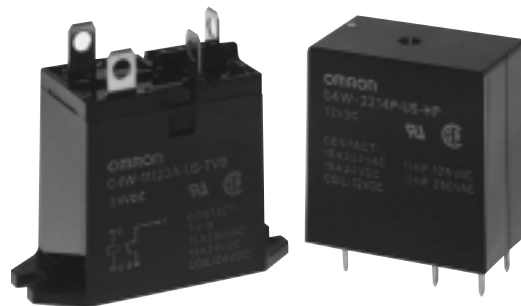


- Impulse withstand voltage of 10,000V between input and output (coil and contact)
- Creepage distance of 10 mm (0.39 in) minimum between coil and contact meets VDE C/250
- Dielectric strength of 4,000 VAC minimum conforms to UL, CSA and IEC Class II
- International 2.5 mm (0.10 in) terminal pitch
- Low power consumption (0.8W)



## Ordering Information

To Order: Select the part number and add the desired coil voltage rating (e.g., G4W-1112P-US-TV8-HP-DC12).

Type	Contact form	Construction	Part number
PCB	SPST-NO	Unsealed	G4W-1112P-US-TV8-HP
	DPST-NO		G4W-2212P-US-TV5-HP
	SPST-NO	Sealed	G4W-1114P-US-TV8-HP
	DPST-NO		G4W-2214P-US-HP
Solder	SPST-NO	Upper mounting bracket	G4W-11123A-US-TV8-HP
	DPST-NO		G4W-22123A-US-TV5-HP
Quick connect	SPST-NO	Upper mounting bracket	G4W-11123T-US-TV8-HP
	DPST-NO		G4W-22123T-US-TV5-HP

## Specifications

### CONTACT DATA

Type	SPST-NO		DPST-NO	
	Resistive (p.f. = 1)	Inductive (p.f. = 0.4)	Resistive (p.f. = 1)	Inductive (p.f. = 0.4)
Rated load	15 A at 250 VAC, 24 VDC	10 A at 250 VAC, 24 VDC	15 A at 250 VAC, 24 VDC	7.5 A at 250 VAC, 24 VDC
Contact material	AgCdO			
Carry current	15 A			
Max. operating voltage	250 VAC, 125 VDC			
Max. operating current	15 A			
Max. switching capacity	3,750 VA	2,500 VA	3,750 VA	1,875 VA
Min. permissible load	500 mA, 5 VDC			

## ■ COIL DATA

Rated voltage (VDC)	Rated current (mA)	Coil resistance ( $\Omega$ )	Coil inductance (Ref. value) (H)		Pick-up voltage	Dropout voltage	Maximum voltage	Power consumption (mW)
			Armature OFF	Armature ON				
12	66.70	180	0.93	1.65	80% max.	10% min.	110% max.	Approx. 800
18	44.40	405	1.90	3.30				
24	33.30	720	3.70	6.40				
100	8	12,500	61.80	106				

Note: 1. The rated current and coil resistance are measured at a coil temperature of 23°C (73°F) with a tolerance of  $\pm 10\%$ .  
2. The operating characteristics are measured at a coil temperature of 23°C (73°F).

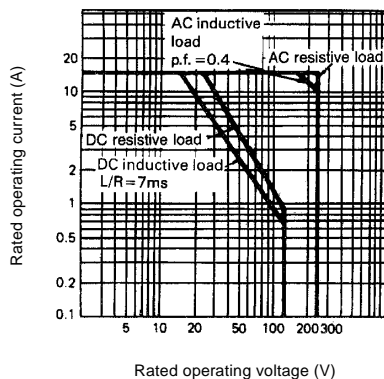
## ■ CHARACTERISTICS

Contact resistance		30 m $\Omega$
Operate time		20 ms max. (mean value: approx. 13 ms)
Release time		5 ms max. (mean value: approx. 2.50 ms)
Bounce time		Operate: approx. 0.40 ms
Operating frequency	Mechanical	18,000 operations/hour
	Electrical	1,800 operations/hour (under rated load)
Insulation resistance		100 M $\Omega$ min. (at 500 VDC)
Dielectric strength		4,000 VAC, 50/60 Hz for 1 minute between coil and contacts 2,000 VAC, 50/60 Hz for 1 minute between contacts of different poles 1,500 VAC, 50/60 Hz for 1 minute between contacts of same pole
Impulse dielectric strength		10,000 VAC, 1.20 x 50 $\mu$ s (between coil and contacts)
Vibration	Mechanical durability	10 to 55 Hz, 1.50 mm (0.06 in) double amplitude range
	Malfunction durability	10 to 55 Hz, 1.50 mm (0.06 in) double amplitude range
Shock	Mechanical durability	1,000 m/s <sup>2</sup> (approx. 100 G)
	Malfunction durability	150 m/s <sup>2</sup> (approx. 15 G)
Ambient temperature	Operating	-25° to 55°C (-13° to 131°F)
	Storage	-25° to 55°C (-13° to 131°F)
Humidity		35% to 85% RH
Service life	Mechanical	5,000,000 operations min. (at operating frequency of 18,000 operations/hour)
	Electrical	See "Characteristic Data"
Weight		29 g (1.02 oz)

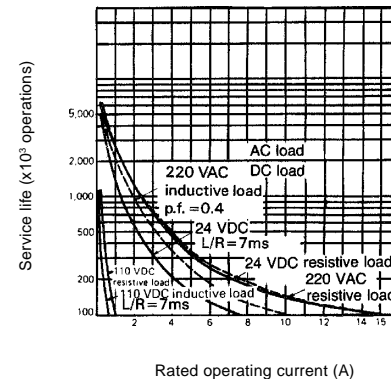
Note: Data shown are of initial value.

## ■ CHARACTERISTIC DATA

### Maximum switching capacity SPST-NO, DPST-NO



### Electrical service life SPST-NO, DPST-NO

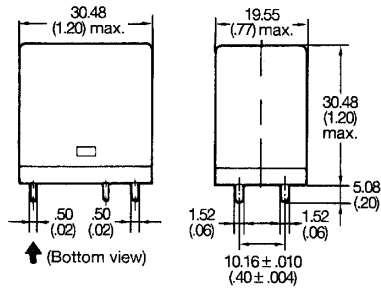


# Dimensions

Unit: mm (inch)

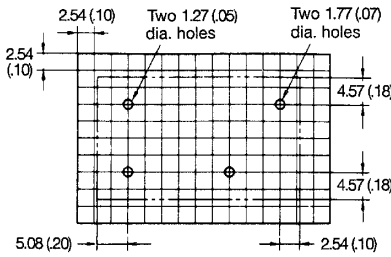
## RELAYS

G4W-□□ 12P-US-TV□-□□



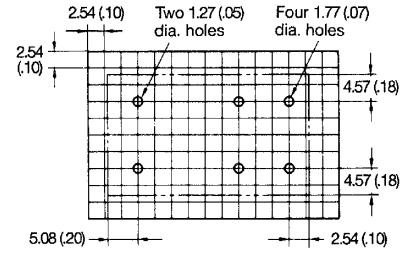
G4W-1112P-US-TV8-HP  
G4W-1114P-US-TV8-HP

Mounting holes (Bottom view)

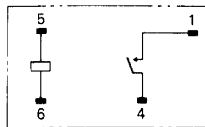


G4W-2212P-US-TV5-HP  
G4W-2214P-US-HP

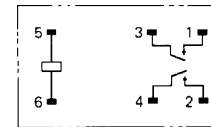
Mounting holes (Bottom view)



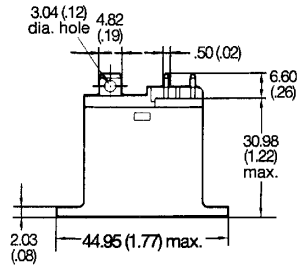
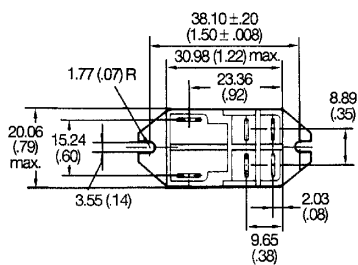
Terminal layout/Internal connections (Bottom view)



Terminal layout/Internal connections (Bottom view)

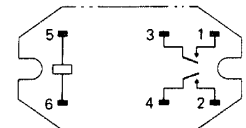
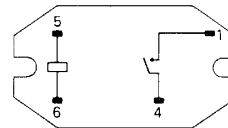


G4W-□□ 123A-US-TV□-HP

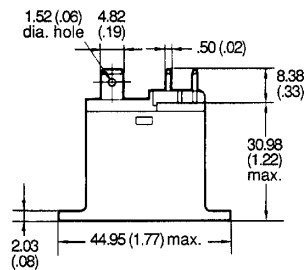
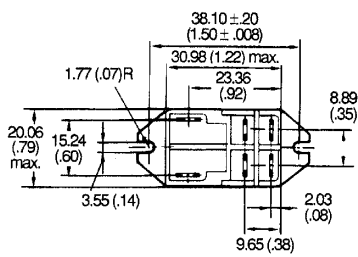


G4W-11123A-US-TV8-HP

G4W-22123A-US-TV5-HP

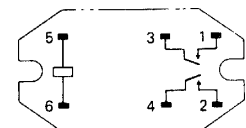
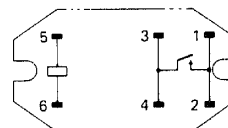


G4W-□□ 123T-US-TV□-HP



G4W-11123T-US-TV8-HP

G4W-22123T-US-TV5-HP



## ■ APPROVALS

### UL (File No. E41643)

Type	Contact form	Coil ratings	Contact ratings
G4W-1112P-US-TV8-HP G4W-11123A-US-TV8-HP G4W-11123T-US-TV8-HP G4W-1114P-US-TV8-HP	SPST-NO	6 to 120 VDC	15 A, 250 VAC (General use)
			15 A, 24 VDC
			TV-8
			1/2 HP, 125 VAC
			1 HP, 250 VAC
G4W-2212P-US-TV5-HP G4W-22123A-US-TV5-HP G4W-22123T-US-TV5-HP G4W-2214P-US-HP	DPST-NO	6 to 120 VDC	15 A, 250 VAC (General use)
			10 A, 250 VAC (General use)
			15 A, 24 VDC
			TV-5
			1/4 HP, 125 VAC
			1/2 HP, 250 VAC
			1/3 HP, 125 VAC
1/3 HP, 250 VAC			

### CSA (File No. LR31928)

Type	Contact form	Coil ratings	Contact ratings
G4W-1112P-US-TV8-HP G4W-11123A-US-TV8-HP G4W-11123T-US-TV8-HP G4W-1114P-US-TV8-HP	SPST-NO	6 to 120 VDC	15 A, 150 VAC (General use)
			15 A, 24 VDC
			TV-8
			1/2 HP, 125 VAC
			3/4 HP, 240 VAC
G4W-2212P-US-TV5-HP G4W-22123A-US-TV5-HP G4W-22123T-US-TV5-HP G4W-2214P-US-HP	DPST-NO	6 to 120 VDC	15 A, 250 VAC (General use) – same polarity
			10 A, 250 VAC (General use)
			15 A, 24 VDC TV-5
			1/4 HP, 125 VAC
			1/2 HP, 250 VAC
			1/3 HP, 125 /250 VAC

- Note: 1. The rated values approved by each of the safety standards (e.g., UL and CSA) may be different from the performance characteristics individually defined in this catalog.  
 2. For details on VDE, SEMKO, TUV and SEV approvals, contact the product specialist.  
 3. In the interest of product improvement, specifications are subject to change.

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