

Impulse Withstand Voltage as High as 10 kV with 4kV Dielectric Strength: Ideal for Power Supply Switching

- Creepage distance of 8 mm min.
- Dielectric strength of 4,000 VAC min.
- SPST-NO types conform to TV-8 rating.
- DPST-NO types conform to TV-5 rating.
- International 2.54mm terminal pitch.



Ordering Information

Contacts		SPST-NO	DPST-NO
Mounting style	Terminals		
General purpose	PCB (straight)	G4W-1112P-US-TV8	G4W-2212P-US-TV5
Upper mounting	Solder	G4W-11123A-US-TV8	G4W-22123A-US-TV5
	Quick-connect	G4W-11123T-US-TV8	G4W-22123T-US-TV5

Note: When ordering, add the rated coil voltage to the model number.
 Example: G4W-11123A-US-TV8 12 VDC
 Rated coil voltage

Model Number Legend

G4W - - - - **VDC**
 1 2 3 4 5 6 7 8 9

- | | | |
|---|--|---|
| <p>1. Contact Form
 11: SPST-NO
 22: DPST-NO</p> <p>2. Contact Type
 1: Single button</p> <p>3. Enclosure Ratings
 2: Unsealed</p> | <p>4. Mounting Style
 None: Standard
 3: Upper mounting bracket</p> <p>5. Terminals
 P: Straight PCB
 A: Solder
 T: Quick connect</p> <p>6. Approved Standards
 US: UL, CSA certified</p> | <p>7. TV Ratings
 TV5: TV-5
 TV8: TV-8</p> <p>8. Special Function
 None: General-purpose
 Z: Full-wave rectifier</p> <p>9. Rated Coil Voltage
 12, 24, 100 VDC</p> |
|---|--|---|

Specifications

■ Coil Ratings

Single-side Stable Type

Rated voltage	12 VDC	24 VDC	100 VDC
Rated current	66.7 mA	33.3 mA	8 mA
Coil resistance	180 Ω	720 Ω	12,500 Ω
Coil inductance (H) (ref. value)	Armature OFF	0.93	3.7
	Armature ON	1.65	6.4
Must operate voltage	80% max. of rated voltage		
Must release voltage	10% min. of rated voltage		
Max. voltage	130% of rated voltage (at 23°C)		
Power consumption	Approx. 800 mW		

Note: 1. The rated current and coil resistance are measured at a coil temperature of 23°C with a tolerance of $\pm 15\%$.

2. Operating characteristics are measured at a coil temperature of 23°C.

■ Contact Ratings

Item	SPST-NO		DPST-NO	
	Resistive load ($\cos\phi = 1$)	Inductive load ($\cos\phi = 0.4$; L/R = 7 ms)	Resistive load ($\cos\phi = 1$)	Inductive load ($\cos\phi = 0.4$; L/R = 7 ms)
Rated load	15A at 250 VAC; 15A at 24 VDC	10A at 250 VAC; 7.5A at 24 VDC	10A at 250 VAC; 10A at 24 VDC;	7.5A at 250 VAC; 5A at 24 VDC
Contact material	AgCdO (Cd free planned 1 Apr 05)			
Rated carry current	15A		10A	
Max. switching voltage	250 VAC, 125 VDC			
Max. switching current	15A		10A	
Max. switching power	3,750 VA, 375 W	2,500 VA, 255 W	2,500 VA, 240 W	1,850 VA, 120 W
Failure rate (reference value)	100 mA at 5 VDC			

■ Characteristics

Contact resistance	30 m Ω max.
Operate time	20 ms max. (mean value: approx. 13 ms)
Release time	5 ms max. (mean value: approx. 2.5 ms)
Bounce time	Operate: approx. 3 ms
Max. Operating Frequency	Mechanical: 18,000 operations/hr Electrical: 1,800 operations/hr (under rated load)
Insulation resistance	100 M Ω max. (at 500 VDC)
Dielectric strength	4,000 VAC, 50/60 Hz for 1 min between coil and contacts 2,000 VAC, 50/60 Hz for 1 min between contacts of different polarities (DPST-NO) 1,500 VAC, 50/60 Hz for 1 min between contacts of same polarity
Impulse withstand voltage	10,000 V (1.2 x 50 μ s) between coil and contacts
Vibration resistance	Destruction: 10 to 55 to 10 Hz, 0.75mm single amplitude (1.5mm double amplitude) Malfunction: 10 to 55 to 10 Hz, 0.75mm single amplitude (1.5mm double amplitude)
Shock resistance	Destruction: 1,000 m/s ² Malfunction: 150 m/s ²
Endurance	Mechanical: 5,000,000 operations min. (at 18,000 operations/hr) Electrical: 100,000 operations min. (at 1,800 operations/hr)
Ambient temperature	Operating: -25°C to 55°C (with no icing)
Ambient humidity	Operating: 5% to 85% RH
Weight	Approx. 29 g

■ Approved Standards

UL508 (File No. E41643)/CSA C22.2 No.14 (File No.LR31928)

Model	Contact Form	Coil ratings	Contact ratings
G4W-1112P-US-TV8 G4W-11123A-US-TV8 G4W-11123T-US-TV8	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 3/4 hp, 240 VAC
G4W-2212P-US-TV5 G4W-22123A-US-TV5 G4W-22123T-US-TV5	DPST-NO		15 A, 250 VAC (general use) 10 A, 250 VAC (general use) 15 A, 24 VDC TV-5 1/2 hp, 250 VAC 1/3 hp, 125/250 VAC

SEMKO (File No. 9346122, 9223128)

Contact form	Coil ratings	Contact ratings
SPST-NO	6-100 VDC	15/120 A, 250 VAC
DPST	6-120 VDC	10/80 A, 250 VAC

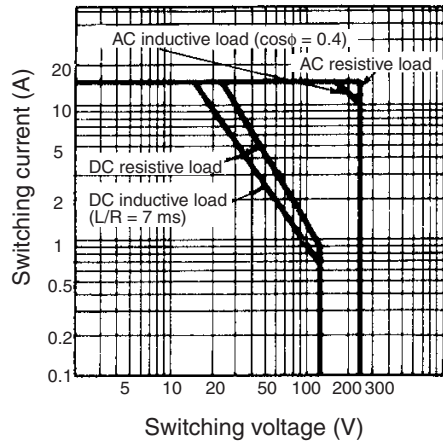
EN 61810-1 (VDE0435 (File No. 1906, No. 1907)

Contact form	Coil ratings	Contact ratings
SPST-NO	6, 12, 24, 48, 100 VDC	15 A, 250 VAC ($\cos\phi = 1.0$) 10 A, 250 VAC ($\cos\phi = 0.4$) 15 A, 24 VDC (0 ms) 7.5 A, 24 VDC (40 ms)
DPST-NO		10 A, 250 VAC ($\cos\phi = 1.0$) 7.5 A, 250 VAC ($\cos\phi = 0.4$) 10 A, 24 VDC (0 ms) 5 A, 24 VDC (40 ms)

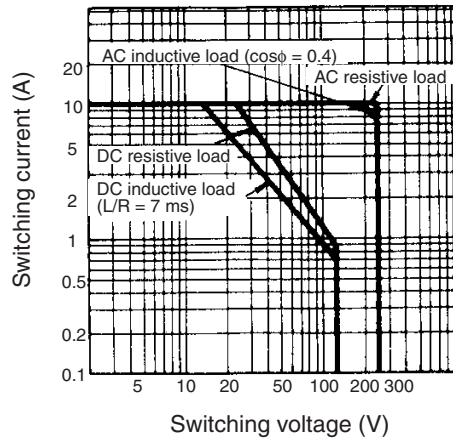
Engineering Data

Maximum Switching Power

G4W-1112P-US-TV8/-11123A-US-TV8/-11123T-US-TV8

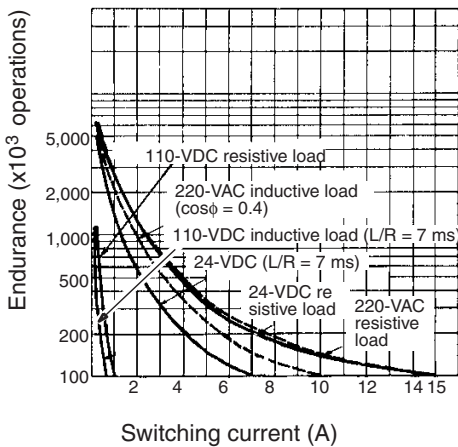


G4W-2212P-US-TV5/-22123A-US-TV5/-22123T-US-TV5

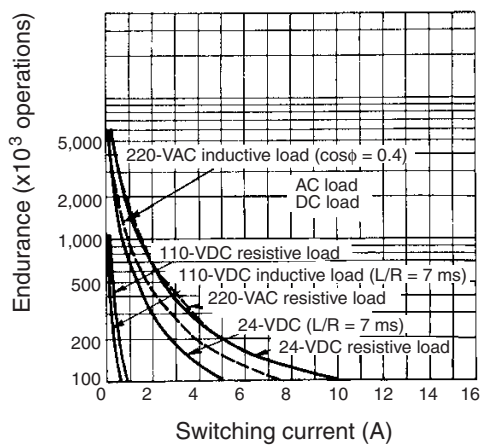


Endurance

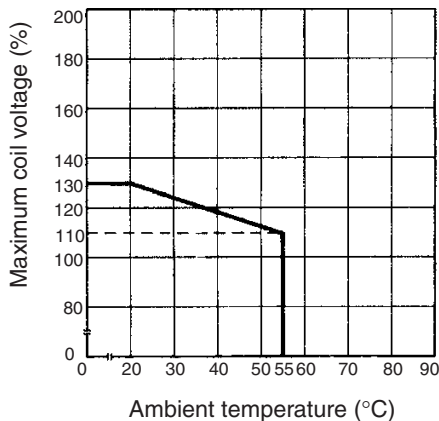
G4W-1112P-US-TV8/-11123A-US-TV8/-11123T-US-TV8



G4W-2212P-US-TV5/-22123A-US-TV5/-22123T-US-TV5



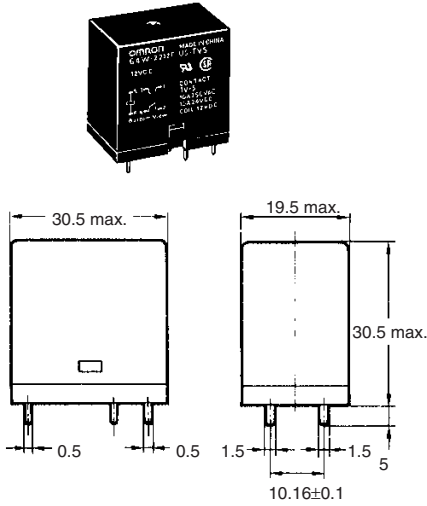
Ambient Temperature vs. Maximum Coil Voltage



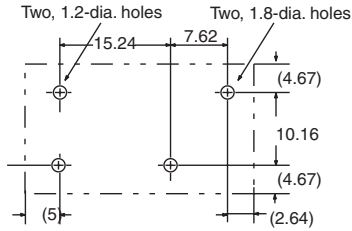
Note: The maximum coil voltage refers to the maximum value in a varying range of operating power voltage, not a continuous voltage.

Dimensions

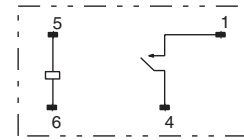
G4W-□12P-US-TV



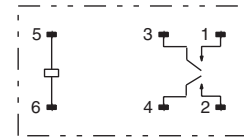
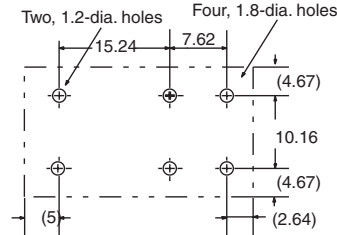
Mounting Holes (Bottom View)
G4W-1112P-US-TV-8



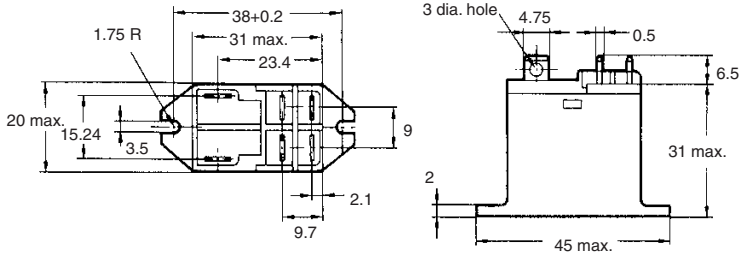
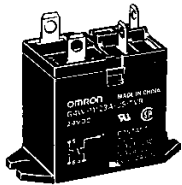
Terminal Arrangement/Internal Connections (Bottom View)



G4W-2212P-US-TV-5



G4W-□123A-US-TV



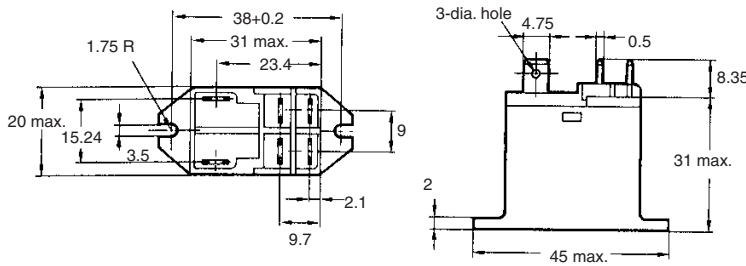
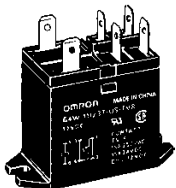
Terminal Arrangement/Internal Connections (Bottom View)
G4W-11123A-US-TV8



G4W-11123T-US-TV-8



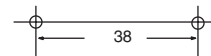
G4W-□123T-US-TV



G4W-22123A-US-TV5
G4W-22123T-US-TV5



Mounting Holes (Bottom View)
Tolerance: ±0.2



Complete "Terms and Conditions of Sale" for product purchase and use are on Omron's website at www.omron.com/oei – under the "About Us" tab, in the Legal Matters section.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

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