

## Solid-state Relay

### G3B/G3BD

#### Plug-in Type, Same as MK Series Power Relays

- Wide voltage range, Input: 4 to 28 VDC; Output: 75 to 264 VAC; Input: 4 to 28 VDC; Output: 3 to 125 VDC.
- Same size as MK Series.
- Operating indicator provided.
- DC Output Type available with 3 to 125 VDC output capability.



### Ordering Information

Isolation	Zero cross function	Indicator	Rated output load (applicable output load)	Rated input voltage	Model
Photocoupler	Yes	Yes	5 A at 100 to 240 VAC (5 A at 75 to 264 VAC) (see note 2)	5 to 24 VDC	G3B-205S
	No		3 A at 5 to 110 VDC (3 A at 3 to 125 VDC)		G3BD-103S

- Note:**
1. When ordering the G3B/G3BD with an operating voltage range of 3 to 30 VDC, add a "-M" after the model number.
  2. Product is labelled "250 VAC".

#### ■ Accessories (Order Separately)

##### Connecting Socket/Hold-Down Clip

Refer to page 244 for details.

Item	PF083A-E	PL-08
Connecting	Front connecting	Back connecting
Mounting method/Terminal type	Track mounted/screw terminals	Solder terminals
Hold-down clip	PYC-A1 (when track mounted)	PLC

### Specifications

#### ■ Input Ratings

Model	Rated voltage	Operating voltage	Impedance	Voltage levels	
				Must operate voltage	Must release voltage
G3B-205S	5 to 24 VDC	4 to 30 VDC	1.5 kΩ +20%/-10%	4 VDC max.	1 VDC min.
G3BD-103S					

- Note:** Operating voltage range is 3 to 30 VDC for M Types with no operating indicator.  
Input impedance attains its maximum at the operating voltage.

#### ■ Output Ratings

Model	Applicable load			
	Rated load voltage	Load voltage	Load current	Inrush current
G3B-205S	100 to 240 VAC	75 to 264 VAC	0.1 to 5 A	80 A, 60 Hz for 1 cycle
G3BD-103S	5 to 110 VDC	3 to 125 VDC	0.1 to 3 A	12 A (10 ms)

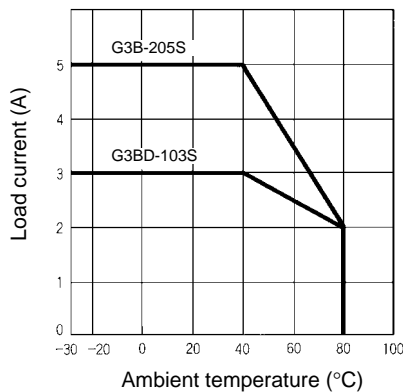
## ■ Characteristics

Model	G3B-205S	G3BD-103S
Operate time	1/2 cycle of load power source + 1 ms max.	0.5 ms max.
Release time	1/2 cycle of load power source + 1 ms max.	2.5 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)	5 mA max. (at 125 VDC)
Insulation resistance	100 MΩ min. (at 500 VDC)	
Dielectric strength	1,500 VAC, 50/60 Hz for 1 min	
Vibration resistance	10 to 55 Hz, 1.5-mm double amplitude	
Shock resistance	1,000 m/s <sup>2</sup>	
Ambient temperature	Operating: -30°C to 80°C (with no icing or condensation) Storage: -30°C to 100°C (with no icing or condensation)	
Ambient humidity	45% to 85%	
Weight	Approx. 70 g	

## Engineering Data

### Load Current vs. Ambient Temperature Characteristics

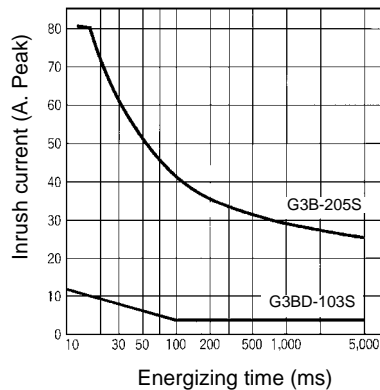
G3B-205S, G3BD-103S



### Inrush Current Resistivity

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

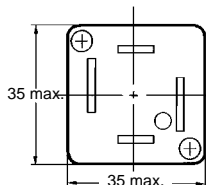
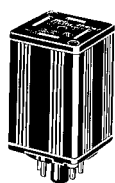
G3B-205S, G3BD-103S



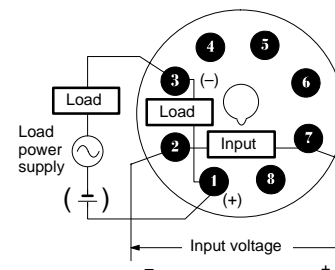
## Dimensions

Note: All units are in millimeters unless otherwise indicated.

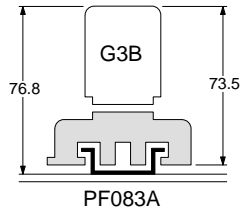
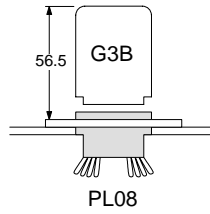
G3B  
G3BD



### Terminal Arrangement (Bottom View)



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

**Mounting Height with socket  
Front Connecting Socket****Back Connecting Socket**

**Note:** When mounting PF083A, mount the key track down.

## Precautions

Refer to pages 11 to 19 for general precautions.

The SSR case serves to dissipate heat. Install the relays so that they are adequately ventilated. If poor ventilation is unavoidable, reduce the load current to half.

**ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.**

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