

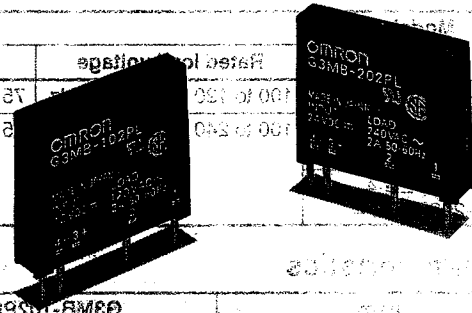
# OMRON

## Solid-state Relay

# G3MB

**Low-cost, Subminiature PCB-mounting SSR Switching 2 A**

- Bottom is approximately three times as small as that of the G3M and ideal for high-density PCB applications
- DC input-AC output for 2-A load at 25°C
- Mono-block lead frame incorporating terminals, heat sink, and a PCB directly mounted with bare chips made it possible to miniaturize the relay.
- Standard models approved by UL, CSA and -UTU models by VDE (TUV).



## Ordering Information

Isolation	Zero cross function	Indicator	Input resistor	Snubber circuit	Applicable output load	Rated input voltage	Model	
Phototriac	No	No	Yes	Yes	2 A at 100 to 120 VAC (rated load voltage)	5 VDC	G3MB-102PL (-UTU)	
						12 VDC	G3MB-102PL-12	
						24 VDC	G3MB-102PL-24	
						5 VDC	G3MB-202P (-UTU)	
	Yes	No	No	No	No	2 A at 100 to 240 VAC (rated load voltage)	5 VDC	G3MB-202P (-UTU)
							12 VDC	G3MB-202P-12
							24 VDC	G3MB-202P-24
							5 VDC	G3MB-202PL (-UTU)
No	No	No	No	No	2 A at 100 to 240 VAC (rated load voltage)	12 VDC	G3MB-202PL (-UTU)	
						24 VDC	G3MB-202PL-24 (-UTU)	
						*1	G3MB-202PEG-4 (-UTU)	
							G3MB-202PLEG-4 (-UTU)	

**Note:** When ordering models conforming to VDE (TUV), add "UTU" to the model number.

\* Recommended Operating Conditions

Item	Min.	Standard	Max.
Forward current	5 mA	10 mA	20 mA
Must release voltage	0		1 V

## Specifications

### ■ Ratings

#### Input Resistor Contact

Rated voltage	Operating voltage	Impedance	Voltage levels	
			Must operate voltage	Must release voltage
5 VDC	4 to 6 VDC	440 Ω ±20%	4 VDC max.	1 VDC min.
12 VDC	9.6 to 14.4 VDC	1 kΩ ±20%	9.6 VDC max.	
24 VDC	19.2 to 28.8 VDC	2.2 kΩ ±20%	19.2 VDC max.	

**Note:** Each model has 5-VDC, 12-VDC, and 24-VDC input versions.

LED forward current	50 mA	Max.
Repetitive peak LED forward current	1 A	
LED reverse voltage	5 V	

**Solid-state Relay**  
 Low-cost, subminiature PCB-mounting  
 SSR switching 2 A

**Output**

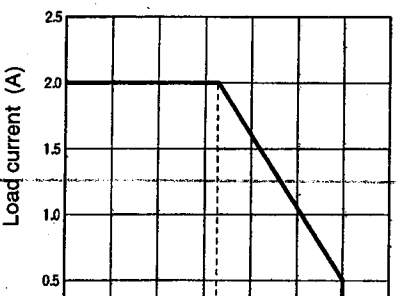
Model	Rated load voltage	Load voltage range	Load current	Inrush current
G3MB-102PL	100 to 120 VAC, 50/60 Hz	75 to 132 VAC, 50/60 Hz	0.1 to 2 A	30 A (60 Hz, 1 cycle)
G3MB-202P G3MB-202PL	100 to 240 VAC, 50/60 Hz	75 to 264 VAC, 50/60 Hz		
G3MB-202PEG-4 G3MB-202PLEG-4				

**Characteristics**

Item	G3MB-102PL	G3MB-202P, -202P-4, -202PEG-4	G3MB-202PL, -202PL-4, -202PLEG-4
Operate time	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.		
Output ON-voltage drop	1.6 V (RMS) max.		
Leakage current	1 mA max. (at 100 VAC)	1.5 mA max. (at 200 VAC)	
Insulation resistance	1,000 MΩ min. (at 500 VDC)		
Dielectric strength	2,500 VAC, 50/60 Hz for 1 min.		
Vibration resistance	Malfunction: 10 to 55 Hz, 0.75-mm double amplitude.		
Shock resistance	Malfunction: 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	Operating: 45% to 85%		
Approved standards	UL508 File No. E64562 CSA C22.2 (No.14) File No. LR35535 TUV R9351062 (EN60950) ("UTU" type)		
Weight	Approx. 5 g		

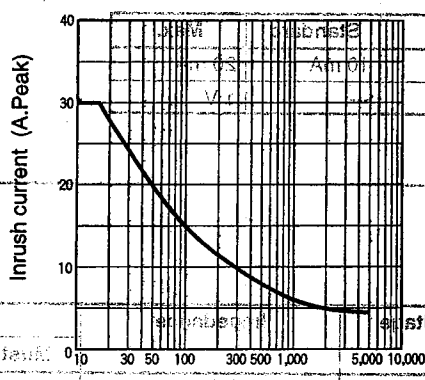
**Engineering Data**

**Load Current vs. Ambient Temperature Characteristics**



**Inrush Current Resistivity**

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



**Specifications**  
 Ratings  
 Input: Push-in Contact  
 Output: Push-in Contact