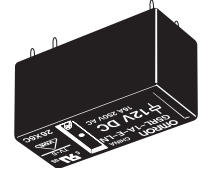
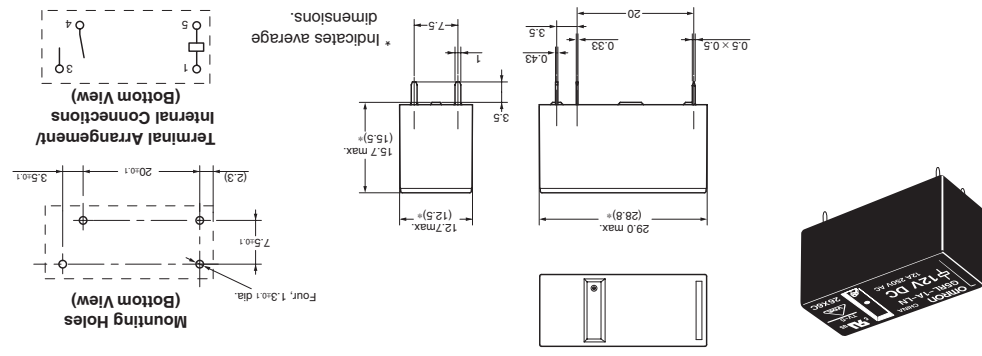


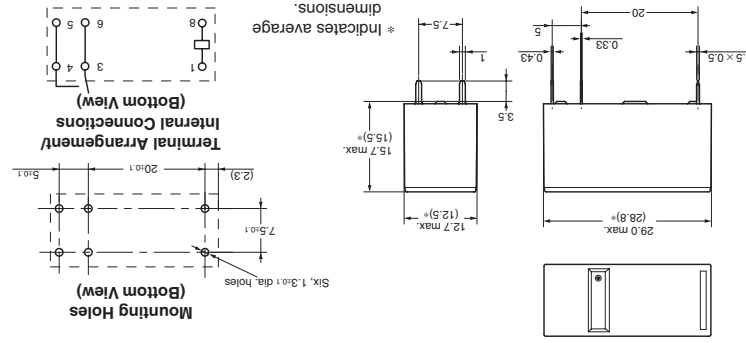
PCB Power Relay – G5RL

Dimensions

Note: All units are in millimetres unless otherwise indicated.



G5RL-1A-E-LN



ALL DIMENSIONS SHOWN ARE IN MILLIMETRES.
To convert millimetres into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Disclaimer:
When mounting a G5RL-LN Relay (Silent Relay) on a PCB, use a diode for surge absorption for the coil.
All technical performance data applies to the product as such; specific conditions of individual applications are not considered. Always check the suitability of the product for your intended purpose. OMRON does not assume any responsibility or liability for non-compliance herein, and we recommend prior technical clarification for applications where requirements, loading, or ambient conditions differ from

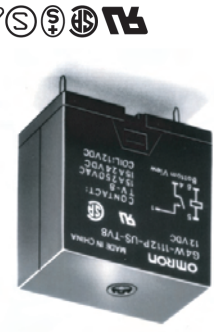
■ Mounting

Precautions

PCB Power Relay – G4W

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

- ROHS compliant.
- 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.



Power Relays

Ordering Information

Mounting style	Contacts	General purpose	
		PCB (straight)	Terminals
SPST-NO	DPST-NO	G4W-112P-US-TV8	G4W-2212P-US-TV5
		G4W-112P-US-TV8	G4W-2212P-US-TV5

Note: When ordering, add the rated coil voltage to the model number.
Example: G4W-112P-US-TV8 12 VDC

Model Number Legend
G4W - - - - VDC

- Contact Form**
11: SPST-NO
22: DPST-NO
 - Contact Type**
1: Single Button
 - Enclosure Ratings**
2: Unsealed
P: Straight PCB
 - Terminals**
- Approved Standards**
US: UL, CSA certified
 - TV Ratings**
TV5: TV-5
TV8: TV-8
 - Special Function**
None: General purpose
Z: Full-wave rectifier
 - Rated Coil Voltage**
12, 24, 100 VDC

PCB Power Relay – G4W

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	0.93	3.7	61.8
(H) (ref. value)	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 ±15%.
 2. Operating characteristics are measured at a coil temperature of 23°C.

■ Contact Ratings

Item	SPST-NO			DPST-NO		
Load	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4; L/R = 7 ms)	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4; L/R = 7 ms)	Resistive load (cosφ = 1)	
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	5A at 250 VAC; 5A at 24 VDC	
Contact material	AgSnIn					
Rated carry current	15A					
Max. switching voltage	250 VAC, 125 VDC					
Max. switching current	15A					
Max. switching power	3,750 VA, 375 W			2,500 VA, 255 W		
Failure rate (reference value)	100 mA at 5 VDC			1,850 VA, 120 W		

Note: F level: λ₆₀ = 0.1 x 10⁶/operation

PCB Power Relay – G4W

■ Characteristics

Contact resistance	30 mΩ 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 MΩ 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
Insulation	Creepage (Typ) 8.0 mm Distance 8.0 mm
Tracking Resistance (CTI)	175 V
Impulse withstand voltage	10,000 V (1.2 x 50 μs) 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) Electrical: 100,000 operations min. (at 1,800 operations/hr)
Ambient humidity	Operating: 5% to 85% RH
Weight	Approx. 29 g

Power Relays

PCB Power Relay – G4W

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	0.93	3.7	61.8
(H) (ref. value)	1.65	6.4	106
Armature ON			
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 ±15%.
2. Operating characteristics are measured at a coil temperature of 23°C.

Contact Ratings

Item	SPST-NO		DPST-NO	
Load	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4; L/R = 7 ms)	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4; L/R = 7 ms)
Rated load	15A at 250 VAC; 15A at 24 VDC	10A at 250 VAC; 10A at 24 VDC	7.5A at 250 VAC; 7.5A at 24 VDC	5A at 250 VAC; 5A at 24 VDC
Contact material	AgSnIn			
Rated carry current	15A			
Max. switching voltage	250 VAC, 125 VDC			
Max. switching current	15A			
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			

Note: F level: λ₆₀ = 0.1 x 10⁶/operation

PCB Power Relay – G4W

Characteristics

Contact resistance	30 mΩ 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 MΩ 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
Insulation	Creepage (Typ) 8.0 mm Distance 8.0 mm
Tracking Resistance (CTI)	175 V
Impulse withstand voltage	10,000 V (1.2 x 50 μs) 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) Electrical: 100,000 operations min. (at 1,800 operations/hr)
Ambient humidity	Operating: 5% to 85% RH
Weight	Approx. 29 g

Power Relays

PCB Power Relay – G4W

■ 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	SPST-NO	6 to 120 VDC	15 A, 250 VAC (general use) TV-8 1/2 hp, 125 VAC 1 hp, 250 VAC 3/4 hp, 240 VAC
G4W-2212P-US-TV5	DPST-NO		15 A, 250 VAC (general use) TV-5 1/2 hp, 250 VAC 1/3 hp, 125/250 VAC

SEMKO (File No. 204772)

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

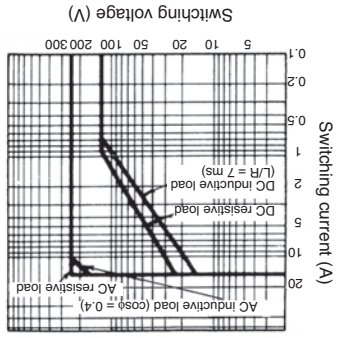
EN 61810-1 (VDE0435 (File No. 1907)

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

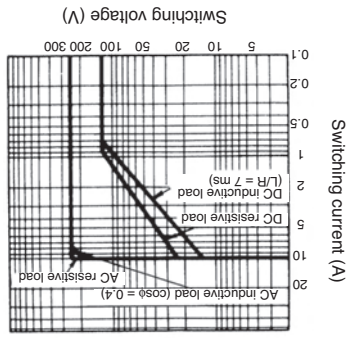
PCB Power Relay – G4W

Engineering Data

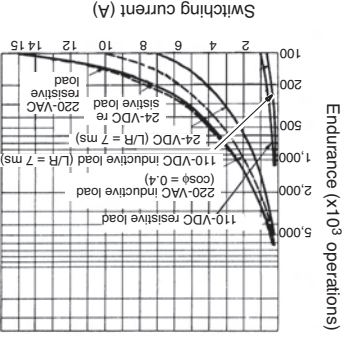
Maximum Switching Power



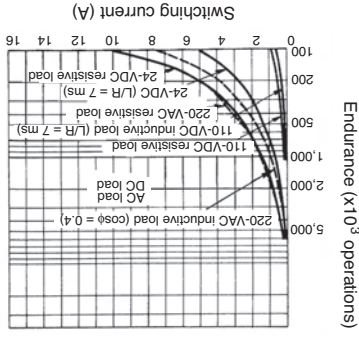
G4W-1112P-US-TV8



G4W-2212P-US-TV5

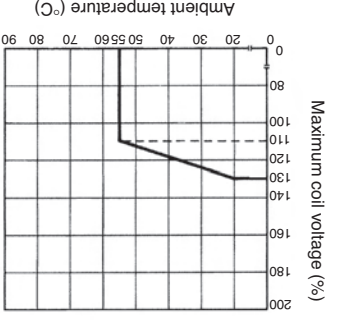


G4W-1112P-US-TV8



G4W-2212P-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.

PCB Power Relay – G4W

■ 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	SPST-NO	6 to 120 VDC	15 A, 250 VAC (general use) TV-8 1/2 hp, 125 VAC 1 hp, 250 VAC 3/4 hp, 240 VAC
G4W-2212P-US-TV5	DPST-NO		15 A, 250 VAC (general use) TV-5 1/2 hp, 250 VAC 1/3 hp, 125/250 VAC

SEMKO (File No. 204772)

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

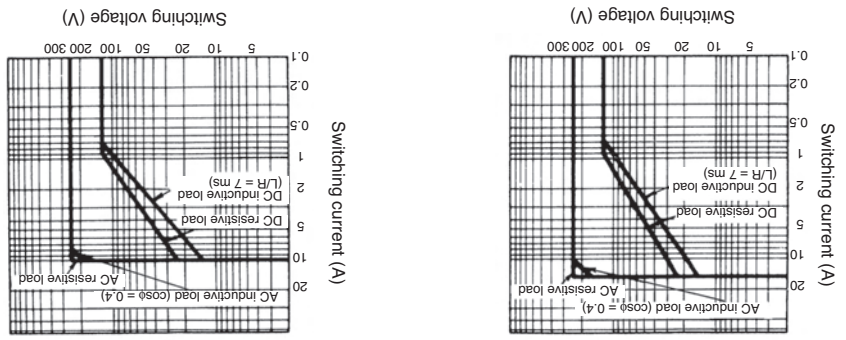
EN 61810-1 (VDE0435 (File No. 1907)

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

PCB Power Relay – G4W

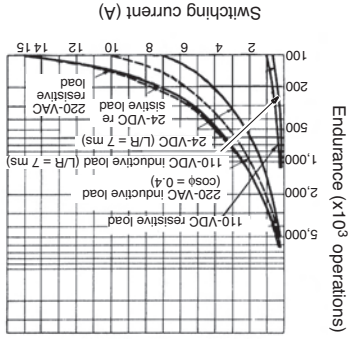
Engineering Data

Maximum Switching Power

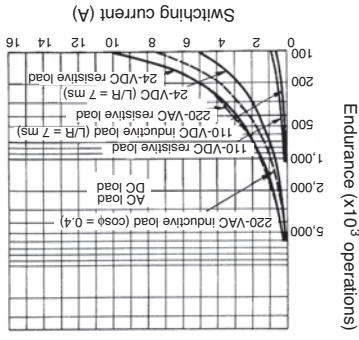


G4W-1112P-US-TV8

G4W-2212P-US-TV5

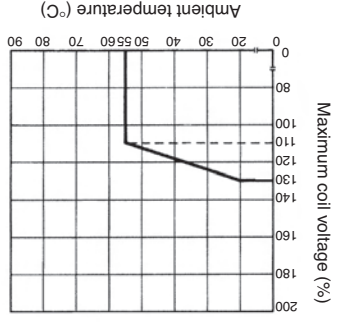


G4W-1112P-US-TV8



G4W-2212P-US-TV5

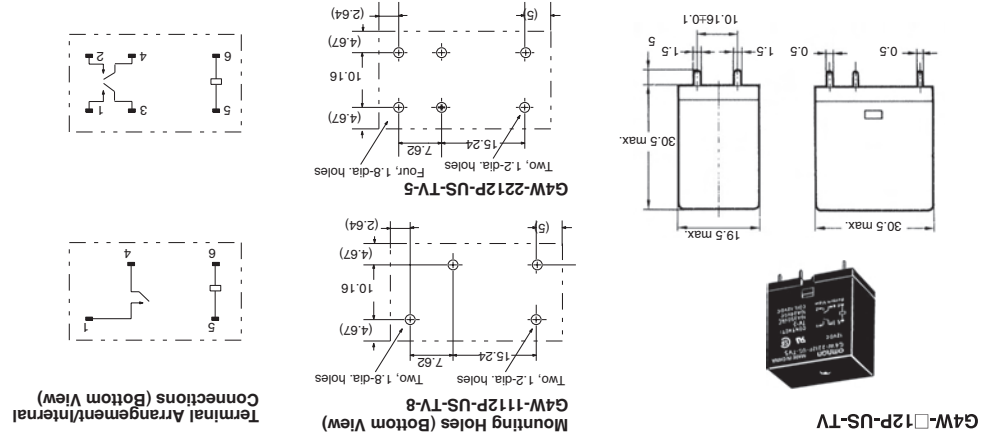
Ambient Temperature vs. Maximum Coil Voltage



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

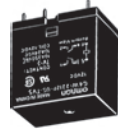
PCB Power Relay – G4W

Dimensions



G4W-112P-US-TV

G4W-2212P-US-TV-5



PCB Power Relay – G8P

Compact, Low-cost 30-A Power Relay for PC Board or Panel-mounted Applications

- ROHS compliant.
- Compact, yet capable of switching up to 30-A loads.
- Complies with UL873 and UL508 column A spacings (⅜" through air, ⅙" over surface).
- UL Class F insulation standard.
- Withstands of up to 6,000 V under 1,250 μs impulse wave or ring wave.
- A selection of contact forms: SPDT and SPST-NO.
- Quick-connect terminals ideal for PC board and panel mounting.
- Flanged mounting available.
- Ideal for home and industrial appliances, HVAC (heating, ventilating, and air conditioning), and many other applications.



Power Relays



Ordering Information

Classification	Contact Form	Enclosure Rating		
		Mounting style	Terminals	
PCB mounting	Quick-connect	SPST-NO	G8P-1AP	
		SPDT	G8P-1CP	
		SPST-NO	G8P-1ATP	
	Flanged mounting	Quick-connect	SPDT	G8P-1CTP
			SPST-NO	G8P-1A2TF
			SPDT	G8P-1C2TF

Note: 1. The contacts described above are AgCdO.
2. When ordering, add the rated coil voltage to the model number.

Example: G8P-1AP 12 VDC
Rated coil voltage

Model Number Legend

G8P - - VDC

1. Number of Poles

1: 1 pole

2. Contact Form

A: SPST-NO

C: SPDT

3. Enclosure Ratings

None: Open

2: Unsealed

4: Fully-Sealed

4. Terminals

P: Straight PCB for contacts and coil

T: Quick-connect (#250 terminals for coil) and #187 terminals for contacts

TP: Quick-connect (#250 terminals) and straight PCB for contacts, and straight PCB for coil

5. Mounting

None: PCB mounting

F: Flanged mounting

6. Rated Coil Voltage

5, 9, 12, 24, 48, 110

Other rated coil voltages available.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [General Purpose Relays](#) category:

Click to view products by [Omron](#) manufacturer:

Other Similar products are found below :

[APF30318](#) [JVN1AF-4.5V-F](#) [PCN-105D3MHZ](#) [5JO-10000S-SIL](#) [5JO-1000CD-SIL](#) [5JO-400CD-SIL](#) [LY2S-AC220/240](#) [LYQ20DC12](#)
[6031007G](#) [6131406HQ](#) [6-1393099-3](#) [6-1393099-8](#) [6-1393122-4](#) [6-1393123-2](#) [6-1393767-1](#) [6-1393843-7](#) [6-1415012-1](#) [6-1419102-2](#) [6-](#)
[1423698-4](#) [6-1608051-6](#) [6-1608067-0](#) [6-1616170-6](#) [6-1616248-2](#) [6-1616282-3](#) [6-1616348-2](#) [6-1616350-1](#) [6-1616350-8](#) [6-1616358-7](#) [6-](#)
[1616359-9](#) [6-1616360-9](#) [6-1616931-6](#) [6-1617039-1](#) [6-1617052-1](#) [6-1617090-2](#) [6-1617090-5](#) [6-1617347-5](#) [6-1617353-3](#) [6-1617801-8](#) [6-](#)
[1617802-2](#) [6-1618107-9](#) [6-1618248-4](#) [M83536/1-027M](#) [CX-4014](#) [MAHC-5494](#) [MAVCD-5419-6](#) [703XCX-120A](#) [7-1393100-5](#) [7-1393111-7](#)
[7-1393144-5](#) [7-1393767-8](#)