

Power PCB Relay

G8P

- Up to 30 A switching capacity in compact package
- Available with quick-connect terminals for easy load connecting
- UL Class F coil insulation standard
- Complies with UL 873 and UL 508 column A spacings up to 300 V
- Minimum 6kV Impulse Surge Withstand
- Ideal for home and industrial appliances, HVAC (heating, ventilating, and air conditioning), and many other applications
- UL/CSA approvals, VDE pending







Ordering Information _____

To Order: Select the part number and add the desired coil voltage rating, (e.g., G8P-1A4P-DC12).

Mounting type	Contact form	Construction	Part number
PCB	SPST-NO	Open frame	G8P-1AP
		Sealed with ventable nib	G8P-1A4P
	SPDT	Open frame	G8P-1CP
		Sealed with ventable nib	G8P-1C4P
PCB & Quick Connect load terminals	SPST-NO	Open frame	G8P-1ATP
		Sealed with ventable nib	G8P-1A4TP
	SPDT	Open frame	G8P-1CTP
		Sealed with ventable nib	G8P-1C4TP
Flange mount Quick Connect terminals	SPST-NO	Vented	G8P-1A2T-F
	SPDT	Vented	G8P-1C2T-F

Note: Load terminals are .250" Quick Connect. Coil terminals on Flange Mount versions are .187" Quick Connect.

Specifications _____

■ CONTACT DATA

Туре	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

■ COIL DATA

Rated voltage	Rated current	Coil resistance	Pick-up voltage	Dropout voltage	Maximum voltage	Power consumption
(VDC)	(mA)	(Ω)	% of rated voltage			(mW)
5	185	27	75% max.	10% min.	120% max.	Approx. 900
9	93	97				
12	77	155				
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 ±10%.

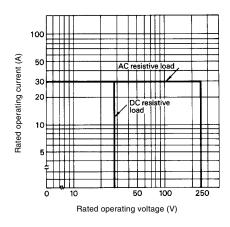
■ CHARACTERISTICS

Contact resistance		100 m Ω max. (measured with 5 VDC, 1 A)	
Operate time		15 ms max.	
Release time		10 ms max.	
Insulation resistance		10 MΩ min. (at 500 VDC)	
Dielectric strength		2,500 VAC, 50/60 Hz for 1 minute (coil to contacts), 1,500 VAC, 50/60 Hz for 1 minute (between contacts)	
Impulse surge withsta	nd	6,000 V between coil to contacts (1.2 μs/50 μs & 100 kHz ring wave per IEC 1000-4-12	
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 ² (approx. 100 G)	
	Malfunction durability	100 m/s ² (approx. 10 G)	
Ambient temperature		-55° to 105°C (-67° to 221°F)	
Humidity		45% to 85% RH	
Service life	Mechanical	10 million operations minimum	
	Electrical	100,000 operations at rated load (minimum)	

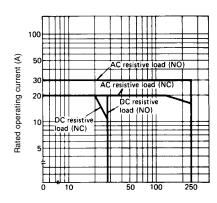
Note: Data shown are of initial value. Operate and release times excluding bounce.

■ CHARACTERISTIC DATA

Maximum switching capacity SPST-NO



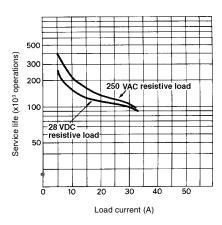
SPDT



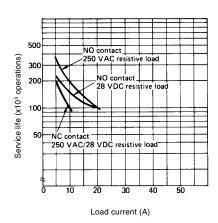
Rated operating voltage (V)

■ CHARACTERISTIC DATA

Electrical service life SPST-NO



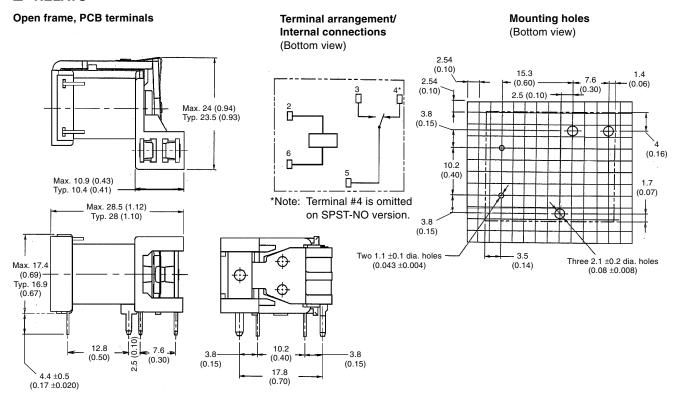
SPDT



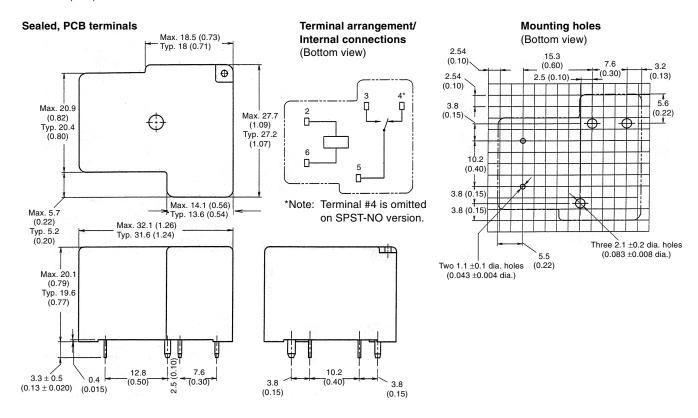
Dimensions

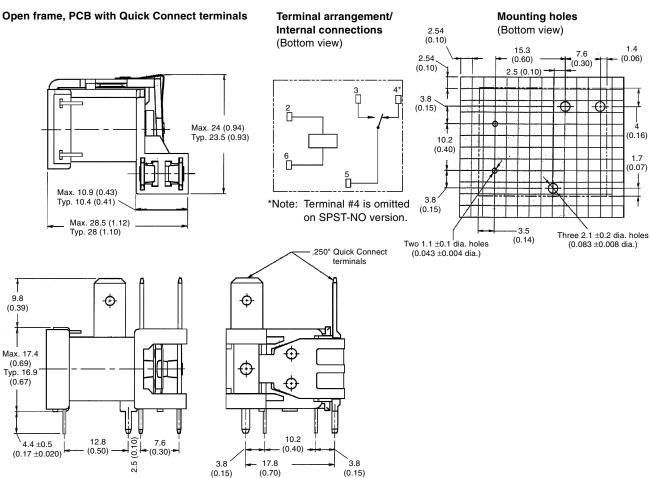
Unit: mm (inch)

■ RELAYS



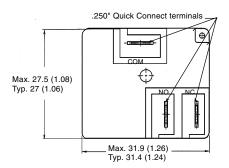
Unit: mm (inch)



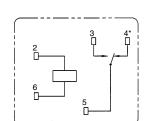


Unit: mm (inch)

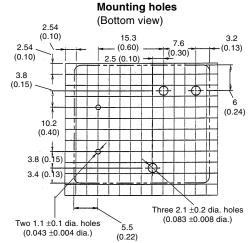
Sealed, PCB with Quick Connect terminals

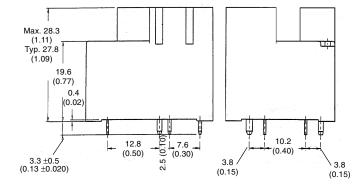


Terminal arrangement/ Internal connections (Bottom view)



*Note: Terminal #4 is omitted on SPST-NO version.

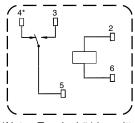




Flange mount

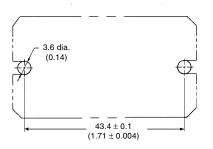
.250° Quick Connect terminals Max. 27.7 (1.09) Typ. 27.2 (1.07) .8 dia (0.03) .187" Quick Connect terminals Max. 32 (1.26) Typ. 31.5 (1.24)

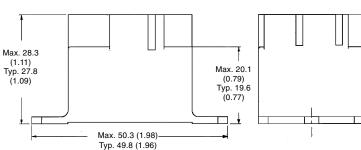
Terminal arrangement/ Internal connections (Bottom view)



*Note: Terminal #4 is omitted on SPST-NO version.







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

■ APPROVALS

UL Recognized (File No. E41643), CSA Certified (File No. LR34815)

Contact form	Coil ratings	Contact ratings
SPST-NO	5 to 110 VDC	30A, 277 VAC (G.P./Res.)
		30A, 250 VAC, 100k ops. (Res.)
		20A, 120-240 VAC, 70°C, 100,000 cycles (G.P./Res.)
		20A, 28 VDC (Res.)
		20A, 240 VAC, 105°C, 100,000 cycles (Res.)
		1 HP, 125-250 VAC
		2 HP, 250 VAC
		A300 Pilot Duty
		12FLA, 72LRA, 250 VAC, 100,000 cycles
		20 FLA, 96 LRA, 125 VAC, 100,000 cycles
		5A, 250 VAC (Tungsten)
		20A, 120-277 VAC (Ballast)
SPDT	5 to 110 VDC	NO/NC
		30A/ 30A, 250 VAC (Res.)
		20A/ 15A, 120-240 VAC, 105°C, 100,000 cycles (Res.)
		20A/ 10A, 120-240 VAC, 70°C, 100,000 cycles (G.P./Res.)
		20A/ 10A, 28 VDC (Res.)
		1/2 HP/ 1/2 HP, 125 VAC, 100,000 cycles
		2 HP/ 1/2 HP, 250 VAC
		1 HP/ 1/4 HP, 125 VAC
		B150 Pilot Duty
		5A/ 3A, 250 VAC (Tungsten)
		6A/ 3A, 277 VAC (Ballast)

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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