

## Solid-state Relay

## G3PB

### New Single-phase Solid-state Relay with Compact Size and Low Cost

- Lower cost based on new modular construction
- Models for 15 to 45 A are available
- Slim models with a thickness of only 22.5 mm are also available
- Compact design achieved by optimizing radiator shape.
- DIN track mounting possible (when using the Y92B-P50) in addition to screw mounting.
- Meets EN60947-4-3 (IEC947-4-3) UL508, and CSA22.2 No. 14.
- CE marking



### Ordering Information

No. of phases	Zero-cross function	Main circuit voltage	Applicable heater capacity (resistive load: Class-1 AC)	Model
Single-phase	Yes	100 to 240 VAC	3.6 kW max. (15 A)	G3PB-215B-VD
			6 kW max. (25 A)	G3PB-225B-VD
			8.4 kW max. (35 A)	G3PB-235B-VD
			10.8 kW max. (45 A)	G3PB-245B-VD

#### ■ Accessories (Order Separately)

Mounting Track	50 cm (1) x 7.3 mm (t)	PFP-50N
	1 m (1) x 7.3 mm (t)	PFP-100N
	1 m (1) x 16 mm (t)	PFP-100N2

## Specifications

### ■ Ratings (at an Ambient Temperature of 25°C)

#### Operating Circuit (Common)

Item	Common
Rated operating voltage	12 to 24 VDC
Operating voltage range	9.6 to 30 VDC
Rated input current	7 mA max.
Must-operate voltage	9.6 VDC max.
Reset voltage	1 VDC min.
Insulation method	Phototriac
Operation indicator	Yellow LED

#### Main Circuit of Models with Built-in Heat Sinks

Item	G3PB-215B-VD	G3PB-225B-VD	G3PB-235B-VD	G3PB-245B-VD
Rated voltage	100 to 240 VAC			
Operating voltage range	75 to 264 VAC			
Rated carry current	15 A	25 A	35 A	45 A
Minimum load current	0.1 A		0.5 A	
Inrush current resistance (peak value)	150 A (60 Hz, 1 cycle)	220 A (60 Hz, 1 cycle)	440 A (60 Hz, 1 cycle)	
Permissible I <sup>2</sup> t (half 60-Hz wave)	121 A <sup>2</sup> s	260 A <sup>2</sup> s	1,260 A <sup>2</sup> s	
Applicable load (with Class-1 AC resistive load)	3 kW max. (at 200 VAC)	5 kW max. (at 200 VAC)	7 kW max. (at 200 VAC)	9 kW max. (at 200 VAC)

### ■ Characteristics

Item	G3PB-215B-VD	G3PB-225B-VD	G3PB-235B-VD	G3PB-245B-VD
Operate time	1/2 of load power source cycle + 1 ms max. (DC input)			
Release time	1/2 of load power source cycle + 1 ms max. (DC input)			
Output ON voltage drop	1.6 V (RMS) max.			
Leakage current	10 mA max. (at 200 VAC)			
Insulation resistance	100 MΩ min. (at 500 VDC)			
Dielectric strength	2,500 VAC, 50/60 Hz for 1 min			
Vibration resistance	Destruction and malfunction: 10 to 55 Hz, 0.75-mm double amplitude			
Shock resistance	Destruction: 294 m/s <sup>2</sup> Malfunction: 294 m/s <sup>2</sup> (DIN track mounting)			
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	Operating: 45% to 85%			
Approved standards	UL508 File No. E64562 (From April 1999) CSA22.2 No. 14 File No. LR35535 (From April 1999) IEC947-4-3 File No. 6825 UG			
Weight	Approx. 240 g	Approx. 240 g	Approx. 400 g	Approx. 400 g