

## ■ Accessories (Order Separately)

### Back Connecting Sockets

Applicable Relay	Back Connecting Socket (See note 1.)
G6C(U)-1114P-US-P6C G6C(U)-1117P-US-P6C G6C(U)-2114P-US-P6C G6C(U)-2117P-US-P6C	P6C-06P
G6CK-1114P-US-P6C G6CK-1117P-US-P6C G6CK-2114P-US-P6C G6CK-2117P-US-P6C	P6C-08P

- Note:** 1. Not applicable to the self-clinching versions.  
The operating current for the socket is 5 A max.  
2. Use the G6C(U)-□□□□P-US-**P6C** if mounting relays in a P6C Socket.

Removal Tool	P6B-Y1
Hold-down Clips	P6B-C2

## Specifications

### ■ Contact Ratings

Item	SPST-NO		SPST-NO+SPST-NC	
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	10 A at 250 VAC; 10A at 30 VDC	5 A at 250 VAC; 5 A at 30 VDC	8 A at 250 VAC; 8A at 30 VDC	3.5 A at 250 VAC; 3.5 A at 30 VDC
Contact material	Ag Alloy (Cd free)			
Rated carry current	10 A		8 A	
Max. switching voltage	380 VAC, 125 VDC (the case of latching 250 VAC, 125 VDC)			
Max. switching current	10 A		8 A	
Max. switching capacity	2,500 VA, 300 W	1,250 VA, 220 W	2,000 VA, 240 W	875 VA, 170 W
Min. permissible load (reference value - see note)	10 mA at 5 VDC			

**Note:** P level:  $\lambda_{60} = 0.1 \times 10^{-6}$  operations

### ■ Coil Data

#### Non-latching

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				
3	67	45	0.078	0.067	70% max.	10% min.	160% max. at 23°C	Approx. 200
5	40	125	0.22	0.18				
6	33.30	180	0.36	0.29				
12	16.70	720	1.32	1.13				
24	8.30	2,880	4.96	4.19				

- Note:** 1. The rated current and coil resistance are measured at a coil temperature of 23°C with a tolerance of  $\pm 10\%$ .  
2. Operating characteristics are measured at a coil temperature of 23°C.

## Single Coil Latching Type

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Coil inductance (ref. value) (H)		Set pick-up voltage	Reset pick-up voltage	Maximum voltage	Power consumption (mW)
			Armature OFF	Armature ON	% of rated voltage			
3	67	45	0.09	0.06	70% max.	70% min.	160% max. at 23°C	Approx. 200
5	40	125	0.25	0.20				
6	33.30	180	0.36	0.24				
12	16.70	720	1.75	1.17				
24	8.30	2,880	5.83	3.84				

## Dual Coil Latching Type

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Coil inductance (ref. value) (H)				Set pick-up voltage	Reset pick-up voltage	Maximum voltage	Power consumption (mW)
			Set Coil		Reset Coil					
			Armature OFF	Armature ON	Armature OFF	Armature ON	% of rated voltage			
3	93.50	32.10	0.03	0.02	0.03	0.02	70% max.	70% max.	130% max. at 23°C)	Approx. 280
5	56	89.30	0.07	0.06	0.08	0.07				
6	46.70	129	0.10	0.08	0.12	0.10				
12	23.30	514	0.37	0.32	0.47	0.38				
24	11.70	2,056	1.56	1.18	1.46	1.13				

**Note:** 1. The rated current and coil resistance are measured at a coil temperature of 23°C with a tolerance of  $\pm 10\%$ .

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

3. The minimum pulse width of the set and reset voltage is 20 ms.

## ■ Characteristics

Contact resistance		30 m $\Omega$ max.
Operate (set) time		10 ms max. (mean value: approx. 5 ms)
Release (reset) time		10 ms max. (mean value: approx. 2 ms; latching types: mean value: approx. 5 ms)
Bounce time		5 ms max. (Approx. 3 ms typical)
Min. set/reset signal width		Latching type: 20 ms (at 23°C)
Max. switching frequency	Mechanical	18,000 operations/hr
	Electrical	1,800 operations/hr (under rated load)
Insulation resistance		1,000 M $\Omega$ min. (at 500 VDC, at 250 VDC between set coil and reset coil)
Dielectric strength		2,000 VAC, 50/60 Hz for 1 min between coil and contacts 2,000 VAC, 50/60 Hz for 1 min between contacts of different polarity 1,000 VAC, 50/60 Hz for 1 min between contacts of same polarity 250 VAC, 50/60 Hz for 1 min between set and reset coils (double winding latching type)
Surge withstand voltage		6,000 V (1.2 x 50 $\mu$ s) between coil and contacts (latching types: 4,500 V, 1.2 x 50 $\mu$ s)
Vibration resistance	Mechanical durability	10 to 55 Hz, 1.5-mm double amplitude
	Malfunction durability	10 to 55 Hz, 1.5-mm double amplitude
Shock resistance	Mechanical durability	1,000 m/s <sup>2</sup> (Approx. 100G)
	Malfunction durability	100 m/s <sup>2</sup> (Approx. 10G)
Ambient temperature		Operating: -25°C to 70°C (with no icing)
Ambient humidity		Operating: 5% to 85%
Service Life	Mechanical:	50,000,000 operations min. (at 18,000 operations/hr)
	Electrical:	100,000 operations min. (at 1,800 operations/hr) See "Characteristic Data"
Weight		Approx. 5.6 g

## ■ Approved Standards

UL Recognized (File No. E41643) -- See note

Model	Contact form	Coil rating	Contact rating
G6C-1114P-US G6C-1114C-US G6C-1117P-US G6C-1117C-US	SPST-NO	3 to 60 VDC	10 A, 250 VAC (general use) 10 A, 30 VDC (resistive load) 1/6 hp, 125 VAC 1/4 hp, 125 VAC 1/4 hp, 250 VAC 1/3 hp, 250 VAC TV-5 (40°C, 25,000 operations) 600 W, 120 VAC (tungsten) 530 VA, 20 to 265 VAC, 2 A max. (pilot duty) 43.2 VA, 30 VDC (pilot duty) 12LRA, 2.2FLA, 30 VDC (30,000 operations)
G6C-2114P-US G6C-2114C-US G6C-2117P-US G6C-2117C-US	SPST-NO + SPST-NC		8 A, 250 VAC (general use) 8 A, 30 VDC (resistive load) 1/6 hp, 125 VAC 1/4 hp, 125 VAC 1/4 hp, 250 VAC 1/3 hp, 250 VAC TV-5 (40°C, 25,000 operations) 600 W, 120 VAC (tungsten) 530 VA, 20 to 265 VAC, 2 A max. (pilot duty) 43.2 VA, 30 VDC (pilot duty) 12LRA, 2.2FLA, 30 VDC (30,000 operations)

**Note:** UL Recognition tests performed at 80°C for 6,000 operations unless otherwise specified.

CSA Certified (File No. LR31928)

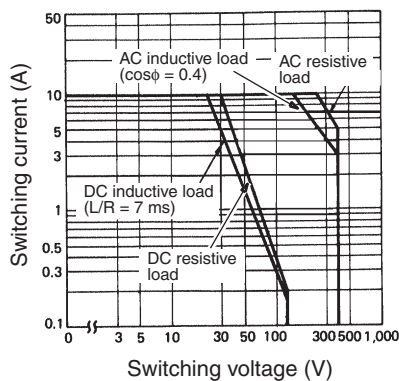
Model	Contact form	Coil rating	Contact rating
G6C-1114P-US G6C-1114C-US G6C-1117P-US G6C-1117C-US	SPST-NO	3 to 60 VDC	10 A, 250 VAC (general use) 10 A, 30 VDC (resistive load) 1/6 hp, 125 VAC 1/4 hp, 125 VAC 1/4 hp, 250 VAC 1/3 hp, 250 VAC TV-5 600 W, 120 VAC (tungsten)
G6C-2114P-US G6C-2114C-US G6C-2117P-US G6C-2117C-US	SPST-NO + SPST-NC		8 A, 250 VAC (general use) 8 A, 30 VDC (resistive load) 1/6 hp, 125 VAC 1/4 hp, 125 VAC 1/4 hp, 250 VAC TV-5 600 W, 120 VAC (tungsten)

VDE (Approval No. 2413) EN61810-1

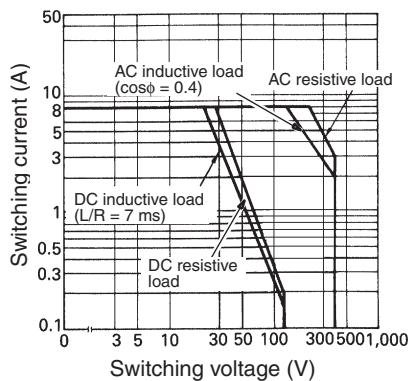
Model	Contact form	Coil rating	Contact rating	Number of test operations
G6C-1114P-US G6C-1114C-US G6C-1117P-US G6C-1117C-US	SPST-NO	3, 12, 24 VDC	10 A, 250 VAC ( $\cos\phi = 1$ ) 5 A, 250 VAC ( $\cos\phi = 0.4$ )	100,000 operations
G6C-2114P-US G6C-2114C-US G6C-2117P-US G6C-2117C-US	SPST-NO + SPST-NC	Single-stable: 3, 5, 12, 24 VDC Latching: 5 VDC G6CU-2117P-VD: 3 VDC	7 A, 250 VAC ( $\cos\phi = 1$ ) 3.5 A, 250 VAC ( $\cos\phi = 0.4$ )	100,000 operations

# Engineering Data

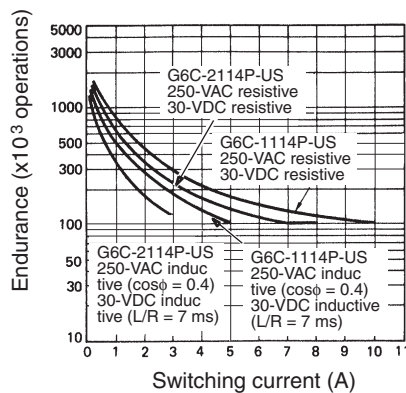
## Maximum Switching Capacity SPST-NO



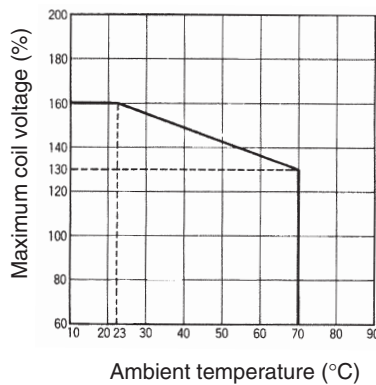
## SPST-NO + SPST-NC



## Service Life




## Ambient Temperature vs. Maximum Coil Voltage



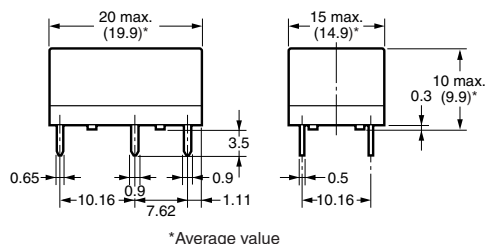
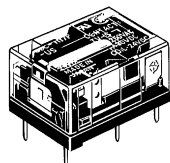
**Note:** The maximum coil voltage refers to the maximum value in a varying range of operating power voltage, not a continuous voltage.

# Dimensions

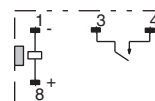
**Note:** 1. All units are in millimeters unless otherwise indicated.  
2. Orientation mark is indicated as follows: 

## ■ Non-latching

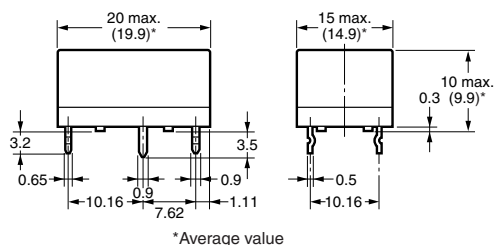
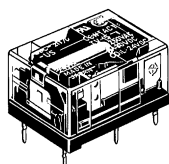
### G6C-117P-US



### G6C-1117P-US, G6C-1117C-US G6C-1114P-US, G6C-1114C-US Terminal Arrangement/Internal Connections (Bottom View)

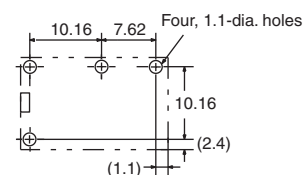


### G6C-117C-US

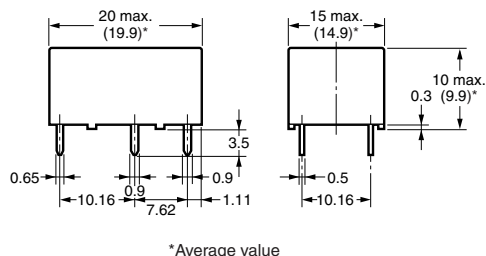
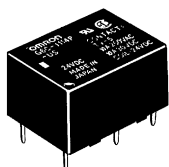


### Mounting Holes (Bottom View)

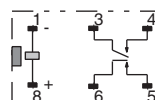
Tolerance:  $\pm 0.1$



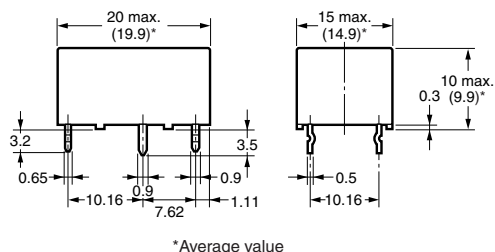
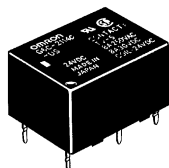
### G6C-114P-US



### G6C-2117P-US, G6C-2117C-US G6C-2114P-US, G6C-2114C-US Terminal Arrangement/Internal Connections (Bottom View)

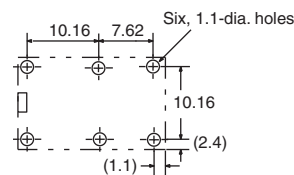


### G6C-114C-US



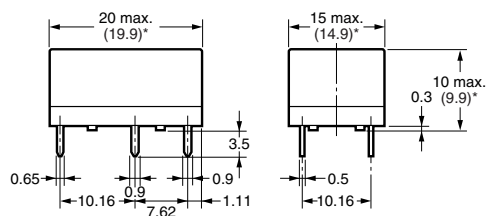
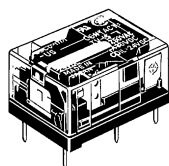
### Mounting Holes (Bottom View)

Tolerance:  $\pm 0.1$



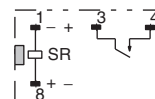
# Single Coil Latching

## G6CU-□117P-US

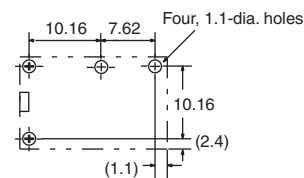


\*Average value

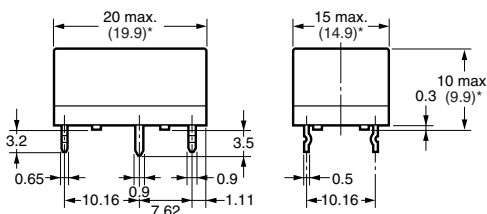
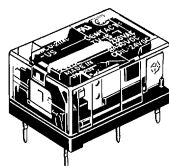
## G6CU-1117P-US, G6CU-1117C-US G6CU-1114P-US, G6CU-1114C-US Terminal Arrangement/Internal Connections (Bottom View)



## Mounting Holes (Bottom View)

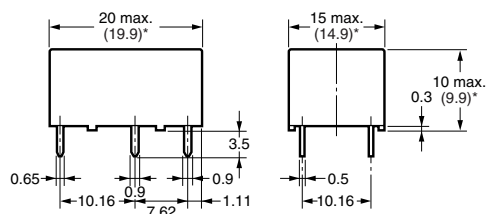
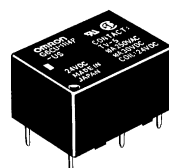


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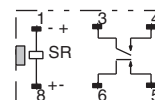
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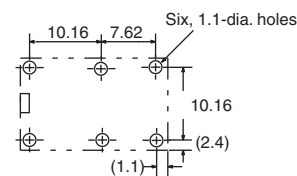


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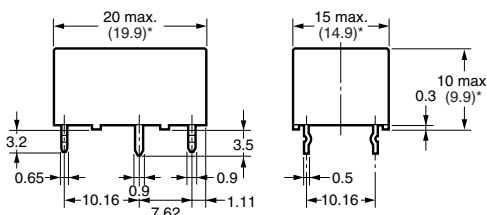
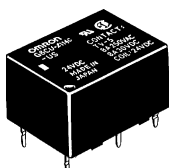
## G6CU-2117P-US, G6CU-2117C-US G6CU-2114P-US, G6CU-2114C-US Terminal Arrangement/Internal Connections (Bottom View)



## Mounting Holes (Bottom View)



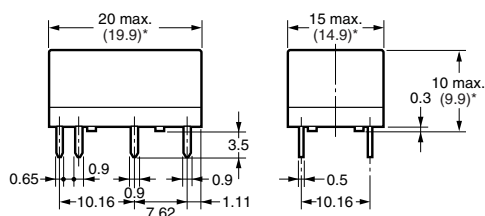
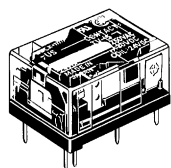
## G6CU-□114C-US



\*Average value

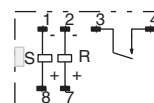
# Dual Coil Latching

## G6CK-□117P-US

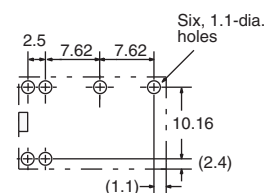


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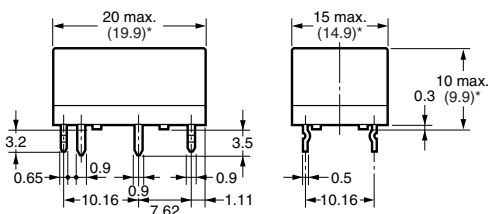
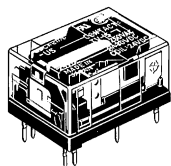
## G6CK-1117P-US, G6CK-1117C-US G6CK-1114P-US, G6CK-1114C-US Terminal Arrangement/Internal Connections (Bottom View)



## Mounting Holes (Bottom View)

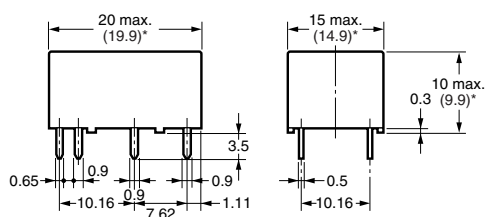
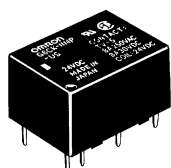


## G6CK-□117C-US



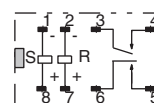
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## G6CK-□114P-US

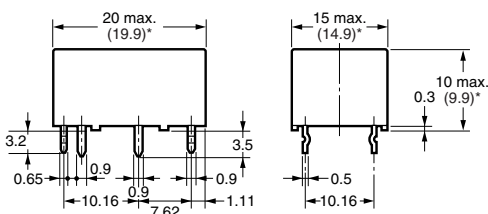
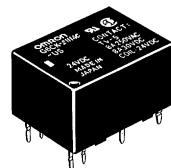


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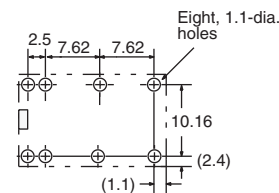


## G6CK-□114C-US



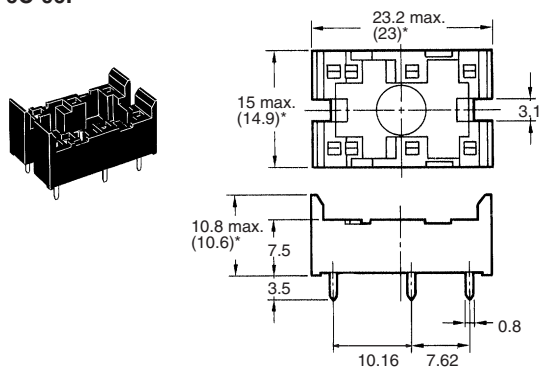
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## Mounting Holes (Bottom View)

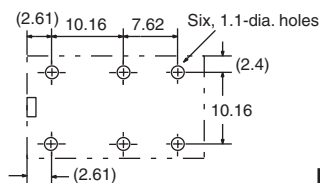


## Accessories

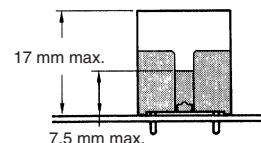
### Back Connecting Sockets P6C-06P



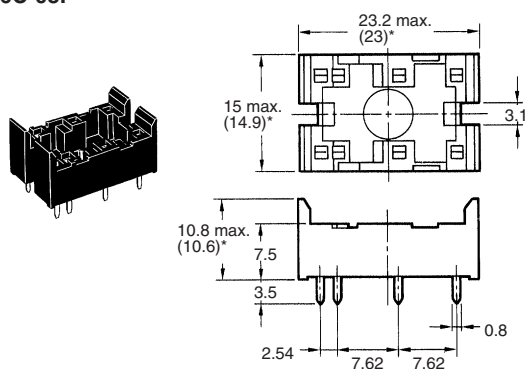
#### Mounting Holes (Bottom View)



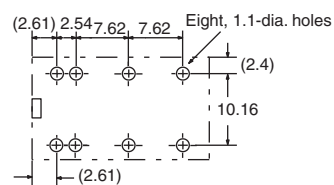
#### Mounting Height of Relay with Connecting Socket



### P6C-08P



#### Mounting Holes (Bottom View)

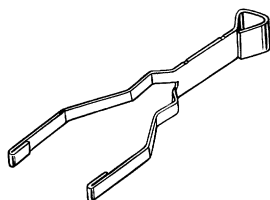


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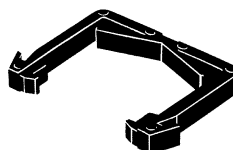
\*Average value

**Note:** Rated current of socket max. 5 A

### Removal Tool P6B-Y1



### Hold-down Clips P6B-C2





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**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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Power PCB Relay **G6C**