

SOLID STATE RELAY

MAXIMUM LOAD CURRENT 3 A

SG Series

■ FEATURES

- Conforms to UL, CSA Standards
- Slim, SIL Terminal Type
 - Size: 9.0 (W) × 40.0 (L) × 20.0(H) mm
 - Weight: approximately 13g
- High reliability, long life and maintenance free
- High isolation (between input and output)
 - Dielectric strength: 2,500 Vrms
- Internal zero cross circuit type available
- Internal output surge absorber (varistor) type available.



■ ORDERING INFORMATION

[Example] SG – 12 A 03 C V L
 (a) (b) (c) (d) (e) (f) (g)

(a)	Series Name	SG: SG Series
(b)	Nominal Voltage (Input side)	3 : 3 VDC 5 : 5 VDC 12 : 12 VDC 24 : 24 VDC
(c)	Load Voltage	A: AC type
(d)	Load Current	03 : 3 A rms
(e)	Zero Cross Circuit	Nil : No zero cross tyoe C : Zero cross type
(f)	Varistor	Nil : No varistor type V : Internal varistor type
(g)	Input Terminal Distance	Nil : 7.62 mm L : 5.08 mm

■ SPECIFICATIONS

Item		AC	Remarks
		TYPE 3 A	
INPUT side	Nominal Voltage (DC)	3 V, 5 V, 12 V, 24 V	
	Operate Range	±20% of nominal voltage	
	Must Operate Voltage	80% of nominal voltage	
	Must Release Voltage	Minimum 1 V	
	Input Impedance	3 VDC Type	130Ω ±10%
		5 VDC Type	330Ω ±10%
		12 VDC Type	1.0 kΩ ±10%
		24 VDC Type	2.2 kΩ ±10%
OUTPUT side	Load Voltage Range	75 to 265 Vrms	
	Maximum Load Current	3.0 Arms	CHARACTERISTIC DATA
	Minimum Load Current	10 mArms	
	1 Cycle Surge Current	132 A (60 Hz)	
	Max. Off-state Leakage Current	2.5 mArms (at 100 Vrms 60 Hz) 5.0 mArms (at 200 Vrms 60 Hz)	
	Max. Off-state Voltage Drop	1.5 Vrms	at max. load current
Max. Operate Time	at no zero cross type	1 ms	
	at zero cross type	1/2 cycle + 1 ms	
Max. Release Time		1/2 cycle + 1 ms	
Insulation Resistance		Minimum 1,000 MΩ (at 500 VDC)	for input-output
Dielectric Strength		2,500 Vrms for 1 minute	for input-output
Operating Temperature Range		−30°C to + 85°C	
Storage Temperature Range		−40°C to + 100°C	
Case Color		Black	
Weight		Approximately 13g	

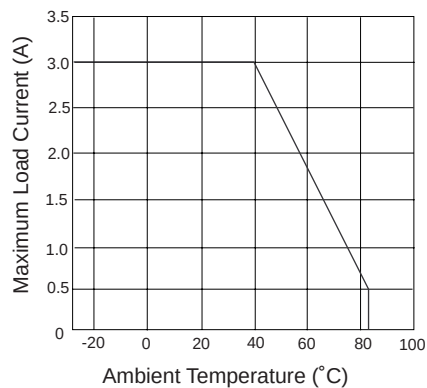
■ BLOCK DIAGRAM

LOAD	INSULATION	CIRCUITS	Input/Output waveform (resistive load)
AC	Photo-triac coupler		Source voltage of load Input signal Load current ON OFF

■ CHARACTERISTIC DATA

SG-A03 (3.0A type)

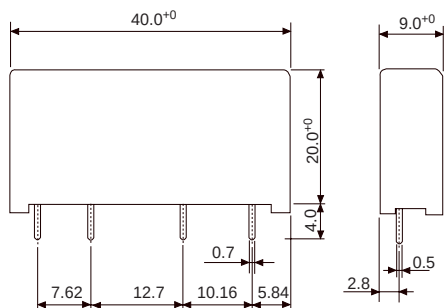
Ambient Temperature vs. Maximum Load Current



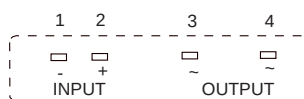
■ DIMENSIONS

● Dimensions

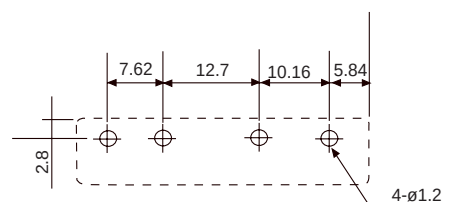
SG-() A03 Type



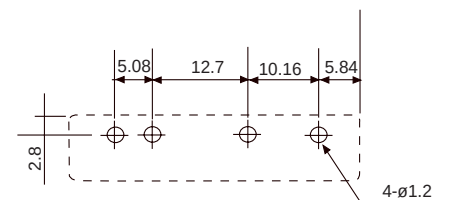
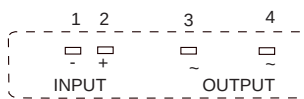
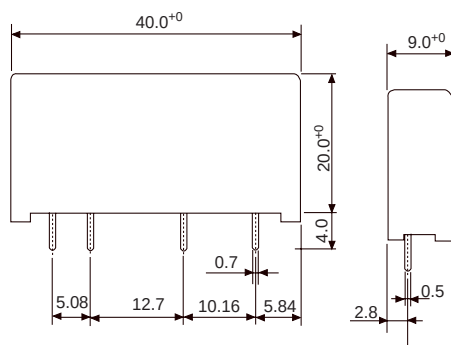
● Schematics (BOTTOM VIEW)



● PC board mounting hole layout (BOTTOM VIEW)



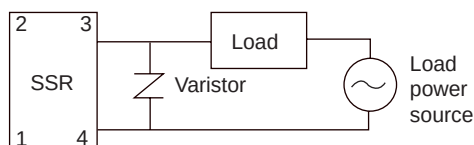
SG-() A03L Type



Unit: mm

■ NOTES

1. Polarity of terminals are pre-determined. Please design accordingly.
2. If using non-Varistor enclosure type please use Varistor type as in Figure 1.



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