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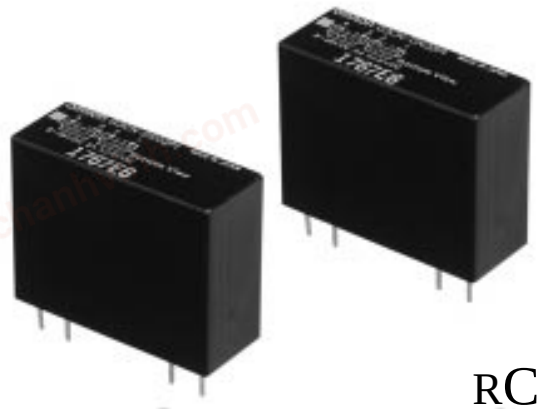
OMRON

Solid-state Relay

G3CN

Low-cost, PCB-mounting SSR for FA Equipment Requiring High Reliability

- Wide I/O voltage range: 3 to 28 VDC input and 75 to 264 VAC or 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.



RC

Ordering Information

Isolation	Zero cross function	Indicator	Applicable output load	Rated input voltage	Model
Phototriac	Yes	No	2 A at 75 to 264 VAC	4 to 24 VDC	G3CN-202P-US
					G3CN-202P1-US*
			3 A at 75 to 264 VAC		G3CN-203P-US
					G3CN-203P1-US*
Phototriac	No		2 A at 75 to 264 VAC	5, 12, 24 VDC	G3CN-202PL-US
					G3CN-202PL1-US*
			3 A at 75 to 264 VAC		G3CN-203PL-US
					G3CN-203PL1-US*
Photocoupler	---		2 A at 3 to 52.8 VDC	4 to 24 VDC	G3CN-DX02P-US
					G3CN-DX02P1-US*
			3 A at 3 to 52.8 VDC		G3CN-DX03P-US
					G3CN-DX03P1-US*

*Vertical models.

Specifications

■ Ratings

Input

Model	Rated voltage	Operating voltage	Impedance	Voltage level	
				Must operate voltage	Must release voltage
G3CN-202P(1) G3CN-203P(1)	4 to 24 VDC	3 to 28 VDC	1.5 kW $^{+20\%}/_{-10\%}$	3 VDC max.	1 VDC min.
G3CN-202PL(1)	5 VDC	4 to 6 VDC	390 W+20%	4 VDC max.	
G3CN-203PL(1)	12 VDC	9.6 to 14.4 VDC	900 W+20%	9.6 VDC max.	
	24 VDC	19.2 to 28.8 VDC	2 kW+20%	19.2 VDC max.	
G3CN-DX02P(1) G3CN-DX03P(1)	4 to 24 VDC	3 to 28 VDC	1.5 kW $^{+20\%}/_{-10\%}$	3 VDC max.	

Note: The input impedance is measured at the maximum value of the rated supply voltage. For example, with the model rated at 4 to 24 VDC, the input impedance is measured at 24 VDC.

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Output

Model	Applicable load		
	Rated load voltage	Load current Without heat sink	Inrush current
G3CN-202P(1) G3CN-202PL(1)	75 to 264 VAC	0.1 to 2 A	30 A (60 Hz, 1 cycle)
G3CN-203P(1) G3CN-203PL(1)		0.1 to 3 A	45 A (60 Hz, 1 cycle)
G3CN-DX02P(1)	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)

■ Characteristics

Item	G3CN-202P(1)/203P(1)	G3CN-202PL(1)/203PL(1)	G3CN-DX02P(1)/03P(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) 10 mA max. (at 200 VAC)	2.5 mA max. (at 100 VAC) 5 mA max. (at 200 VAC)	5 mA max. (at 50 VDC)
Insulation resistance	100 MW min. (at 500 VDC)		
Dielectric strength	2,500 VAC, 50/60 Hz for 1 min		
Vibration resistance	Malfunction: 10 to 55 Hz, 1.5-mm double amplitude		
Shock resistance	Malfunction: 1,000 m/s^2 (approx. 100G)		
Ambient temperature	Operating: –30% to 80%C (with no icing) Storage: –30% to 100%C (with no icing)		
Ambient humidity	Operating: 45% to 85%		
Weight	Approx. 25 g		

■ Approved Standards

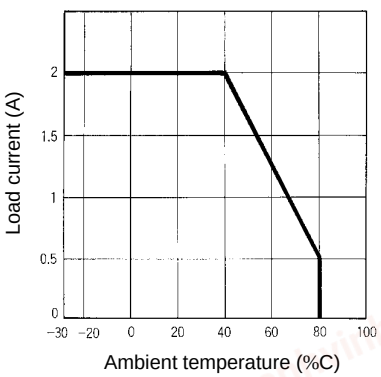
UL114 File No.E64562/CSA C22.2 (No.0, No.14) File No. LR35535

Model	Ratings
G3CN-202P(L)(1)-US	2 A at 240 VAC
G3CN-203P(L)(1)-US	3 A at 240 VAC
G3CN-DX02P(1)-US	2 A at 48 VDC
G3CN-DX03P(1)-US	3 A at 48 VDC

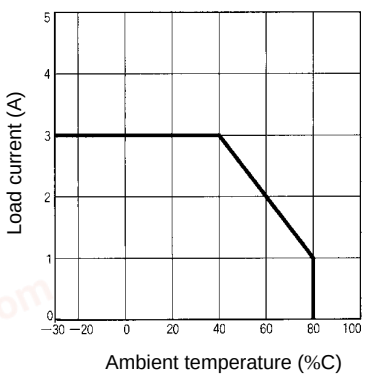
Engineering Data

Load Current vs. Ambient Temperature Characteristics

G3CN-202P(1)/-202PL(1)/-DX02P(1)



G3CN-203P(1)/-203PL(1)/-DX03P(1)



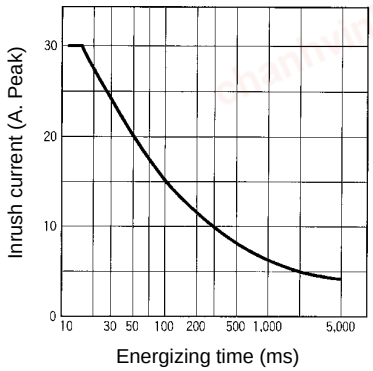
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Inrush Current Resistivity

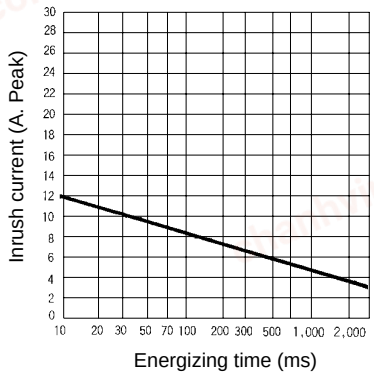
2-A Load

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

G3CN-202P(1)/-202PL(1)

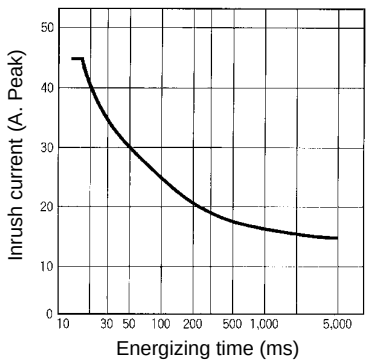


G3CN-DX02P(1)

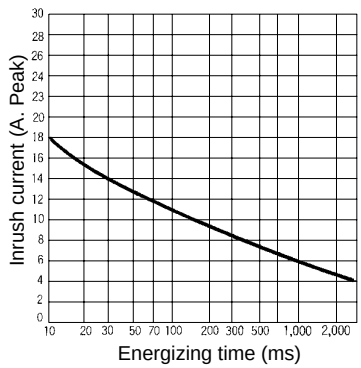


3-A Load

G3CN-203P(1)/-203PL(1)



G3CN-DX03P(1)



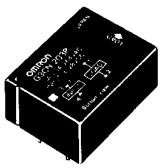
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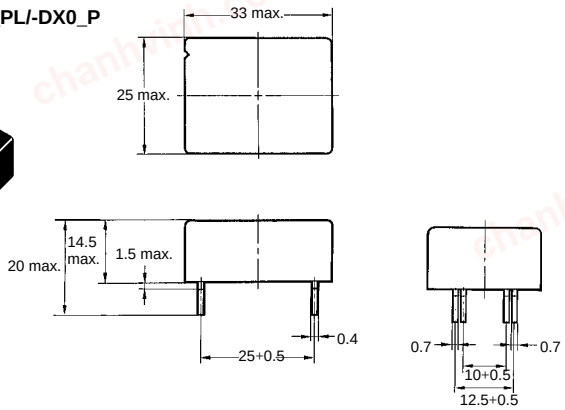
Dimensions

Note: All units are in millimeters unless otherwise indicated.

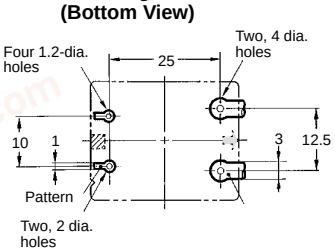
Flat Model

G3CN-20_P/-20_PL/-DX0_P

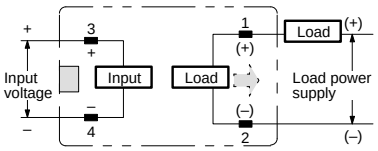




Terminal Arrangement/ Mounting Holes (Bottom View)



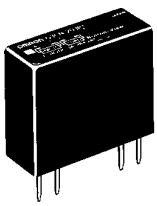
Terminal Arrangement/ Internal Connections (Bottom View)

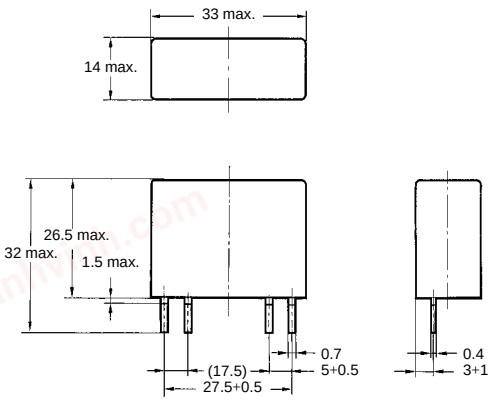


Note: Values in parentheses apply to the DC-load versions.

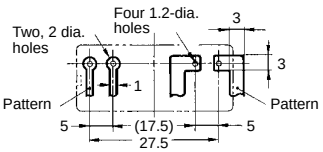
Vertical Model

G3CN-20_P1/-20_PL1/-DX0_P1

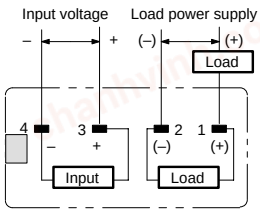




Terminal Arrangement/ Mounting Holes (Bottom View)



Terminal Arrangement/ Internal Connections (Bottom View)



Note: Values in parentheses apply to the DC-load versions.

Precautions

Refer to pages 5 to 13 for general precautions.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.