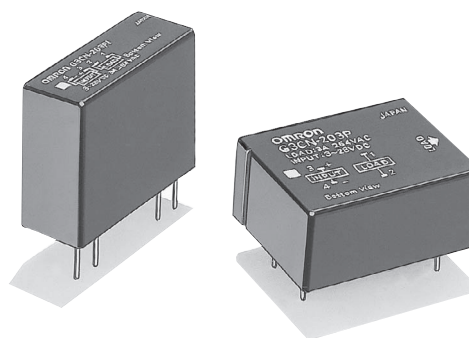


### PCB-mounting SSR for FA Equipment Requiring High Reliability

- 3 to 28 VDC input and 75 to 264 VAC output.
- Wide I/O voltage range: 3 to 28 VDC input and 3 to 52.8 VDC output.
- Two load currents available: 2 A and 3 A
- Flat and vertical models available for a variety of applications.

RoHS Compliant



Refer to "Solid State Relays Common Precautions".

#### List of Models

| Isolation    | Zero cross function | Indicator | Rated output load     | Rated input voltage          | Model          | Minimum packing unit |
|--------------|---------------------|-----------|-----------------------|------------------------------|----------------|----------------------|
| Photocoupler | Yes                 | No        | 2 A at 100 to 240 VAC | 4 to 24 VDC                  | G3CN-202P      | 10 pcs               |
|              |                     |           | 3 A at 100 to 240 VAC |                              | G3CN-202P1 *1  | 20 pcs               |
|              |                     |           |                       |                              | G3CN-203P      | 10 pcs               |
|              |                     |           |                       |                              | G3CN-203P1 *1  | 20 pcs               |
| Phototriac   | No                  |           | 2 A at 100 to 240 VAC | 5 VDC<br>12 VDC<br>24 VDC *2 | G3CN-202PL     | 10 pcs               |
|              |                     |           | 3 A at 100 to 240 VAC |                              | G3CN-202PL1 *1 | 20 pcs               |
|              |                     |           |                       |                              | G3CN-203PL     | 10 pcs               |
|              |                     |           |                       |                              | G3CN-203PL1 *1 | 20 pcs               |
| Photocoupler | —                   |           | 2 A at 4 to 48 VDC    | 4 to 24 VDC                  | G3CN-DX02P     | 10 pcs               |
|              |                     |           | 3 A at 4 to 48 VDC    |                              | G3CN-DX02P1 *1 | 20 pcs               |
|              |                     |           |                       |                              | G3CN-DX03P     | 10 pcs               |
|              |                     |           |                       |                              | G3CN-DX03P1 *1 | 20 pcs               |

Note: Refer to the "List of Certified Models" for UL, CSA, and EN approved models. \*1. These are vertical types. \*2 When ordering, specify the input voltage.

#### Ratings

##### Input

| Model                          | Rated voltage | Operating voltage | Input impedance      | Voltage level        |                      |
|--------------------------------|---------------|-------------------|----------------------|----------------------|----------------------|
|                                |               |                   |                      | Must operate voltage | Must release voltage |
| G3CN-202P(1)<br>G3CN-203P(1)   | 4 to 24 VDC   | 3 to 28 VDC       | 1.5 kΩ $+20\%/-10\%$ | 3 VDC max.           | 1 VDC min.           |
| G3CN-202PL(1)<br>G3CN-203PL(1) | 5 VDC         | 4 to 6 VDC        | 390 Ω $\pm 20\%$     | 4 VDC max.           |                      |
|                                | 12 VDC        | 9.6 to 14.4 VDC   | 900 Ω $\pm 20\%$     | 9.6 VDC max.         |                      |
|                                | 24 VDC        | 19.2 to 28.8 VDC  | 2 kΩ $\pm 20\%$      | 19.2 VDC max.        |                      |
| G3CN-DX02P(1)<br>G3CN-DX03P(1) | 4 to 24 VDC   | 3 to 28 VDC       | 1.5 kΩ $+20\%/-10\%$ | 3 VDC max.           |                      |

##### Output

| Model                         | Rated load voltage | Applicable load    |              |                       |
|-------------------------------|--------------------|--------------------|--------------|-----------------------|
|                               |                    | Load voltage range | Load current | Inrush current        |
| G3CN-202P(1)<br>G3CN-202PL(1) | 100 to 240 VAC     | 75 to 264 VAC      | 0.1 to 2 A * | 30 A (60 Hz, 1 cycle) |
| G3CN-203P(1)<br>G3CN-203PL(1) |                    |                    | 0.1 to 3 A * | 45 A (60 Hz, 1 cycle) |
| G3CN-DX02P(1)                 | 4 to 48 VDC        | 3 to 52.8 VDC      | 0.1 to 2 A * | 12 A (10 ms)          |
| G3CN-DX03P(1)                 |                    |                    | 0.1 to 3 A * | 18 A (10 ms)          |

Note: The input impedance values are the maximum values of applied voltage. (measured at 28 VDC for 4 to 24 VDC models)

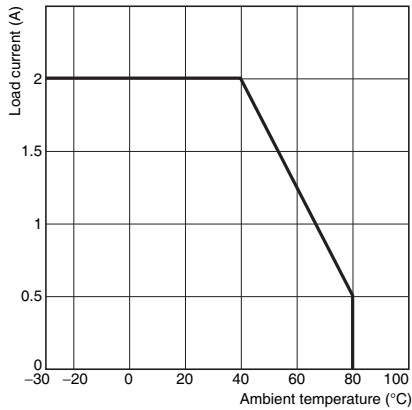
\* The applicable output load current varies depending on the ambient temperature. Consult your Omron sales representative for details.

#### Characteristics

| Model                         | Item | G3CN-202P(1), G3CN-203P(1)                                            | G3CN-202PL(1), G3CN-203PL(1)                       | G3CN-DX02P(1), G3CN-DX03P(1) |
|-------------------------------|------|-----------------------------------------------------------------------|----------------------------------------------------|------------------------------|
| Operate time                  |      | 1/2 of load power source cycle + 1 ms max.                            | 1 ms max.                                          | 0.5 ms max.                  |
| Release time                  |      | 1/2 of load power source cycle + 1 ms max.                            | 1/2 of load power source cycle + 1 ms max.         | 2 ms max.                    |
| Output ON voltage drop        |      | 1.6 V (RMS) max.                                                      |                                                    | 1.5 V max.                   |
| Leakage current               |      | 5 mA max. (at 100 VAC)<br>10 mA max. (at 200 VAC)                     | 2.5 mA max. (at 100 VAC)<br>5 mA max. (at 200 VAC) | 5 mA max. (at 50 VDC)        |
| Insulation resistance         |      | 100 MΩ min. (at 500 VDC)                                              |                                                    |                              |
| Dielectric strength           |      | 2,500 VAC, 50/60 Hz for 1 min between input and output                |                                                    |                              |
| Vibration resistance          |      | 10 to 55 to 10 Hz, 0.75-mm single amplitude (1.5-mm double amplitude) |                                                    |                              |
| Shock resistance              |      | 1,000 m/s <sup>2</sup>                                                |                                                    |                              |
| Ambient Operating temperature |      | -30°C to 80°C (with no icing nor condensation)                        |                                                    |                              |
| Ambient Operating humidity    |      | 45% to 85%RH                                                          |                                                    |                              |
| Storage Temperature           |      | -30°C to 100°C (with no icing nor condensation)                       |                                                    |                              |
| Weight                        |      | Approx. 25 g                                                          |                                                    |                              |

## Engineering Data

### ● Load Current vs. Ambient Temperature Characteristics G3CN-202P(1), G3CN-202PL(1), G3CN-DX02P(1)

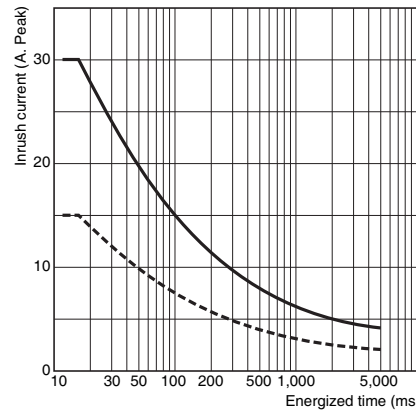


### ● One Cycle Surge Current: Non-repetitive

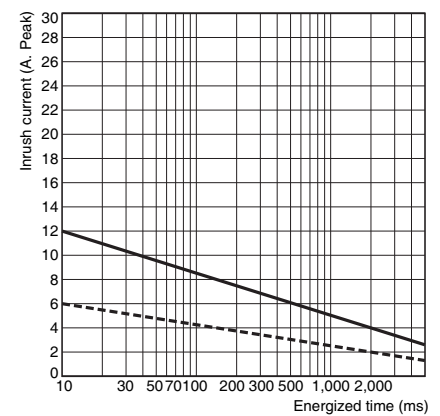
Non-repetitive (Keep the inrush current to half the rated value if it occurs repetitively.)

#### 2-A Load Model

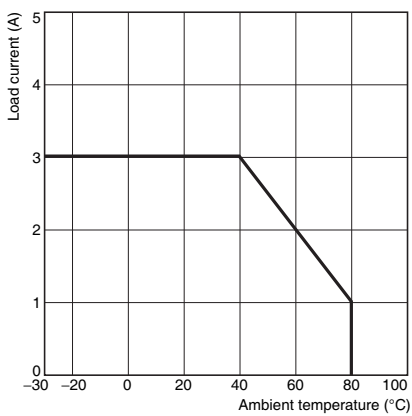
##### G3CN-202P(1), G3CN-202PL(1)



##### G3CN-DX02P(1)

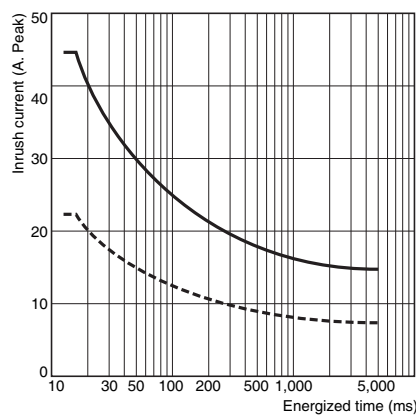


### G3CN-203P(1), G3CN-203PL(1), G3CN-DX03P(1)

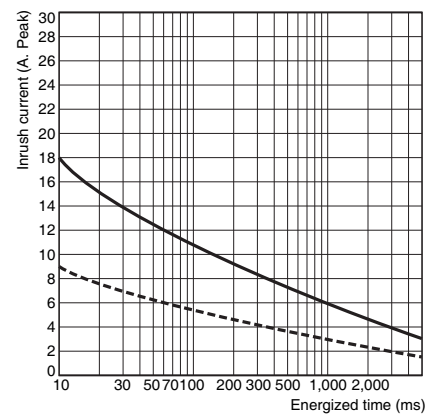


#### 3-A Load Model

##### G3CN-203P(1), G3CN-203PL(1)



##### G3CN-DX03P(1)

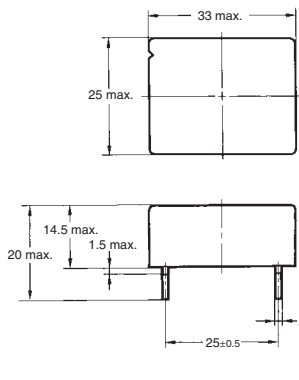
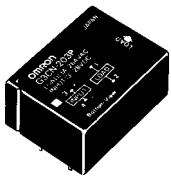


## Dimensions

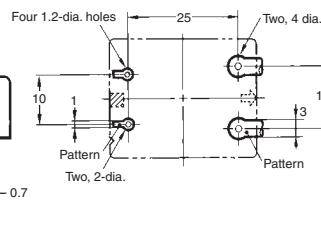
(Unit: mm)

### ● Flat Model

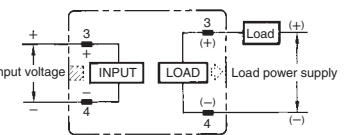
#### G3CN-20□P G3CN-20□PL G3CN-DX0□P



#### Mounting Holes Tolerance: ±0.1 mm unless specified (BOTTOM VIEW)



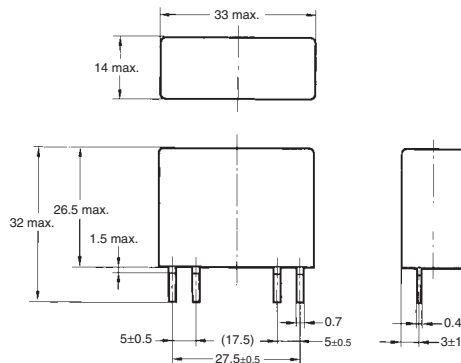
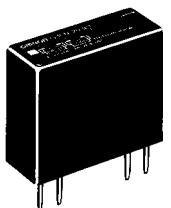
#### Terminal Arrangement/ Internal Connections (BOTTOM VIEW)



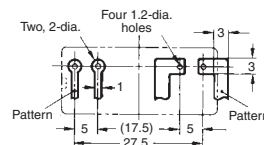
Note. The plus and minus symbols shown in the parentheses are for DC loads.

### ● Vertical Model

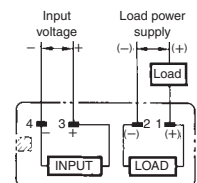
#### G3CN-20□P1 G3CN-20□PL1 G3CN-DX0□P1



#### Mounting Holes Tolerance: ±0.1 mm unless specified (BOTTOM VIEW)



#### Terminal Arrangement/ Internal Connections (BOTTOM VIEW)



Note. The plus and minus symbols shown in the parentheses are for DC loads.

## Precautions

● Please refer to "Solid State Relays Common Precautions" for correct use.

- Application examples provided in this document are for reference only. In actual applications, confirm equipment functions and safety before using the product.
- Consult your OMRON representative before using the product under conditions which are not described in the manual or applying the product to nuclear control systems, railroad systems, aviation systems, vehicles, combustion systems, medical equipment, amusement machines, safety equipment, and other systems or equipment that may have a serious influence on lives and property if used improperly. Make sure that the ratings and performance characteristics of the product provide a margin of safety for the system or equipment, and be sure to provide the system or equipment with double safety mechanisms.

**Note: Do not use this document to operate the Unit.**

**OMRON Corporation**  
ELECTRONIC AND MECHANICAL COMPONENTS COMPANY

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