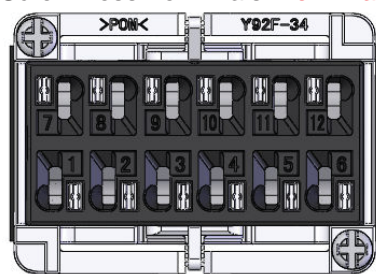
Case Color

Models to be discontinued E5GN-□□□□TC series/E5GN-□□□□P series	Recommended replacement E5GN-□□□□T series
Case color: Smoky Gray	Case color: Black

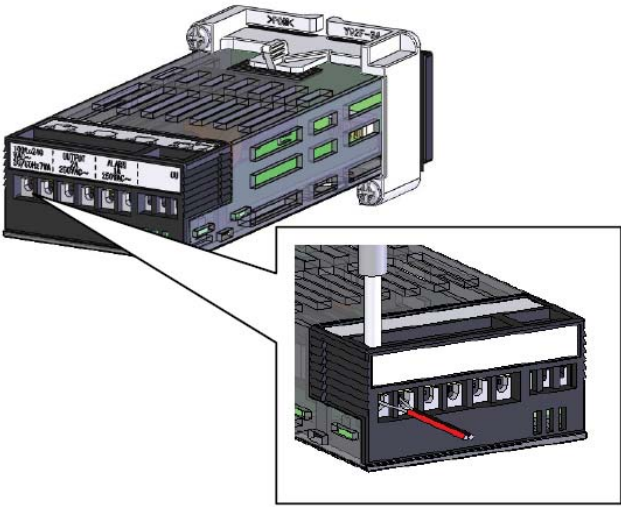
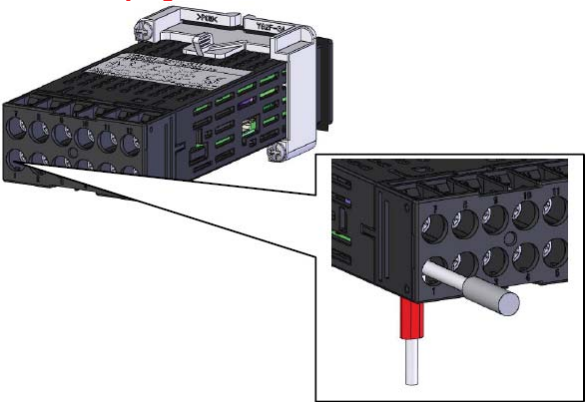
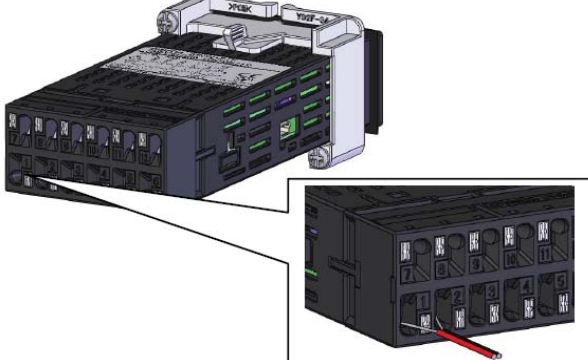
Dimensions

<p>Models to be discontinued E5GN-□□□□TC series/E5GN-□□□□P series</p>  <p>Thickness of the Bezel: 3 mm Depth: 100 mm</p>	<p>Recommended replacement E5GN-□□□□T series</p> <p>Two types of terminal block: Models with Screw Terminals Models with Screw-Less Terminals Dimensions are modified.</p> <p>Models with Screw Terminals</p>  <p>Thickness of the Bezel: 2 mm Depth: 99 mm Shape of ventilation slits is modified.</p> <p>Models with Screw-Less Terminals</p>  <p>Thickness of the Bezel: 2 mm. Shape of ventilation slits is modified.</p>
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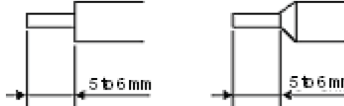
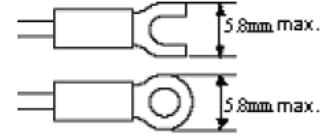
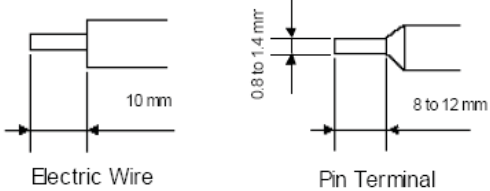
Terminal Block

<p>Models to be discontinued E5GN-□□□□TC series/E5GN-□□□□P series</p> <p>Screw Terminals: Terminals 1 to 6 for M2.6 screws Terminals 7 to 9 for M2 screws</p> 	<p>Recommended replacement E5GN-□□□□T series</p> <p>Screw Terminals: Terminals 1 to 12 for M3 screws</p>  <p>Screw-Less Terminals: Terminals 1 to 12 for non-screws</p> 
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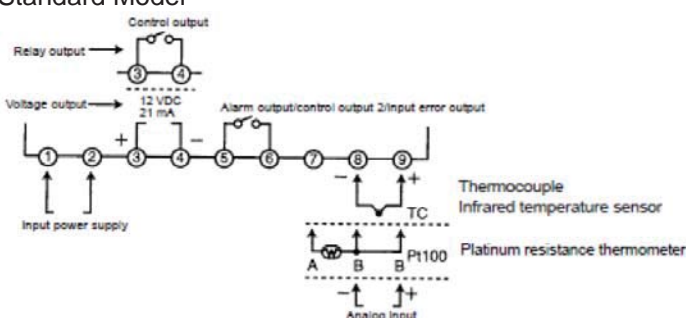
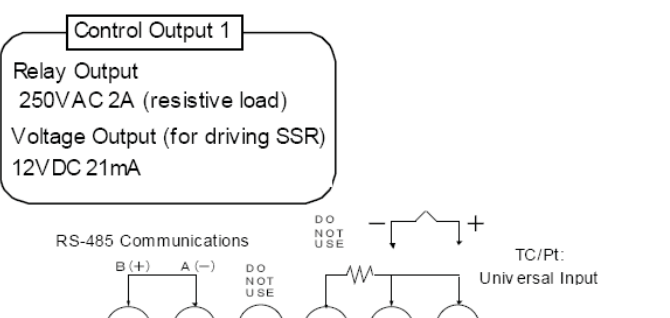
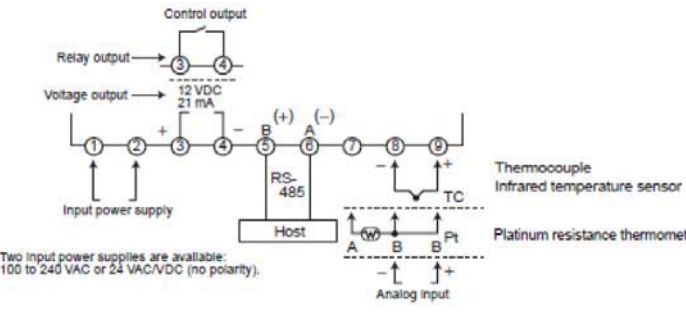
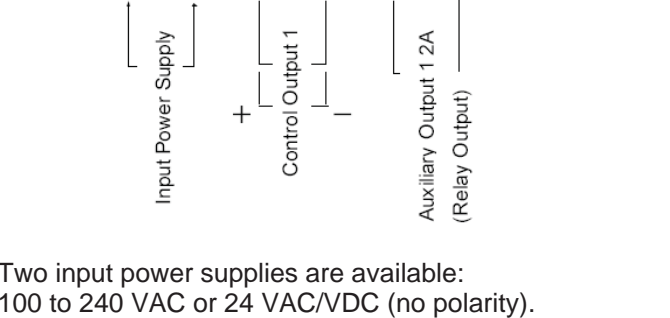
Wiring Connections

Models to be discontinued E5GN-XXXXTC series/E5GN-XXXXP series	Recommended replacement E5GN-XXXXT series
<p>Which way to draw out: Vertically against the terminal block</p> 	<p>Screw Terminals: Which way to draw out: Horizontally against the terminal block</p>  <p>Screw-Less Terminals: Which way to draw out: Vertically against the terminal block</p> 

Wiring Terminals

Models to be discontinued E5GN-XXXXTC series/E5GN-XXXXP series	Recommended replacement E5GN-XXXXT series																		
<p>Terminals are connected as described below.</p> <table border="1" data-bbox="113 1354 747 1470"> <thead> <tr> <th>Connected Terminals</th> <th>Electric Wire</th> <th>Pin Terminal</th> </tr> </thead> <tbody> <tr> <td>Terminals 1 to 6</td> <td>AWG24 to AWG14</td> <td>ø2.1mm max.</td> </tr> <tr> <td>Terminals 7 to 9</td> <td>AWG28 to AWG22</td> <td>ø1.3mm max.</td> </tr> </tbody> </table> <p>The insulation stripped from wires inserted into the terminals is 5 to 6 mm.</p>  <p>Electric wire Pin Terminal</p> <p>Tighten the terminal screws firmly.</p> <table border="1" data-bbox="113 1795 747 1900"> <thead> <tr> <th>Connected Terminals</th> <th>Screws that is used</th> <th>Tightening Torque</th> </tr> </thead> <tbody> <tr> <td>Terminals 1 to 6</td> <td>M2.6</td> <td>0.23 to 0.25 N·m</td> </tr> <tr> <td>Terminals 7 to 9</td> <td>M2</td> <td>0.12 to 0.14 N·m</td> </tr> </tbody> </table>	Connected Terminals	Electric Wire	Pin Terminal	Terminals 1 to 6	AWG24 to AWG14	ø2.1mm max.	Terminals 7 to 9	AWG28 to AWG22	ø1.3mm max.	Connected Terminals	Screws that is used	Tightening Torque	Terminals 1 to 6	M2.6	0.23 to 0.25 N·m	Terminals 7 to 9	M2	0.12 to 0.14 N·m	<p>Screw Terminals: Pin terminals changed to crimp terminals for M3 screws. Tightening Torque 0.5N·m</p>  <p>Screw-Less Terminals: Electric wire: changed from "5 to 6 mm" to "10 mm" Pin Terminals: changed from "5 to 6 mm" to "8 to 12 mm"</p>  <p>Electric Wire Pin Terminal</p>
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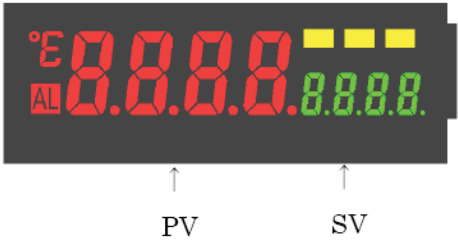
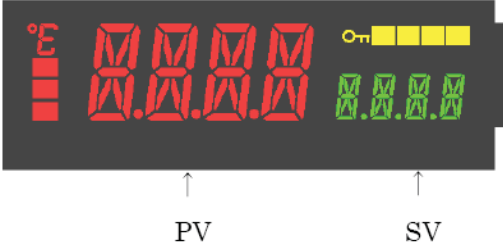
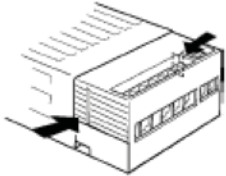
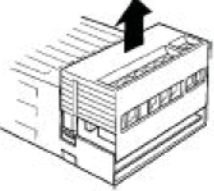
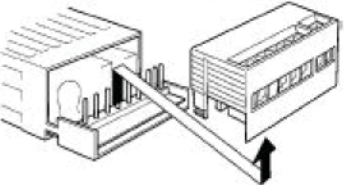
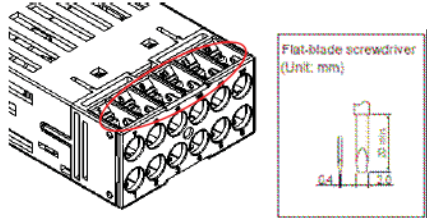
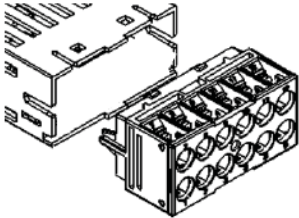
Terminal Arrangement

Models to be discontinued E5GN-□□□TC series/E5GN-□□□P series	Recommended replacement E5GN-□□□T series																								
<p>Number of Terminals: 9 terminals (1) to (9) Input terminals: (7) to (9) RS-485 communications terminals: (5)(6) Standard Model</p>  <p>Two input power supplies are available: 100 to 240 VAC or 24 VAC/VDC (no polarity).</p>	<p>Number of Terminals: 12 terminals (1) to (12) Input terminals: (10) to (12) RS-485 communications terminals: (7)(8)</p>  <p>Two input power supplies are available: 100 to 240 VAC or 24 VAC/VDC (no polarity). Models depend on the power supply specification.</p>																								
<p>Communication Model</p>  <p>Two input power supplies are available: 100 to 240 VAC or 24 VAC/VDC (no polarity).</p>	<p>Control Output 1</p>  <p>Two input power supplies are available: 100 to 240 VAC or 24 VAC/VDC (no polarity). Models depend on the power supply specification.</p>																								
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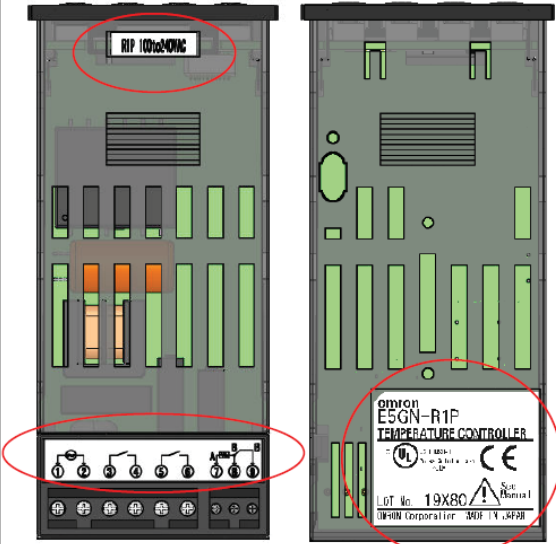
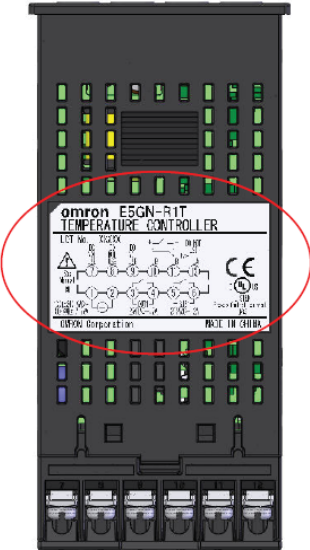
Ratings/Performance Specifications

Model Item	Models to be discontinued E5GN-□□□TC series E5GN-□□□P series	Recommended replacement E5GN-□□□T series
Types of Thermocouple Input	Thermocouple: K,J,T,E,L,U,N,R,S,B	The following types are added. Thermocouple: W, PLII
Input Ranges	E sensor: 0 to 600 °C	E sensor: -200 to 600 °C
Input Accuracy	Thermocouple: (±0.5% of PV or ±1°C, whichever is greater) ±1 digit max. Platinum resistance thermometer: (±0.5% of PV or ±1°C, whichever is greater) ±1 digit max. Analog input: ±0.5%FS ±1 digit max.	Thermocouple: (±0.3% of PV or ±1°C, whichever is greater) ±1 digit Platinum resistance thermometer: (±0.2% of PV or ±0.8°C, whichever is greater) ±1 digit Analog input: ±0.2%FS ±1 digit
Affect of Signal Source Resistance	Thermocouple: 0.1°C (0.2°F)/ Ω max. (100Ω max.) Platinum resistance thermometer: 0.4°C (0.8°F) / Ω max. (10Ω max.)	Thermocouple: 0.1°C/ Ω max. (for all Spec.) Platinum resistance thermometer: 0.1°C/ Ω
Input Sampling Period	500ms	250ms
Dielectric Strength	2,000 VAC, 50 or 60 Hz for 1 min (between terminals with different charge)	2,300 VAC , 50 or 60 Hz for 1 min (between terminals with different charge)
Memory protection	Non-volatile memory (number of writes: 100,000 times)	Non-volatile memory (number of writes: 1,000,000 times)
EMC	Radiated Interference Electromagnetic Field Strength: EN61326 class A Noise Terminal Voltage: EN61326 class A	Radiated Interference Electromagnetic Field Strength: EN55011 Group 1, class A Noise Terminal Voltage: EN55011 Group 1, class A
Alarm output Output ratings	250VAC, 1A	Output ratings are improved. After modification: 250VAC, 2A
Communications Baud Rate	1200, 2400, 4800, 9600, 19200	1200, 2400, 4800, 9600, 19200, 38400, 57600bps

Continued next page

<p>Indication method</p>	 <p style="text-align: center;"> ↑ ↑ PV SV </p> <ul style="list-style-type: none"> ●Segment of Display PV: 7 segment SV: 7 segment ●Height of the Character PV: 7 mm SV: 3.5 mm 	 <p style="text-align: center;"> ↑ ↑ PV SV </p> <ul style="list-style-type: none"> ●Segment of Display PV: 11 segment SV: 11 segment ●Height of the Character PV: 7.5 mm SV: 3.6 mm ● Marks that are indicated are modified. No indicator for single-lighting of AL Single-lighting is added. Key mark is added.
<p>Safety Standard</p>	<p>UL61010C-1</p>	<p>UL61010-1</p>
<p>Water or Dust Proofing Standard</p>	<p>Conforms to NEMA4X Equivalent to IP66</p>	<p>IP66</p>
<p>Removing and Attaching the Terminal Block</p>	<p>(1) Press down hard on the fasteners on both sides of the terminals to unlock the terminal plate and pull upwards.</p>  <p>(2) Draw out the terminal plate as it is.</p>  <p>(3) Before you insert the terminal plate again, make sure that the pins match the positions of the holes in the terminal plate.</p> 	<p>How to remove and attach the terminal block is changed as follows.</p> <p>(1) Insert a flat-blade screwdriver into the two tool insertion holes (one on the top and one on the bottom) to release the hooks.</p>  <p>(2) Carefully pull it out toward you.</p>  <p>Note: Both models with screw terminals and models with screw-less terminals can use the same method.</p>

Labels

Model Item	Models to be discontinued E5GN-□□□TC series E5GN-□□□P series	Recommended replacement E5GN-□□□T series
Front Label	 <p>•Size of the indicator frame: Wide: 36.1 mm Long: 9.8 mm</p>	 <p>•Design is modified. •The following printed characters are added: MANU, SUB1, SUB2, HA</p> <p>•Size of the indicator frame: Wide: 36.8 mm Long:10.1 mm</p>
Side Label	<p>(1) Number of Labels: 3 (2) Model Number: Refer to Model Number Legend. (3) Lot No.: Production year: Last 1 digit in the year</p> <p>□ □ □ □ □ □ (1)(2)(3)(4)(5)(6)</p> <p>(1)(2): Production day 01 to 31 (3): Production month 1 to 9, X, Y, Z X=10, Y=11, Z=12 (4): Production year: Last 1 digit in the year (5) (6): Production factory that is abbreviated.</p>  <p>Top View Bottom View</p>	<p>(1) Number of Labels: Summarized in 1 (2) Model Number: Refer to Model Number Legend. (3) Lot No.: Production year: Last 2 digits in the year</p> <p>□ □ □ □ □ □ □ (1)(2)(3)(4)(5)(6) (7)</p> <p>(1)(2): Production day 01 to 31 (3): Production month 1 to 9, X, Y, Z X=10, Y=11, Z=12 (4) (5): Production year: Last 2 digits in the year (6) (7): Production factory that is abbreviated.</p>  <p>Top View</p>

Model Item	Models to be discontinued E5GN-□□□TC series E5GN-□□□P series	Recommended replacement E5GN-□□□T series
Label for packing case	<p>(1) Model Number: Refer to Model Number Legend.</p> <p>(2) Lot No.: (4 digits) Production year: Last 1 digit in the year</p> <p>□ □ □ □ □ □ (1)(2)(3)(4)(5)(6)</p> <p>(1)(2): Production day 01 to 31 (3): Production month 1 to 9, X, Y, Z X=10, Y=11, Z=12 (4): Production year: Last 1 digit in the year (5) (6): Production factory that is abbreviated.</p> <p>(3) Identification mark No mark on the label.</p> <div data-bbox="347 844 740 1215" style="border: 1px solid black; padding: 5px;"> <p>TYPE E5GN-RTC TEMPERATURE CONTROLLER TEMP. MULTI-RANGE</p> <hr/> <p>VOLTS 100-240 VAC</p> <hr/> <p>LOT No.**** QYT.1</p> <hr/> <p>OMRON Corporation MADE IN CHINA</p> </div>	<p>(1) Model Number: Refer to Model Number Legend.</p> <p>(2) Lot No.: (5 digits) Production year: Last 2 digits in the year</p> <p>□ □ □ □ □ □ □ □ (1)(2)(3)(4)(5)(6) (7)</p> <p>(1)(2): Production day 01 to 31 (3): Production month 1 to 9, X, Y, Z X=10, Y=11, Z=12 (4) (5): Production year: Last 2 digits in the year (6) (7): Production factory that is abbreviated.</p> <p>(3) Identification mark “N6” is marked on the label.</p> <div data-bbox="1005 823 1393 1188" style="border: 1px solid black; padding: 5px;"> <p>TYPE E5GN-RT TEMPERATURE CONTROLLER TEMP. MULTI-RANGE</p> <hr/> <p>VOLTS 100-240 VAC</p> <hr/> <p>N6 LOT No.***** QYT.1</p> <hr/> <p>OMRON Corporation MADE IN CHINA</p> </div>

Model Number Legend

Models to be discontinued E5GN-□□□□TC series/E5GN-□□□□P series	Recommended replacement E5GN-□□□□T series
<p>E5GN-□ □ □ □- □ (1)(2)(3) (4) (5)</p> <p>(1) Control Output R: Relay Q: Voltage Output (for driving SSR)</p> <p>(2) Alarm Outputs Blank: None 1: One output</p> <p>(3) Option Blank: None 03: RS-485 communications</p> <p>(4) Input Type TC: Thermocouple P: Platinum Resistance Thermometer</p> <p>(5) CompoWay/F is supported. Blank: None FLK: CompoWay/F is supported.</p>	<p>E5GN-□ □ □ □ □- □- □ (1)(2)(3)(4) (5) (6) (7)</p> <p>(1) Control Output R: Relay Q: Voltage Output (for driving SSR)</p> <p>(2) Auxiliary Outputs Blank: None 1: One output</p> <p>(3) Option Blank: None 03: RS-485 communications</p> <p>(4) Input Type T: Universal Thermocouple/Platinum Resistance Thermometer</p> <p>(5) Input Power Supply Blank: 100 to 240 VAC D: 24 VAC/VDC</p> <p>(6) Terminal Block Blank: M3 terminal C: Screw-less terminal</p> <p>(7) CompoWay/F is supported. Blank: None FLK: CompoWay/F is supported.</p>

How to Operate

Model Item	Models to be discontinued E5GN-□□□TC series E5GN-□□□P series	Recommended replacement E5GN-□□□T series
Parameters	Parameters	<ul style="list-style-type: none"> ●Parameters are added due to additional functions. ●Parameters are modified as follows. <p>SP ramp set value: Move from advanced function setting level to adjustment level.</p> <p>MV upper limit: Move from advanced function setting level to adjustment level.</p> <p>MV lower limit: Move from advanced function setting level to adjustment level.</p> <p>Alarm hysteresis: Move from advanced function setting level to initial setting level.</p>
Functions	Alarm output	Auxiliary output
Default Values of Parameters	<p>E5GN-□□□P</p> <p>Input Type for models with platinum resistance thermometer</p> <p>Default value: Platinum resistance thermometer Pt100</p>	<p>E5GN-□□□T</p> <p>Input Type for models with universal thermocouple /platinum resistance thermometer</p> <p>Default value: Thermocouple K</p> <p>Universal input type changes the default value of Input Type parameter from platinum resistance thermometer Pt100 to thermocouple K. Change the setting of the Input Type to match the sensor that is used.</p>

Operation Manual

Models to be discontinued E5GN-□□□TC series E5GN-□□□P series	Recommended replacement E5GN-□□□T series
Operation Manual is also updated due to the renewal products.	