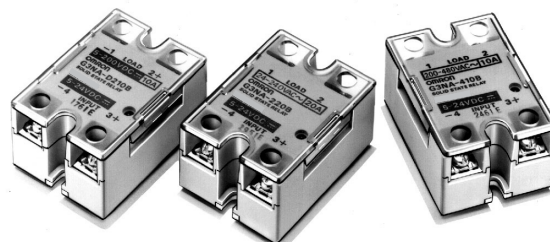


Solid State Relay G3NA

A Wide Range of Models with 5- to 40-A Output Currents and Up to 480-VAC/ 200-VDC Output Voltages

- All models feature the same compact dimensions to provide a uniform mounting pitch. For a lower profile option, see G5NE.
- Built-in varistor effectively absorbs external surges.
- Operation indicator (red LED) enables monitoring operation.
- Protective cover for greater safety.
- Ideal for commercial cooking, industrial/commercial heating, etc.
- Standard models certified by UL/CSA and -UTU models by VDE (TÜV).



Ordering Information

Isolation	Zero cross function	Indicator	Rated output load (applicable output load)	Rated input voltage	Model
Phototriac	Yes	Yes	5 A at 24 to 240 VAC* (19 to 264 VAC)	5 to 24 VDC	G3NA-205B
Photocoupler				100 to 120 VAC	
				200 to 240 VAC	
Phototriac			10 A at 24 to 240 VAC* (19 to 264 VAC)	5 to 24 VDC	G3NA-210B
Photocoupler				100 to 120 VAC	
				200 to 240 VAC	
	—		10 A at 200 to 480 VAC* (180 to 528 VAC)	5 to 24 VDC	G3NA-410B
			100 to 240 VAC		
			10 A at 5 to 200 VDC* (4 to 220 VDC)	5 to 24 VDC	G3NA-D210B
	Yes		20 A at 24 to 240 VAC* (19 to 264 VAC)	5 to 24 VDC	G3NA-220B
Phototriac				100 to 120 VAC	
Photocoupler				200 to 240 VAC	
			20 A at 200 to 480 VAC* (180 to 528 VAC)	5 to 24 VDC	G3NA-420B
				100 to 240 VAC	
				40 A at 24 to 240 VAC* (19 to 264 VAC)	
Phototriac	100 to 120 VAC	200 to 240 VAC	5 to 24 VDC	G3NA-440B	
Photocoupler					100 to 240 VAC
					40 A at 200 to 480 VAC* (180 to 528 VAC)
	100 to 240 VAC	50 A at 200 to 480 VAC* (180 to 528 VAC)	5 to 24 VDC	G3NA-450B	

*Loss time increases under 75 VAC.

Note: When ordering a TÜV-approved model, add "-UTU" to the model number as shown below:
Example: G3NA-210B-UTU.

■ Accessories (Order Separately)

Heat Sink

The following heat sinks are thin and can be DIN-track mounted (except Y92B-P250). See *Dimensions* for details.

Model	Applicable SSR
Y92B-N50	G3NA-205B, G3NA-210B, G3NA-D210B, G3NA-410B, G3NE-205T(L), G3NE-210T(L)
Y92B-N100	G3NA-220B, G3NA-420B, G3NE-220T(L)
Y92B-N150	G3NA-240B, G3NA-440B
Y92B-P250	G3NA-450B

Low-cost Models

Model	Applicable SSR
Y92B-A100	G3NA-205B, G3NA-210B, G3NA-D210B, G3NA-220B, G3NA-410B, G3NA-420B
Y92B-A150N	G3NA-420B, G3NA-440B
Y92B-A250	G3NA-440B

Mounting Bracket

Used to mount the G3NA with a mounting dimension of 56 mm.

Model	Applicable SSR
R99-11	G3NA-420B, G3NA-440B

See *Dimensions* for details.

Specifications

■ Input Ratings

(Ambient temperature: 25°C)

Model	Rated voltage	Operating voltage	Impedance (See note 1)	Voltage level	
				Must operate voltage	Must release voltage
G3NA-2□□B	5 to 24 VDC	4 to 32 VDC	7 mA max. (see note 2)	4 VDC max.	1 VDC min.
	100 to 120 VAC	75 to 132 VAC	36 kΩ ±20%	75 VAC max. (see note 3)	20 VAC min. (see note 3)
	200 to 240 VAC	150 to 264 VAC	72 kΩ ±20%	150 VAC max. (see note 3)	40 VAC min. (see note 3)
G3NA-4□□B	5 to 24 VDC	4 to 32 VDC	5 mA max. (see note 2)	4 VDC max.	1 VDC min.
G3NA-D210B	100 to 240 VAC	75 to 264 VAC	72 kΩ ±20%	75 VAC max.	20 VAC min.

- Note:** 1. The input impedance is measured at the maximum value of the rated supply voltage (for example, with the model rated at 100 to 120 VAC, the input impedance is measured at 120 VAC).
 2. With constant current input circuit system, the impedance for the G3NA-□□□B-UTU is 15 mA max.
 3. Refer to the "Engineering Data" for further details.

■ Output Ratings

Model	Applicable load				
	Rated load voltage	Load voltage range	Load current		Inrush current
			With heat sink*	Without heat sink	
G3NA-205B	24 to 240 VAC	19 to 264 VAC	0.1 to 5 A	0.1 to 3 A	60 A (60 Hz, 1 cycle)
G3NA-210B			0.1 to 10 A	0.1 to 4 A	
G3NA-410B	200 to 480 VAC	180 to 528 VAC	0.2 to 10 A	0.2 to 4 A	220 A (60 Hz, 1 cycle)
G3NA-220B	24 to 240 VAC	19 to 264 VAC	0.1 to 20 A	0.1 to 4 A	
G3NA-420B	200 to 480 VAC	180 to 528 VAC	0.2 to 20 A	0.2 to 4 A	440 A (60 Hz, 1 cycle)
G3NA-240B	24 to 240 VAC	19 to 264 VAC	0.1 to 40 A	0.1 to 6 A	
G3NA-440B	200 to 480 VAC	180 to 528 VAC	0.2 to 40 A	0.2 to 6 A	20 A (10 ms)
G3NA-450B	200 to 480 VAC	180 to 528 VAC	0.2 to 50 A	0.2 to 6 A	
G3NA-D210B	5 to 200 VDC	4 to 220 VDC	0.1 to 10 A	0.1 to 4 A	

*When the appropriate size OMRON heat sink is used.

■ Characteristics

Item		G3NA-205B, -210B, -220B	G3NA-240B	G3NA-410B, -420B, -440B, -450B	G3NA-D210B
Operate time	DC input	1/2 of load power source cycle + 1 ms max.			1 ms max.
	AC input	1 1/2 of load power source cycle + 1 ms max.			30 ms max.
Release time	DC input	1/2 of load power source cycle + 1 ms max.			5 ms max.
	AC input	1 1/2 of load power source cycle + 1 ms max.			30 ms max.
Output ON voltage drop		1.6 V (RMS) max.	1.6 V (RMS) max.	1.8 V (RMS max.)	1.5 V max.
Leakage current		5 mA max. (at 100 VAC)		10 mA max. at 200 VAC	5 mA max. at 200 VDC
		10 mA max. (at 200 VAC)		20 mA max. at 400 VAC	
Insulation resistance		100 MΩ min (at 500 VDC)			
Dielectric strength		2,500 VAC, 50/60 Hz for 1 minute			
Vibration resistance	Malfunction	10 to 55 Hz, 1.5 mm double amplitude			
Shock resistance	Malfunction	1,000 m/s ²			
Ambient temperature	Operating	-30° to 80°C (with no icing or condensation)			
	Storage	-30° to 100°C (with no icing or condensation)			
Approved standards		UL508 File No. E64562/CSA C22.2 (No.0, No.14) File No. LR35535 (except for G3NA-450B) TÜV R9151660 (EN60950) (except for G3NA-4□0B)			
Ambient humidity	Operating	45% to 85%			
Weight		Approx. 60 g (2.1 oz.)	Approx. 70 g (2.5 oz.)	Approx. 80 g (2.8 oz.)	Approx. 70 g (2.5 oz.)

Note: Data shown are of initial value.

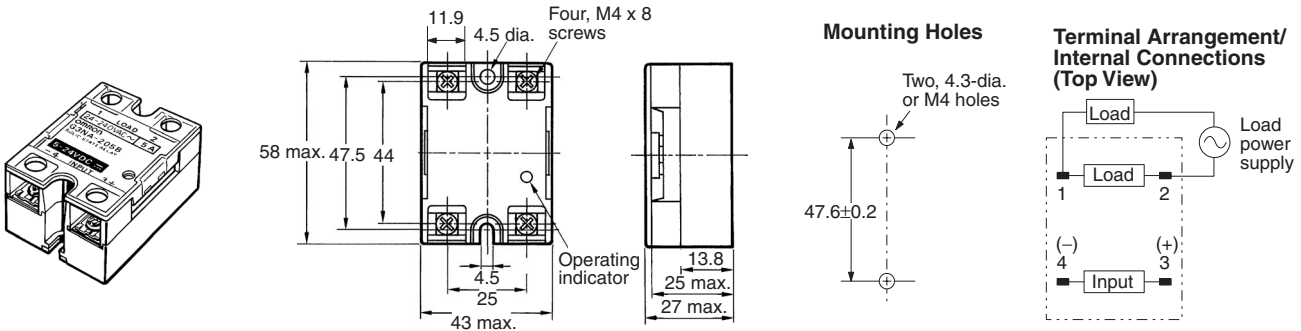
Dimensions

Note: All units are in millimeters unless otherwise indicated.

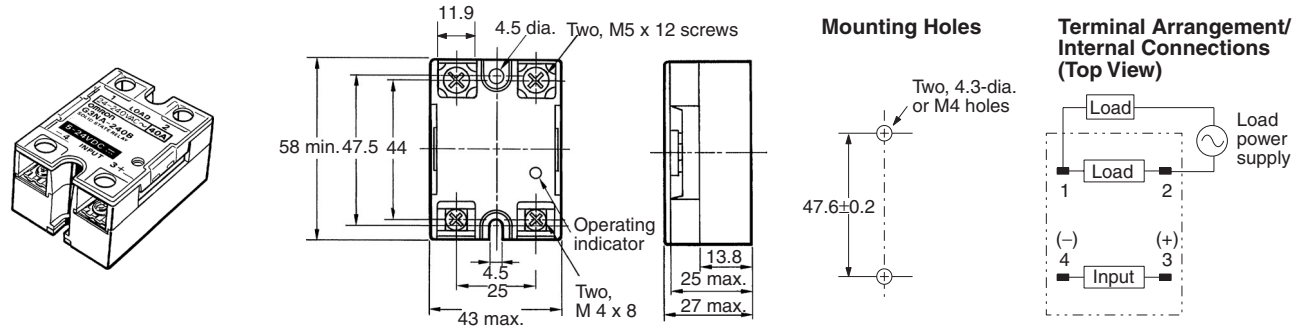
In the case of surface mounting, a 30% derating of the load current is required.

The orientation indicated by the external dimensions is not the correct mounting orientation. When opening mounting holes, refer to the mounting hole dimensions.

G3NA-205B, G3NA-210B, G3NA-220B, G3NA-410B, G3NA-420B



G3NA-240B, G3NA-440B, G3NA-450B



G3NA-D210B

Note: The load can be connected to either the positive or negative side.

