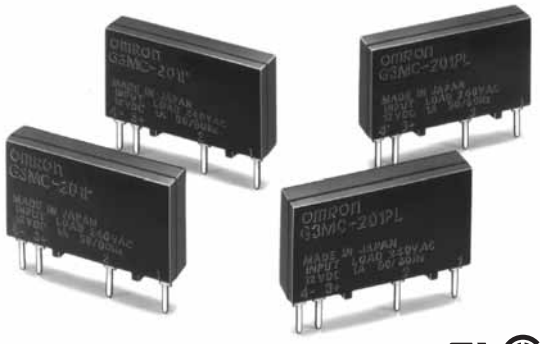
Solid State Relay
G3MC

Compact, Thin-profile, Low-cost SSR with Reinforced Insulation

- Small bottom surface area (approx. 80% of the conventional G3MB's), ideal for close PCB mounting.
- DC input and AC output for an applicable load of 1A at 40°C.
- Compact, thin-profile SSR of monoblock construction with an all-in-one frame incorporates a PCB, terminals, and a heatsink.
- Approved by UL and CSA. VDE certified models available.
- Models with reinforced insulation are available.



Ordering Information

To Order: Select the part number and add the desired coil voltage rating, (e.g., G3MC-101P-*DC12*).

Isolation	Zero-cross function	Built-in snubber circuit	Rated output load	Rated input voltage	Part number
Phototriac	Yes	Yes	1 A at 100 to 120 VAC (75 to 132 VAC)	5 VDC	**G3MC-101P**
				12 VDC	
				24 VDC	
	No			5 VDC	**G3MC-101PL**
				12 VDC	
				24 VDC	
	Yes		2 A at 100 to 240 VAC (75 to 264 VAC)	5 VDC	**G3MC-202P**
				12 VDC	
				24 VDC	
	No			5 VDC	**G3MC-202PL**
				12 VDC	
				24 VDC	

Note: 1. All models meet UL and CSA standards. In order to obtain VDE approved versions with UL, CSA and VDE Logos, add "-VD" to the part number. Example: G3MC-101P-*VD*-DC12

2. 2A models are available with reinforced insulation. Add "-1" to the part number to obain 2A models with reinfored insulation.
Examples: G3MC-202PL-*1*-DC5 G3MC-202P-VD-*1*-DC24

Specifications

■ Ratings (Ambient temperature 25°C)

Input

Rated voltage	Operating voltage	Impedance	Voltage levels	
			Must operate voltage	Must dropout voltage
5 VDC	4 to 6 VDC	300Ω ±20%	4 VDC max.	1 VDC min.
12 VDC	9.6 to 14.4 VDC	800Ω ±20%	9.6 VDC max.	
24 VDC	19.2 to 28.8 VDC	1.6kΩ ±20%	19.2 VDC max.	

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

Output

Part number	Applicable load			
	Rated load voltage	Load voltage range	Load current	Surge current
G3MC-101P(L)(-VD)	100 to 120 VAC, 50/60 Hz	75 to 132 VAC, 50/60 Hz	0.1 to 1 A	8 A (60 Hz, 1 cycle)
G3MC-202P(L)(-VD)(-1)	100 to 240 VAC, 50/60 Hz	75 to 264 VAC, 50/60 Hz	0.1 to 2 A	30 A (60 Hz, 1 cycle)

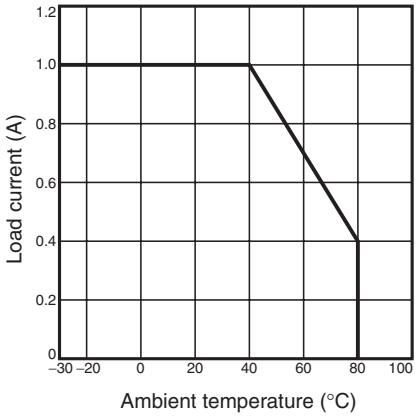
■ Characteristics

Item	G3MC-101P(-VD)	G3MC-101PL(-VD)	G3MC-202P(-VD)(-1)	G3MC-202PL(-VD)(-1)
Operate time	1/2 of load power source cycle + 1 ms	1 ms max.	1/2 of load power source cycle + 1 ms	1 ms max.
Release time	1/2 of load power source cycle + 1 ms)			
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 (3,000 VAC, 50/60 Hz for 1 min. for G3MC-□□□-VD-1)			
Vibration resistance	Malfunction: 10 to 55 Hz, 0.75-mm double amplitude			
Shock resistance	Malfunction: 1,000 m/s^2 (approx. 100G)			
Ambient temperature	Operating:–30°C to 80°C (with no icing or condensation) Storage:–30°C to 100°C (with no icing or condensation)			
Approved standards	UL File No. E64562, CSA File No. LR35535 EN60950 File No. 5925UG (“-VD(-1)” type)			
Ambient humidity	Operating: 45% to 85%			
Weight	Approx. 2.5g (Approx. 5g for G3MC-202P(L)-VD-1)			

Engineering Data

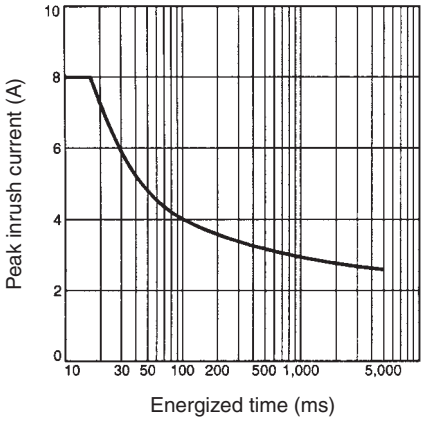
■ G3MC-101P(L)(-VD)

Load Current vs. Ambient Temperature Characteristics



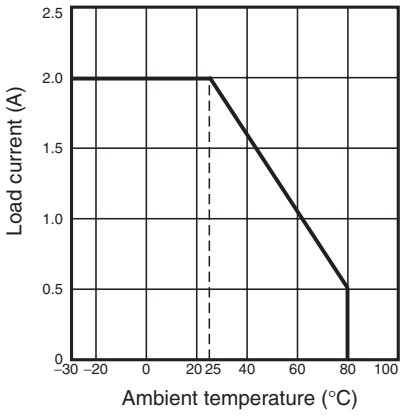
Inrush Current Resistivity

One cycle, non-repetitive (Keep the inrush current to half the rated value if it occurs repeatedly.)



■ G3MC-202P(L)(-VD)(-1)

Load Current vs. Ambient Temperature Characteristics



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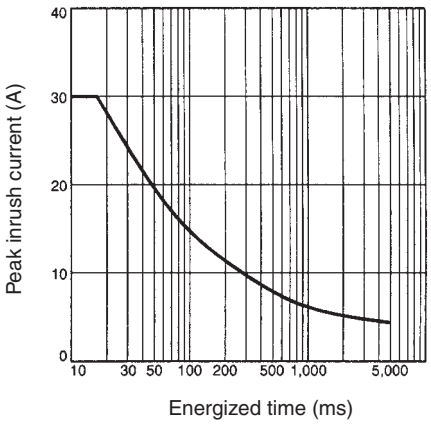
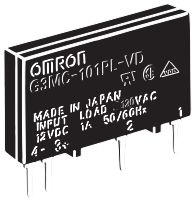
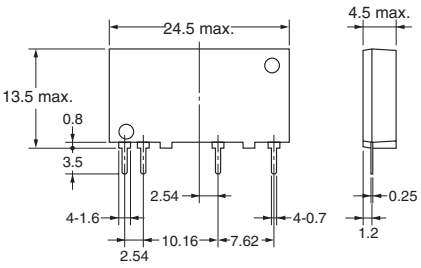


Dimensions

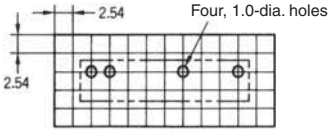
Units: mm (inch)

G3MC-101P(L)(-VD)

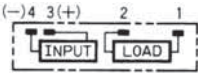




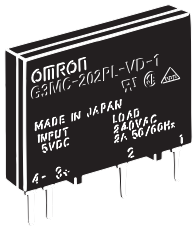
PCB Dimensions (Bottom View)

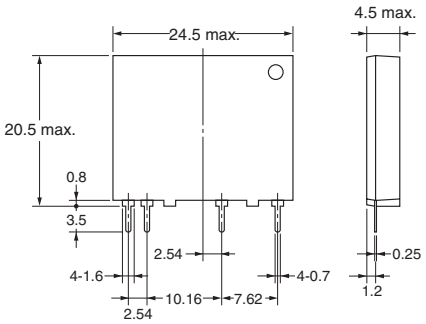


Terminal Arrangement (Bottom View)



G3MC-202P(L)(-VD)(-1)





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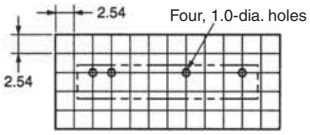

Terminal Arrangement (Bottom View)