

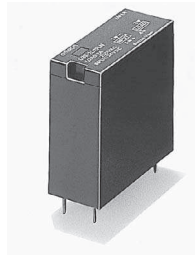
G3R/G3RD

Solid State Relays

Same Shape as SSR Type G2R Power Relay for PCB Mounting



- Direct mounting to PCBs.
Also standardized with input indicator.
- High dielectric strength of 2,500 VAC for 2-A models.
- High-voltage DC version also available.



RoHS Compliant

⚠ Refer to "Solid State Relays Common Precautions".

List of Models

Terminals	Isolation	Zero cross function	Indicator	Rated output load	Rated input voltage	Model	Minimum packing unit
PCB	Phototriac	Yes	Yes	2 A at 100 to 120 VDC *1	5, 12, 24 VDC	G3R-102PN	20 pcs
		No				G3R-102PLN	
		Yes		2 A at 100 to 240 VAC *2		G3R-202PN	
		No				G3R-202PLN	
	Photocoupler	—		1.5 A at 5 to 110 VDC		G3RD-101PN	
		—		2 A at 4 to 48 VDC *3		G3RD-X02PN	

Note: Refer to the "List of Certified Models" for UL, CSA, and EN approved models.

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

Ratings

Input (AC Output With Zero Cross Function)

Model	Item	Rated voltage	Operating voltage	Must operate voltage level	Must release voltage level	Input impedance
G3R-102PN G3R-202PN		5 VDC	4 to 6 VDC	3.5 VDC max.	0.375 VDC min.	250 Ω±20%
		12 VDC	9.6 to 14.4 VDC	8.4 VDC max.	0.9 VDC min.	600 Ω±20%
		24 VDC	19.2 to 28.8 VDC	16.8 VDC max.	1.8 VDC min.	1.5 kΩ±20%

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

Model	Item	Rated voltage	Operating voltage	Must operate voltage level	Must release voltage level	Input impedance
G3R-102PLN G3R-202PLN G3RD-X02PN G3RD-101PN		5 VDC	4 to 6 VDC	3.5 VDC max.	0.375 VDC min.	300 Ω±20%
		12 VDC	9.6 to 14.4 VDC	8.4 VDC max.	0.9 VDC min.	750 Ω±20%
		24 VDC	19.2 to 28.8 VDC	16.8 VDC max.	1.8 VDC min.	1.5 kΩ±20%
		24 VDC	19.2 to 28.8 VDC	16.8 VDC max.	1.8 VDC min.	1.5 kΩ±20%

Output

Model	Item	Applicable load			
		Rated load voltage	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)

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

Characteristics

Item	Model	G3R-102PLN	G3R-102PN	G3R-202PLN	G3R-202PN	G3RD-X02PN G3RD-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 50 VDC) 0.1 mA max. (at 125 VDC)
Insulation resistance		100 MΩ min. (at 500 VDC)				
Dielectric strength		2,500 VAC, 50/60Hz 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 ²				
Ambient operating temperature		-30°C to 80°C (with no icing or condensation)				
Ambient operating humidity		45% to 85%RH				
Storage temperature		-30°C to 100°C (with no icing or condensation)				
Weight		Approx. 12g (1-A load model), Approx. 18 g (2-A LOAD, DC output model)				