

Solid State Relay

G3M

1, 2 and 3A single in-line package
SSR

- Thin design for high-density PCB applications.
- DC input-AC output for up to a 3-A load.
- Two foot prints offer greater flexibility
- Approved by UL and CSA.



Ordering Information

To order: Select the part number and add the desired coil voltage rating, (e.g., G3M-202P-US DC5)

Isolation	Input terminal pitch	Zero cross function	Indicator	Rated output load (Applicable output load)	Rated input voltage	Part number
Phototriac	7.62 mm	Yes	No	2 A at 100 to 240 VAC (2 A at 75 to 264 VAC)	5 VDC	G3M-202P-US
					12 VDC	
					24 VDC	
				3 A at 100 to 240 VAC (3 A at 75 to 264 VAC)	5 VDC	G3M-203P
					12 VDC	
					24 VDC	
		No		2 A at 100 to 120 VAC (2 A at 75 to 132 VAC)	5 VDC	G3M-102PL-US
					12 VDC	
					24 VDC	
				2 A at 100 to 240 VAC (2 A at 75 to 264 VAC)	5 VDC	G3M-202PL-US
					12 VDC	
					24 VDC	
	3 A at 100 to 240 VAC (3 A at 75 to 264 VAC)	5 VDC		G3M-203PL		
		12 VDC				
		24 VDC				
	5.08 mm	Yes		2 A at 100 to 240 VAC (2 A at 75 to 132 VAC)	5 VDC	G3M-202P-4-US-4
					12 VDC	
					24 VDC	
				3 A at 100 to 240 VAC (3 A at 75 to 264 VAC)	5 VDC	G3M-203P-4
					12 VDC	
					24 VDC	
		No		2 A at 100 to 120 VAC (3 A at 75 to 264 VAC)	5 VDC	G3M-102PL-4-US-4
					12 VDC	
					24 VDC	
2 A at 100 to 240 VAC (2 A at 75 to 264 VAC)			5 VDC	G3M-202PL-4-US-4		
			12 VDC			
			24 VDC			
3 A at 100 to 240 VAC (3 A at 75 to 264 VAC)	5 VDC	G3M-203PL-4				
	24 VDC					

Note: TÜV marking is available with "-UTU" in place of "-US" on the part number.

Specifications

■ RATINGS

Input

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

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

Output

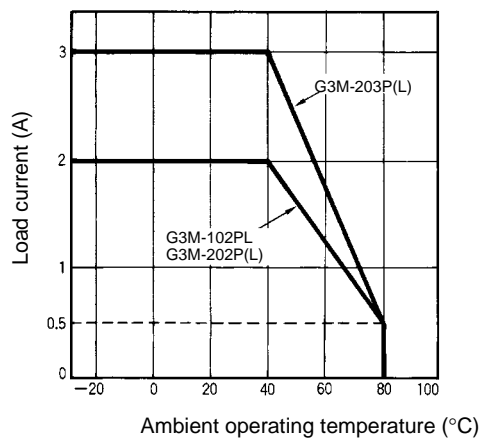
Model	Rated voltage	Applicable load		
		Load voltage	Load current	Inrush current
G3M-102PL-US (-4)	100 to 240 VAC	75 to 132 VAC	0.1 to 2 A	30 A (60 Hz, 1 cycle)
G3M-202P(L)-US (-4)		75 to 264 VAC		
G3M-203P(L) (-4)		75 to 264 VAC	0.1 to 3 A	45 A (60 Hz, 1 cycle)

■ CHARACTERISTICS

Item	G3M-102PL-US (-4)	G3M-202P(L)-US (-4)	G3M-203P (L) (-4)
Operate time	1 ms max. (1/2 of load power source cycle + 1 ms max. for G3M-202P and G3M-203P)		
Release time	1/2 of load power source cycle + 1 ms max.		
Output ON voltage drop	1.6 V (RMS) max.		
Leakage current	2 mA max. (at 100 VAC)	2 mA max. (at 100 VAC) 5 mA max. (at 200 VAC)	1.5 mA (at 200 VAC)
Insulation resistance	1,000 M Ω min. (at 500 VDC)		
Dielectric strength	2,000 VAC, 50/60 Hz for 1 min		2,500 VAC, 50/60 Hz for 1 min
Vibration resistance	Malfunction: 10 to 55 Hz, 1.5-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	UL508 File No.E64562/CSA C22.2 (No.0, No.14) File No. LR35535 TÜV R9551055 (EN60950)		
Ambient humidity	Operating: 45% to 85%		
Weight	Approx. 15 g		

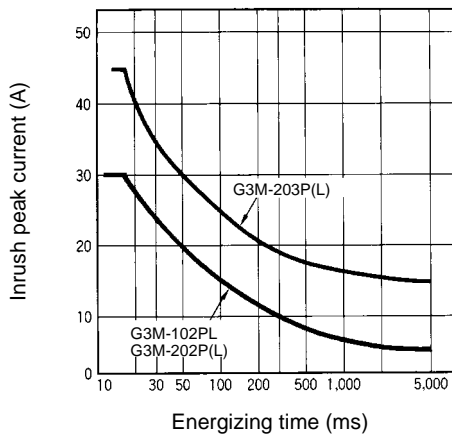
Engineering Data

Load Current vs. Rated Ambient Operating Temperature



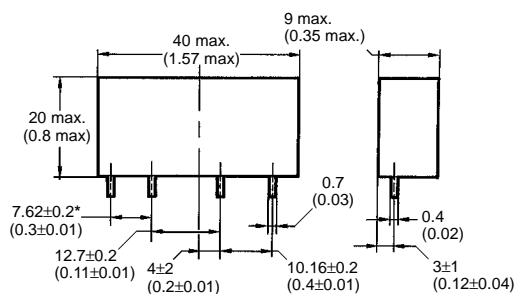
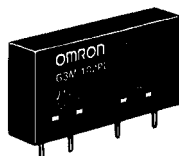
Inrush Current Immunity

Non-repetitive
Reduce the current to 1/2 or less if the G3M is in repetitive operation.



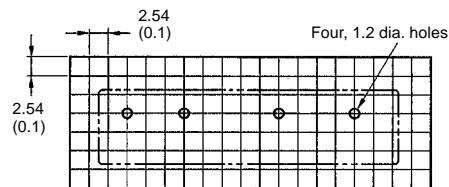
Dimensions

Unit: mm (inch)

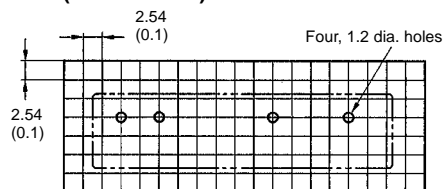


* Input terminal pitch of 5.08mm (0.2) is also available

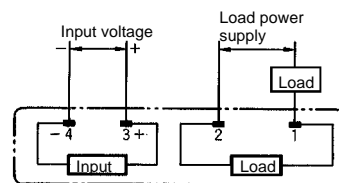
G3M PCB Dimensions (Bottom View)



G3M(-4) PCB Dimensions (Bottom View)



Terminal Arrangement (Bottom View)



NOTE: DIMENSIONS SHOWN ARE IN MILLIMETERS. To convert millimeters to inches divide by 25.4.

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