

- Compact, yet capable of switching up to 30 A loads
- Ideal for home and industrial appliances, HVAC (heating, ventilating, and air conditioning), and many other applications
- Class B insulation standard
- Class F insulation, sealed versions, and dust cover available
- Complies with UL 873 and UL 508 column A spacings ( $\frac{1}{8}$ " through air,  $\frac{1}{4}$ " over surface)
- Minimum 6kV Impulse Surge Withstand



## Ordering Information

To Order: Select the part number and add the desired coil voltage rating, (e.g., G8P-1A-DC12).

Type	Contact form	Construction	Part number
Standard	SPST-NO	Open	<b>G8P-1A</b>
		Sealed	<b>G8P-1A4</b>
	SPDT	Open	<b>G8P-1C</b>
		Sealed	<b>G8P-1C4</b>
Class F insulation	SPST-NO	Open	<b>G8P-1A-CF</b>
		Sealed	<b>G8P-1A4-CF</b>
	SPDT	Open	<b>G8P-1C-CF</b>
		Sealed	<b>G8P-1C4-CF</b>

## Specifications

### ■ CONTACT DATA

Type	SPST-NO	SPDT
Rated load	30 A at 250 VAC, 20 A at 28 VDC	20/10 A* at 250 VAC, 20/10 A at 28 VDC
Contact material	AgCdO	
Carry current	30 A	20/10 A*
Max. operating voltage	250 VAC, 28 VDC	
Max. operating current	AC 30 A, DC 20 A	AC 20/10 A, DC 20/10 A*
Max. switching capacity	7,500 VA, 560 W	5,000/2,500 VA, 560/280 W*
Min. permissible load	DC 5 V, 500 mA	

\* NO contact/NC contact

- Note:
1. AgSnIn contacts available; add suffix "-FD" to part number. (Example: G8P-1A4-FD-CF-DC12)
  2. Also available with extra common pin (#1) removed; add suffix "-X" to part number. (Example: G8P-1A4-CF-X-DC12)
  3. 1formB contact arrangement available, contact Omron for details.

## ■ COIL DATA

Rated voltage (VDC)	Rated current (mA)	Coil resistance ( $\Omega$ )	Pick-up voltage	Dropout voltage	Maximum voltage	Power consumption (mW)
			% of rated voltage			
5	185	27	75% max.	10% min.	120% max.	Approx. 900
6	150	40				
9	93	97				
12	77	155				
15	59	256				
18	47	380				
24	36	660				
48	19	2480				
110	9	12400				

Note: The rated current and coil resistance are measured at a coil temperature of 23°C (73°F) with tolerances of  $\pm 10\%$ .

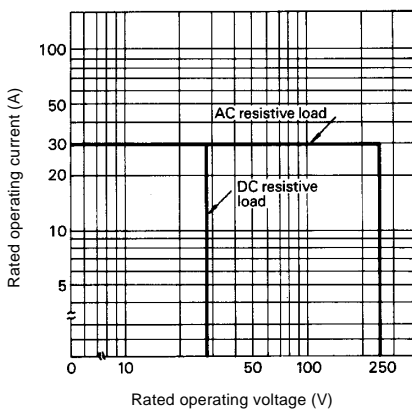
## ■ CHARACTERISTICS

Contact resistance		50 m $\Omega$ max. (measured with 5 VDC, 1A)
Operate time		15 ms max.
Release time		10 ms max.
Insulation resistance		10 M $\Omega$ min. (at 500 VDC)
Dielectric strength		1,500 VAC, 50/60 Hz for 1 minute
Impulse surge withstand		6,000 V between coil to contacts (1.2 $\mu$ s/50 $\mu$ s)
Vibration	Mechanical durability	10 to 55 Hz, 1.65 mm (0.06 in) double amplitude for 2 hours
	Malfunction durability	10 to 55 Hz, 1.65 mm (0.06 in) double amplitude for 5 minutes
Shock	Mechanical durability	1,000 m/s <sup>2</sup> (approx. 100 G)
	Malfunction durability	100 m/s <sup>2</sup> (approx. 10 G)
Ambient temperature	Standard type	-55° to 85°C (-67° to 185°F)
	With Class F insulation	-55° to 105°C (-67° to 221°F)
Humidity		45% to 85% RH
Service life	Mechanical	10 million operations min.
	Electrical	100,000 operations at rated load
Weight		Approx. 19 g (0.67 oz)

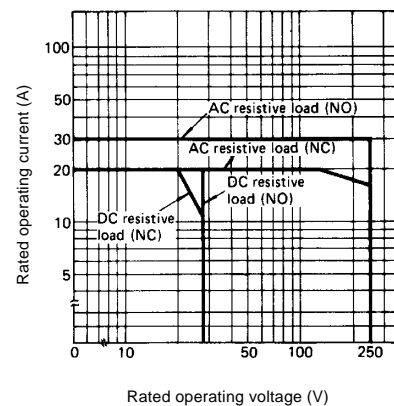
Note: Data shown are of initial value. Operate and release times excluding bounce.

## ■ CHARACTERISTIC DATA

### Maximum switching capacity SPST-NO

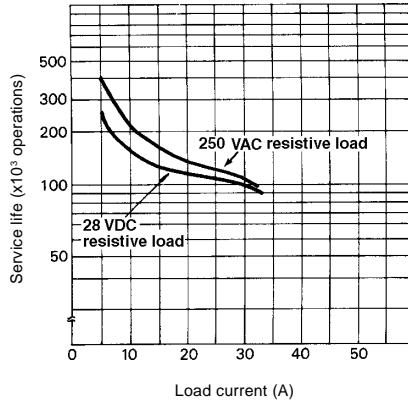


### SPDT

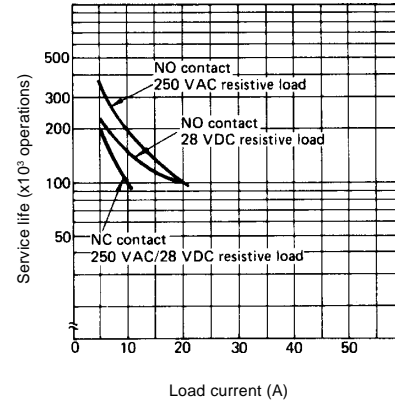


■ CHARACTERISTIC DATA

Electrical service life  
SPST-NO



SPDT

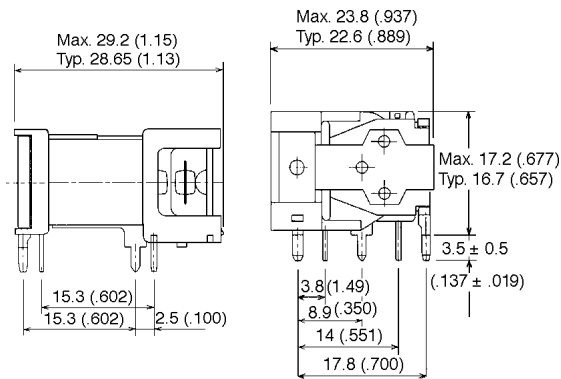


Dimensions

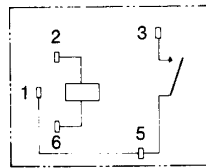
Unit: mm (inch)

■ RELAYS

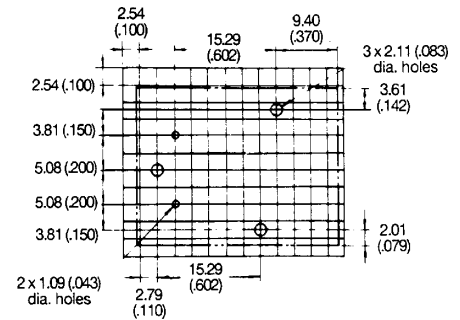
SPST-NO (Open)



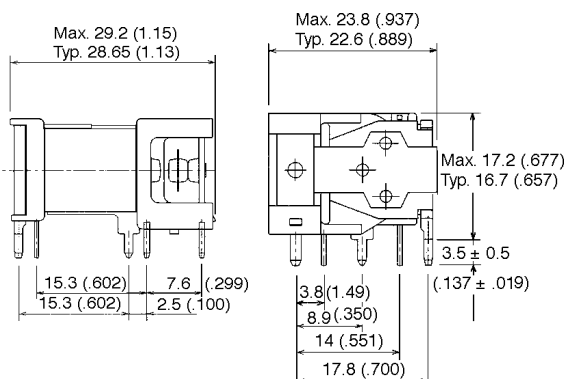
Terminal arrangement/  
Internal connections  
(Bottom view)



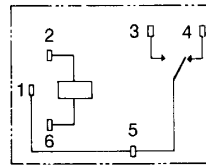
Mounting holes  
(Bottom view)



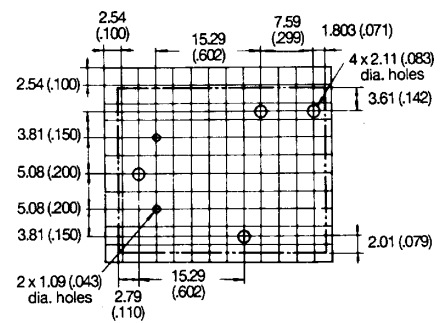
SPDT (Open)



Terminal arrangement/  
Internal connections  
(Bottom view)

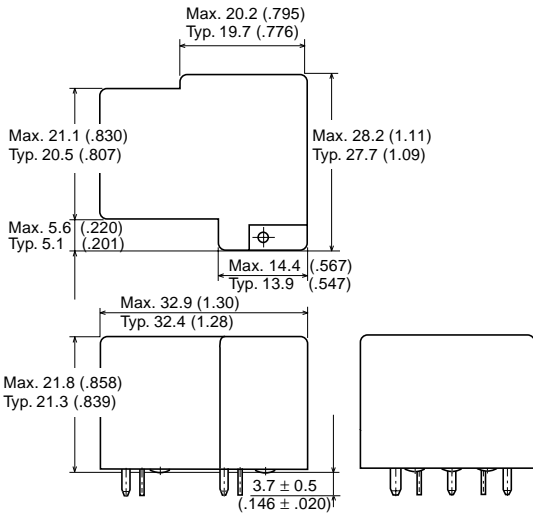


Mounting holes  
(Bottom view)

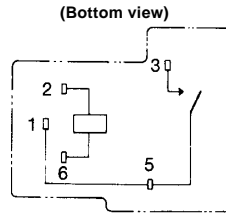


Unit: mm (inch)

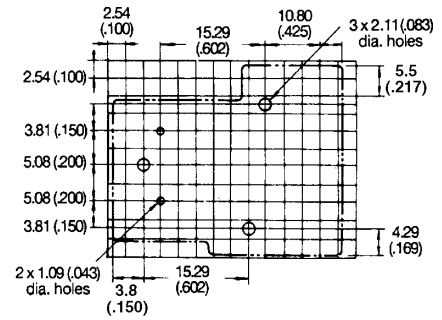
**SPST-NO (Sealed)**



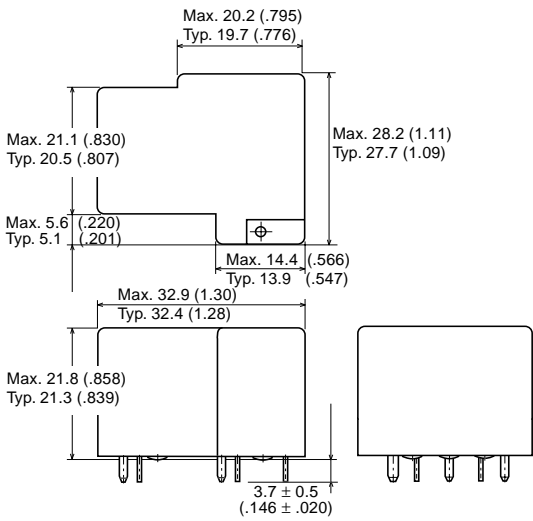
**Terminal arrangement/  
Internal connections**



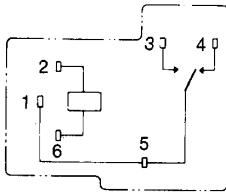
**Mounting holes  
(Bottom view)**



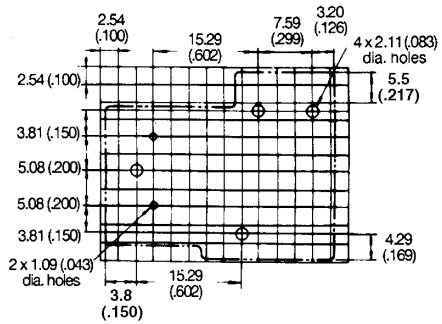
**SPDT (Sealed)**



**Terminal arrangement/  
Internal connections  
(Bottom view)**



**Mounting holes  
(Bottom view)**

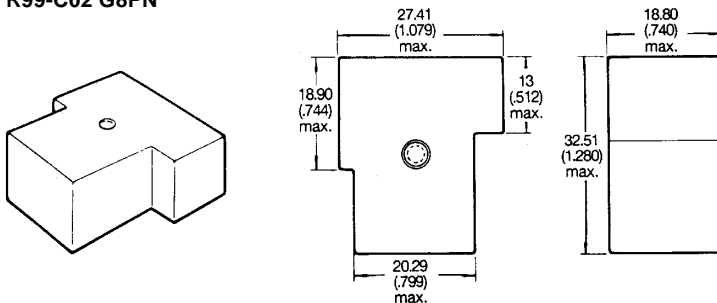


Note: Allow air circulation within the sealed type G8P by removing the knock off nib from the cover after soldering and cleaning is complete.

**ACCESSORIES**

**Snap-On Dust Cover** (Protects relay contacts against dust contamination only. Do not wave solder or flux clean with a dust cover!)

**R99-C02 G8PN**



## ■ APPROVALS

### UL recognized types (File No. E41643)

Type	Contact form	Coil ratings	Contact ratings	
			UL 508 recognized	UL 1950 recognized
G8P-1A G8P-1A4 G8P-1A-CF G8P-1A4-CF	SPST-NO	5 to 110 VDC	10 A, 250 VAC (G.P./Res.) 1 HP, 125 VAC (Motor load) 1 HP, 250 VAC (Motor load) 5 A, (1,250 W) 250 VAC (Tungsten) 20 A, 125 VAC (G.P./Res.) 20 A, 28 VDC (Resistive)	30 A, 250 VAC (G.P./Res.) 20 A, 28 VDC (Resistive) 1 HP, 125 VAC (Motor load) 2 HP, 250 VAC (Motor load)  12 A, 277 VAC (G.P./Res.) 20 A, 125 VAC (G.P./Res.) 5 A (1,250 W), 250 VAC (Tungsten)
G8P-1C G8P-1C4 G8P-1C-CF G8P-1C4-CF	SPDT	5 to 110 VDC	NO/NC 15 A/10 A, 125 VAC (G.P./Res.) 10 A/10 A, 250 VAC (G.P./Res.) 1 HP/1/4 HP, 125 VAC (Motor load) 1 HP/1/2 HP, 250 VAC (Motor load) 5 A/3 A, 250 VAC (Tungsten) 20 A/10 A, 28 VDC (Resistive)	NO/NC 20 A/10 A, 250 VAC (G.P./Res.) 20 A/10 A, 28 VDC (Resistive) 1 HP/1/4 HP, 125 VAC (Motor load) 2 HP/1/2 HP, 250 VAC (Motor load) 12 A/6 A, 277 VAC (G.P./Res.) 5 A/3 A, 250 VAC (Tungsten)

### CSA certified types (File No. LR34815)

Type	Contact form	Coil ratings	Contact ratings
G8P-1A G8P-1A4 G8P-1A-CF G8P-1A4-CF	SPST-NO	5 to 110 VDC	6 A, 277 VAC (G.P./Res.) 15 A, 125 VAC (G.P./Res.) 10 A, 250 VAC (G.P./Res.) 15 A, 28 VDC (Resistive) 1 HP, 125 VAC (Motor load) 1 HP, 250 VAC (Motor load) 5 A, 125 VAC (Tungsten) 5 A, 250 VAC (Tungsten)
G8P-1C G8P-1C4 G8P-1C-CF G8P-1C4-CF	SPDT	5 to 110 VDC	NO/NC 6 A/3 A, 277 VAC (G.P./Res.) 15 A/10 A, 125 VAC (G.P./Res.) 10 A/10 A, 250 VAC (G.P./Res.) 15 A/10 A, 28 VDC (Resistive) 1/2 HP/1/4 HP, 125 VAC (Motor load) 1 HP/1/2 HP, 250 VAC (Motor load) 5 A/3 A, 125 VAC (Tungsten) 5 A/3 A, 250 VAC (Tungsten)

- Note: 1. The rated values approved by each of the safety standards (e.g., UL, CSA) may be different from the performance characteristics individually defined in this catalog.  
 2. For information on additional ratings not included in this catalog, contact your local Omron Representative.  
 3. In the interest of product improvement, specifications are subject to change.

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