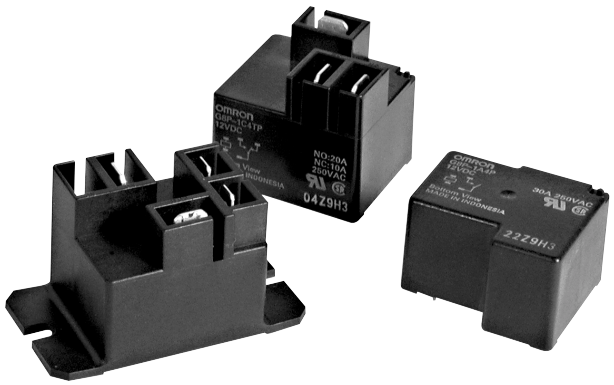
OMRON

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

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

■ COIL DATA

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Pick-up voltage	Dropout voltage	Maximum voltage	Power consumption (mW)
			% of rated voltage			
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

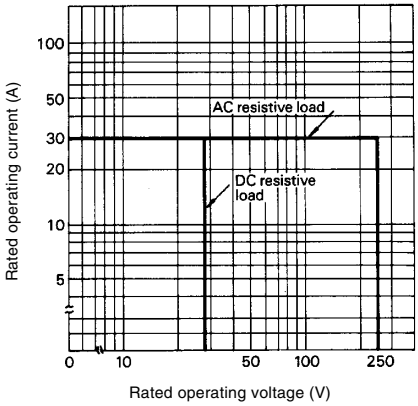
Contact resistance		100 mΩ max. (measured with 5 VDC, 1 A)
Operate time		15 ms max.
Release time		10 ms max.
Insulation resistance		10 MΩ min. (at 500 VDC)
Dielectric strength		2,500 VAC, 50/60 Hz for 1 minute (coil to contacts), 1,500 VAC, 50/60 Hz for 1 minute (between contacts)
Impulse surge withstand		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/s² (approx. 100 G)
	Malfunction durability	100 m/s² (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.

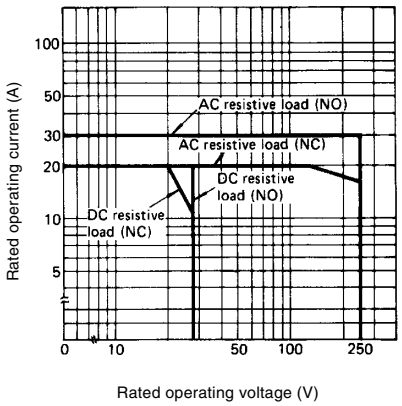
■ CHARACTERISTIC DATA

Maximum switching capacity

SPST-NO



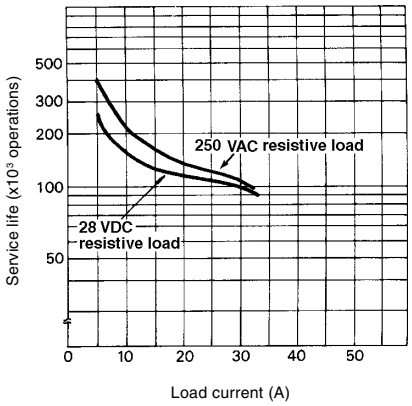
SPDT



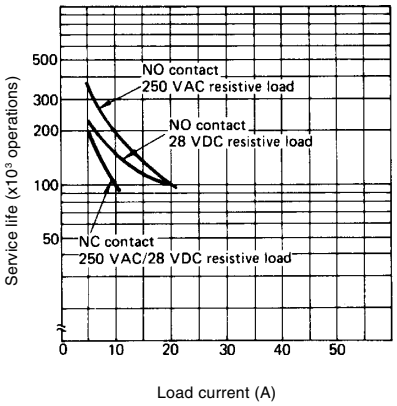
■ CHARACTERISTIC DATA

Electrical service life

SPST-NO



SPDT

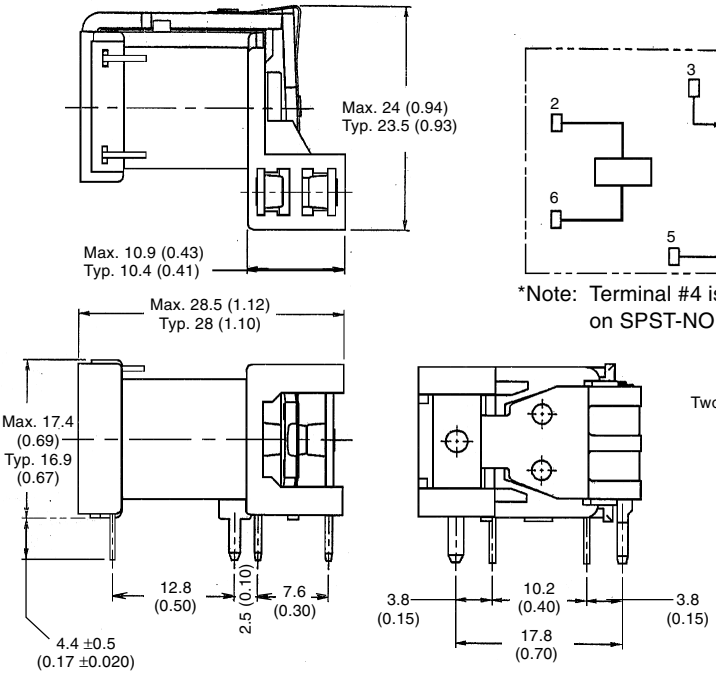


Dimensions

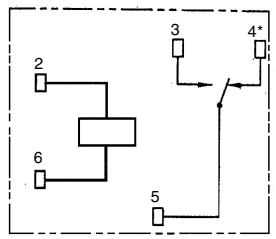
Unit: mm (inch)

■ RELAYS

Open frame, PCB terminals

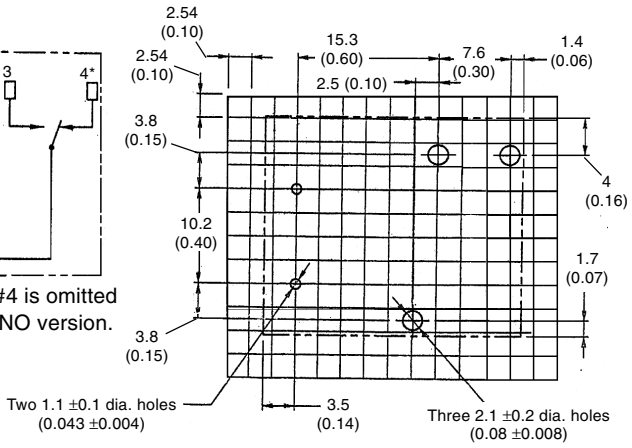


Terminal arrangement/ Internal connections
(Bottom view)



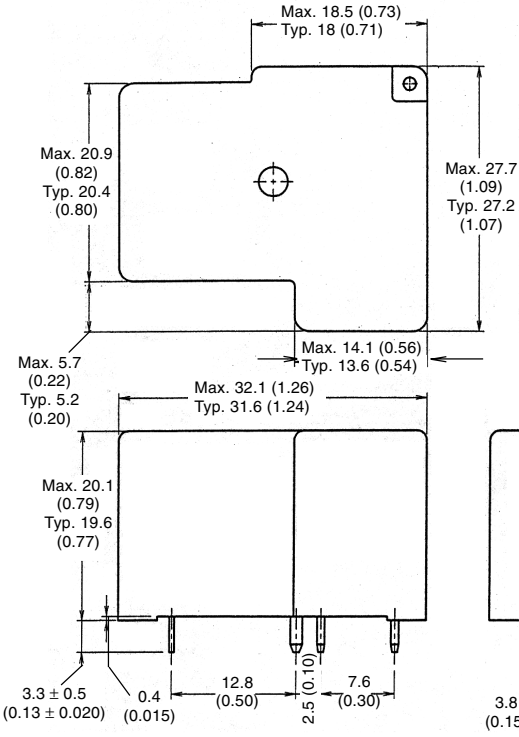
*Note: Terminal #4 is omitted on SPST-NO version.

Mounting holes
(Bottom view)



Unit: mm (inch)

Sealed, PCB terminals



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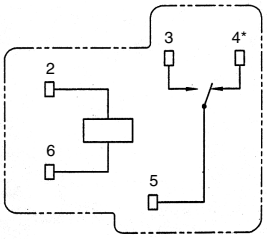

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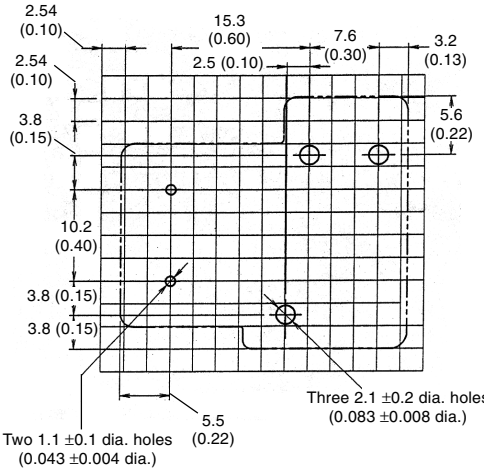
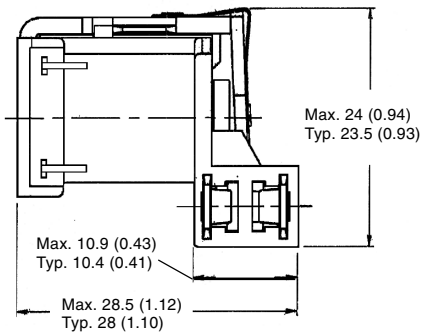
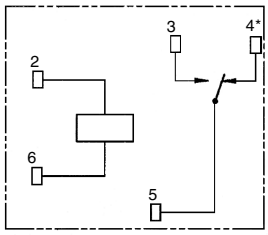
Mounting holes
(Bottom view)



Open frame, PCB with Quick Connect terminals



Terminal arrangement/ Internal connections
(Bottom view)



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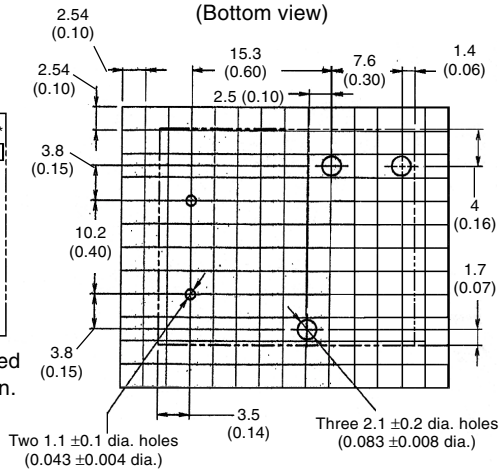
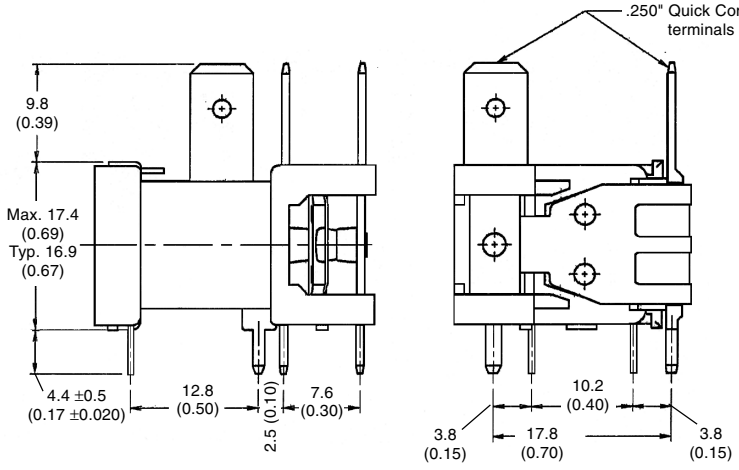
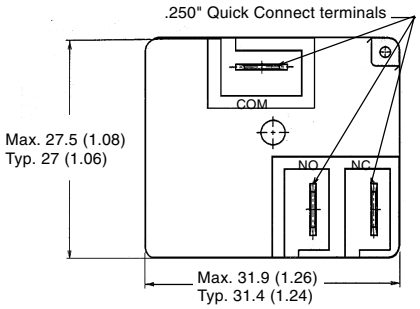
Mounting holes
(Bottom view)





Unit: mm (inch)

Sealed, PCB with Quick Connect terminals



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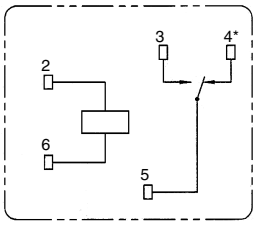
(Bottom view)



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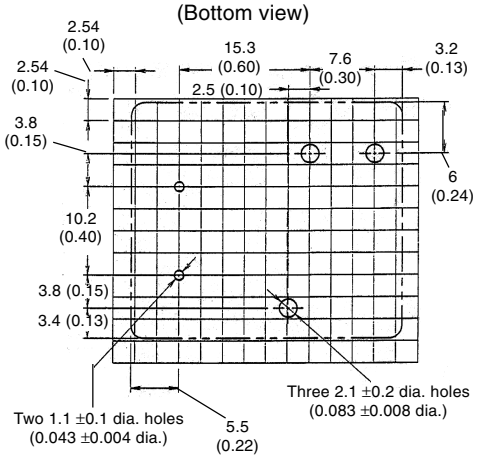
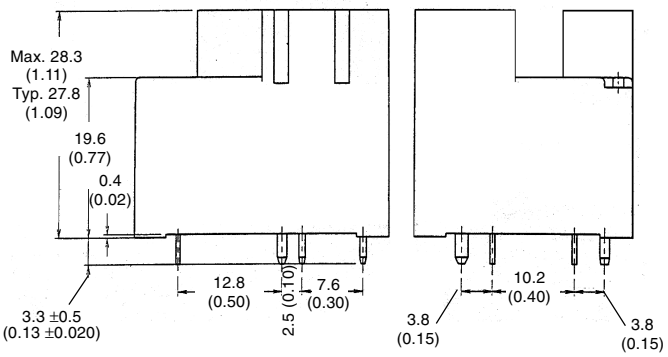
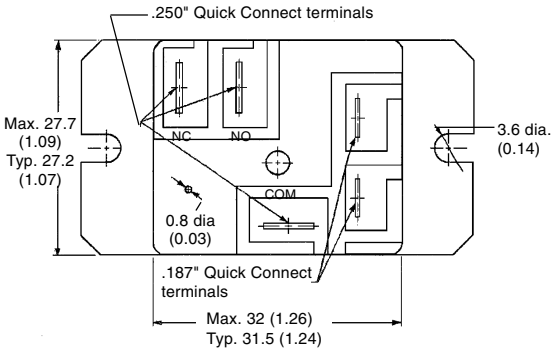




Flange mount



Terminal arrangement/ Internal connections
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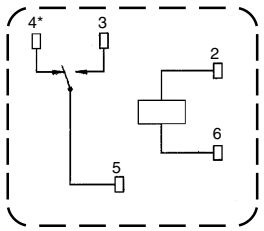

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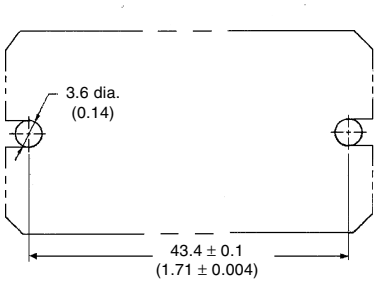

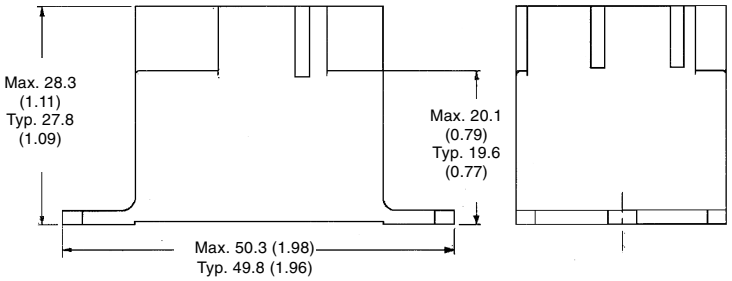

Note: Allow air circulation within the sealed type G8P by removing the ventilation nib from the cover after soldering and cleaning is complete.

■ 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.

OMRON

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