

Compact SSRs Ideal for Built-in Applications

- Vertical, compact SSRs with an operation indicator offered in versatile variations.
- High dielectric strength of 2,500 VAC for 2-A models.
- High-voltage DC version also available.
- Approved by UL and CSA.



Ordering Information

Terminals	Isolation	Zero cross function	Indicator	Rated output load (Applicable output load)	Rated input voltage	Model
PCB	Phototriac	Yes		2 A at 100 to 120 VDC (2 A at 75 to 132 VDC) (see note 1)		G3R-102PN-US
		No				G3R-102PLN-US
		Yes		2 A at 100 to 240 VAC (2 A at 75 to 264 VAC) (see note 2)		G3R-202PN-US
		No				G3R-202PLN-US
	Photocoupler	---	Yes	1.5 A at 5 to 110 VDC (1.5 A at 3 to 125 VDC)		G3RD-101PN-US
				2 A at 4 to 48 VDC (2 A at 3 to 52.8 VDC) (see note 3)		G3RD-X02PN-US

Note: 1. Product is labelled "125 VAC".
 2. Product is labelled "250 VAC".
 3. Product is labelled "50 VDC".

Specifications

■ Ratings

Input (AC Output With Zero Cross Function)

Model	Rated voltage	Operating voltage	Impedance	Voltage level	
				Must operate voltage	Must release voltage
G3R-102PN	5 VDC	4 to 6 VDC	250 $\Omega \pm 20\%$	3.5 VDC max.	0.375 VDC min.
G3R-202PN	12 VDC	9.6 to 14.4 VDC	600 $\Omega \pm 20\%$	8.4 VDC max.	0.9 VDC min.
	24 VDC	19.2 to 28.8 VDC	1.5 k $\Omega \pm 20\%$	16.8 VDC max.	1.8 VDC min.

Input (AC Output Without Zero Cross Function, DC Output)

Model	Rated voltage	Operating voltage	Impedance	Voltage level	
				Must operate voltage	Must release voltage
G3R-102PLN	5 VDC	4 to 6 VDC	300 $\Omega \pm 20\%$	3.5 VDC max.	0.375 VDC min.
G3R-202PLN	12 VDC	9.6 to 14.4 VDC	750 $\Omega \pm 20\%$	8.4 VDC max.	0.9 VDC min.
G3RD-X02PN G3RD-101PN	24 VDC	19.2 to 28.8 VDC	1.5 k $\Omega \pm 20\%$	16.8 VDC max.	1.8 VDC min.

Output

Model	Rated load voltage	Applicable load		
		Load voltage range	Load current	Inrush current
G3R-102PN G3R-102PLN	100 to 120 VAC	75 to 132 VAC	0.1 to 2 A	30 A (60 Hz, 1 cycle)
G3R-202PN G3R-202PLN	100 to 240 VAC	75 to 264 VAC	0.1 to 2 A	
G3RD-X02PN	4 to 48 VDC	3 to 52.8 VDC	0.01 to 2 A	8 A (10 ms)
G3RD-101PN	5 to 110 VDC	3 to 125 VDC	0.01 to 1.5 A	2.5 A (10 ms)

■ Characteristics

Item	G3R-102PLN	G3R-102PN	G3R-202PLN	G3R-202PN	G3RD-X02PN/-101PN
Operate time	1 ms max.	1/2 of load power source cycle + 1 ms max.	1 ms max.	1/2 of load power source cycle + 1 ms max.	1 ms max.
Release time	1/2 of load power source cycle + 1 ms max.				1 ms max.
Output ON voltage drop	1.6 V (RMS) max.				1.5 V max.
Leakage current	2 mA max. (at 100 VAC)		2 mA max. (at 100 VAC) 5 mA max. (at 200 VAC)		0.1 mA max. (at 125 VDC) 0.1 mA max. (at 50 VDC)
Insulation resistance	100 M Ω min. (at 500 VDC)				
Dielectric strength	2,500 VAC, 50/60 Hz for 1 min				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				
Ambient temperature	Operating: -30°C to 80°C (with no icing or condensation) Storage: -30°C to 100°C (with no icing or condensation)				
Approved standards	UL508 File No. E64562, CSA C22.2 (No. 14) File No. 35535				
Ambient humidity	Operating: 45% to 85%				
Weight	Approx. 18 g				

■ Approved Standards

UL508 File No.E64562/CSA C22.2 (No.0, No.14) File No. LR35535

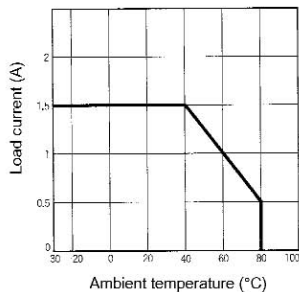
Model	Ratings
G3R-102P(L)(N)-US	2 A at 125 VAC
G3R-202P(L)(N)-US	2 A at 250 VAC
G3RD-X02P(N)-US	2 A at 50 VDC

Engineering Data

Load Current vs. Ambient Temperature Characteristics

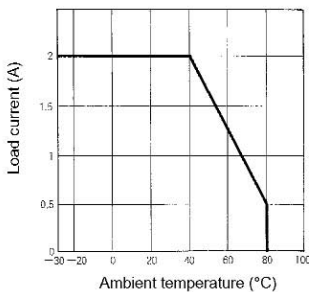
1-A Load Model

G3RD-101PN



2-A Load Model

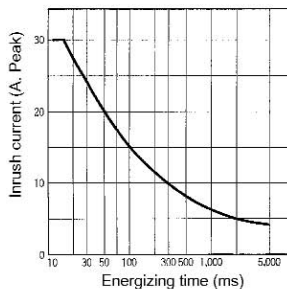
G3R-102□, G3RD-X02□, G3R-202□



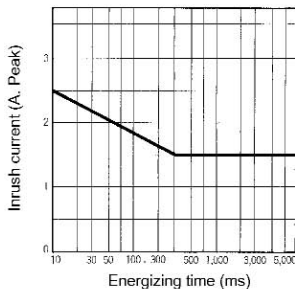
Inrush Current Resistivity

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

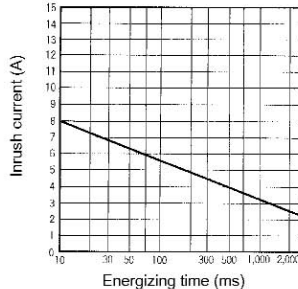
G3R-102□/-202□



G3RD-101PN



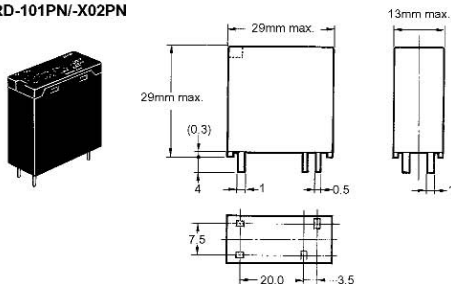
G3RD-X02□



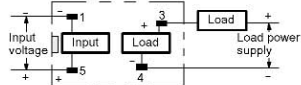
Dimensions

Note: All units are in millimeters unless otherwise indicated.

G3R-102P□/V-202P□
G3RD-101PN/-X02PN

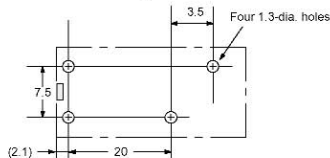


Terminal Arrangement/ Internal Connections (Bottom View)



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

Mounting Holes



Precautions

Connection

The SSR for DC switching a surge can connect to a load regardless of the polarity of the positive and negative output terminals.

Protective Terminal

For AC inductive loads, connect the load terminals of the SSR to a surge absorber (varistor).

ALL DIMENSIONS SHOWN ARE IN MILLIMETRES.

To convert millimetres into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Omron:

[G3R-OA202SLN-DC5-24](#) [G3RDX02PN2DC24](#) [G3RZ-201SLN DC5](#) [G3RZ-201SLN DC24](#) [G3RZ-201SLN DC12](#)
[G3R-OD201SN DC5-24](#) [G3R-IDZR1SN-1 DC12-24](#) [G3R-IDZR1SN DC12-24](#) [G3R-202PN-US DC24](#) [G3RD-X02PN](#)
[DC24](#) [G3R-OA202SZN-UTU DC5-24](#) [G3R-202PN-2 DC24](#) [G3R-ODX02SN-UTU DC5-24](#) [G3R-IDZR1SN DC5](#) [G3R-](#)
[IDZR1SN-1 DC5](#) [G3R-OD201SN-UTU DC5-24](#) [G3RV-202S DC12](#) [G3RV-202S DC24](#) [G3RV-202S DC48](#) [G3RV-](#)
[202SL DC12](#) [G3RV-202SL DC24](#) [G3RV-202SL DC48](#) [G3RV-D03SL DC12](#) [G3RV-D03SL DC24](#) [G3RV-D03SL DC48](#)
[G3RV-SL500-A AC/DC48](#) [G3RV-SL500-A AC110](#) [G3RV-SL500-A AC230](#) [G3RV-SL500-A DC12](#) [G3RV-SL500-A](#)
[DC24](#) [G3RV-SL500-AL AC230](#) [G3RV-SL500-AL DC24](#) [G3RV-SL500-D AC110](#) [G3RV-SL500-D AC230](#) [G3RV-](#)
[SL500-D DC12](#) [G3RV-SL500-D DC24](#) [G3RV-SL700-A AC/DC48](#) [G3RV-SL700-A AC110](#) [G3RV-SL700-A AC230](#)
[G3RV-SL700-A DC12](#) [G3RV-SL700-A DC24](#) [G3RV-SL700-AL AC110](#) [G3RV-SL700-AL AC230](#) [G3RV-SL700-AL](#)
[DC24](#) [G3RV-SL700-D AC/DC48](#) [G3RV-SL700-D AC110](#) [G3RV-SL700-D AC230](#) [G3RV-SL700-D DC12](#) [G3RV-](#)
[SL700-D DC24](#) [G3RV-SL500-A AC/DC24](#) [G3RV-SL500-AL AC110](#) [G3RV-SL500-AL AC/DC24](#) [G3RV-SL500-AL](#)
[AC/DC48](#) [G3RV-SL500-AL DC12](#) [G3RV-SL500-D AC/DC24](#) [G3RV-SL500-D AC/DC48](#) [G3RV-SL700-A AC/DC24](#)
[G3RV-SL700-AL AC/DC24](#) [G3RV-SL700-AL AC/DC48](#) [G3RV-SL700-AL DC12](#) [G3RV-SL700-D AC/DC24](#) [G3RD-](#)
[X02PN-2 DC24](#)