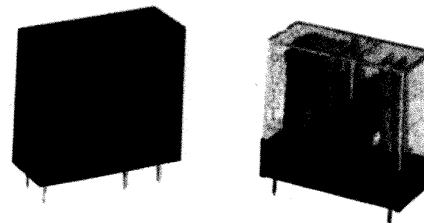


G2R

Power PCB Relay

Features

- Slim-styled power relay – available in both latching and non-latching types
- Creepage distance of 7.874 mm (.31 in.) min. between coil and contact
- Single and dual-winding latching types available
- Plug-in and Quick-connect terminals available
- High-sensitivity (360mW), high capacity (16 A) and bifurcated contact types available
- Highly stable magnetic circuit for latching endurance and excellent resistance to vibration and shock
- Safety-oriented design assuring high surge resistance (15,000 V min. between coil and contact with the single-winding type; 10,000 V min. between coil and contact with the dual coil type)



Contact Data

Contact ratings

One-pole:

General purpose: 10 A, 250 VAC, 30 VDC (Resistive); 7.5 A, 250 VAC, 5 A, 30 VDC (Inductive); 3 A, 120 VAC, Tungsten (TV-3); 1/3HP, 120 VAC; 1/2HP, 250 VAC; 1/2HP, 277 VAC

High-capacity: 16 A, 250 VAC, 30 VDC (Resistive); 8 A, 250 VAC, 30VDC (Inductive);

3 A, 120 VAC, Tungsten (TV-3); 1/3HP, 120 VAC; 1/2HP, 250 VAC

High-sensitivity: 5 A, 250 VAC, 30 VDC (Resistive); 2 A, 250 VAC, 3 A, 30 VDC (Inductive)

Latching: 5 A, 250 VAC, 30 VDC (Resistive); 3.5 A, 250 VAC, 2.5 A, 30 VDC (Inductive);

3 A, 120 VAC, Tungsten (TV-3); 1/6HP, 120 VAC; 1/2HP, 250 VAC

Two-pole:

General purpose: 5 A, 250 VAC, 30 VDC (Resistive); 2 A, 250 VAC, 3 A, 30 VDC (Inductive);

3 A, 120 VAC, Tungsten (TV-3); 1/6HP, 120 VAC; 1/3HP, 240 VAC

High-sensitivity: 3 A, 250 VAC, 30 VDC (Resistive); 1 A, 250 VAC, 1.5 A, 30 VDC (Inductive)

Latching: 3 A, 250 VAC, 30 VDC (Resistive); 1.5 A, 250 VAC, 2 A, 30 VDC (Inductive);

3 A, 120 VAC, Tungsten (TV-3); 1/6HP, 120 VAC; 1/3HP, 250 VAC

Contact material AgCdO

Maximum operating voltage 380 VAC, 125 VDC

Maximum operating current

One-pole:

General purpose: 10 A

High-capacity: 16 A

High-sensitivity: 5 A

Latching: 5 A

Two-pole:

General purpose: 5A

High-sensitivity: 3A

Latching: 3A

Maximum switching capacity

One-pole:

General purpose, Resistive: Unsealed – 2,500 VA, 300 W; Sealed – 2,000 VA, 240 W

High-capacity, Resistive: Unsealed – 4,000 VA, 480 W

High-sensitivity, Resistive: Unsealed/Sealed – 1,250 VA, 150 W

Latching, Resistive – 1,250 VA, 150 W

Two-pole:

General purpose, Resistive: Unsealed – 1,250 VA, 150 W; Sealed – 1,000 VA, 120 W

High-sensitivity, Resistive: Unsealed/Sealed – 750 VA, 90 W

Latching, Resistive – 750 VA, 90 W

Minimum permissible load

One-pole:

100 mA at 5 VDC

Two-pole:

10 mA at 5 VDC

Coil Data [% of rated voltage]

Pickup voltage 70% max. (DC & High-Sensitivity DC); 80% max. (AC)

Dropout voltage 15% min. (DC & High-Sensitivity DC); 30% min. (AC)

Set voltage 70% max.

Reset voltage 70% max.

Maximum voltage 110% at 70°C

Characteristic Data

Initial contact resistance

One-pole: 30mΩ max.

Two-pole: 50mΩ max.

Operate time 15ms max.

Release time

AC coil: 10ms max.

DC coil: 5ms max.

Set time – Latching 20ms max.

Reset time – Latching 20ms max.

Insulation resistance 1,000MΩ min. (at 500 VDC)

Dielectric strength

One-pole:

Between coil and contacts: 5,000 VAC, 50/60 Hz for 1 minute

Across open contacts of same pole: 1,000 VAC, 50/60 Hz for 1 minute

Two-pole:

Between coil and contacts: 5,000 VAC, 50/60 Hz for 1 minute

Between contact sets: 3,000 VAC, 50/60 Hz for 1 minute

Across open contacts of same pole: 1,000 VAC, 50/60 Hz for 1 minute

Latching:

Between set and reset coils: 1,000 VAC, 50/60 Hz for 1 minute

Ambient temperature -40° to 70°C

Service life

Mechanical:

AC coil: 10,000,000 operations min.

DC coil: 20,000,000 operations min.

Electrical: 100,000 operations min. for all resistive and inductive ratings with the following

exceptions: *One-pole, General purpose, Sealed:* 8 A, 250 VAC, 30 VDC

Two-pole, General purpose, Sealed: 4 A, 250 VAC, 30 VDC

Construction Data

Termination Plug-in, Quick Connect, and PCB terminals

Construction Semi-sealed and Fully-sealed

Weight .6 oz (17 g), Latching, Quick Connect Type: .71 oz (20 g)

Packaging method Trays

G2R

Power PCB Relay

7 RELAYS

Ordering Information

Part number	Rated voltage (V)	Coil res. (Ohms)	Power	Contact rating	Type
G2R-1-DC5	5 DC	47	530mW	10 A	SPDT
-DC6	6 DC	68		10 A	PCB
-DC12	12 DC	275		10 A	General
-DC24	24 DC	1,100		10 A	Purpose
-DC48	48 DC	4,170		10 A	Semi-Sealed
-AC24	24 AC	260	0.9 VA	10 A	
-AC120	120 AC	6,500		10 A	
-AC240	240 AC	30,000		10 A	
G2R-14-DC5	5 DC	47	530mW	10 A	SPDT
-DC6	6 DC	68		10 A	PCB
-DC9	9 DC	153		10 A	General
-DC12	12 DC	275		10 A	Purpose
-DC24	24 DC	1,100		10 A	Sealed
-DC48	48 DC	4,170		10 A	
-AC12	12 AC	65	0.9 VA	10 A	
-AC24	24 AC	260		10 A	
-AC120	120 AC	6,500		10 A	
-AC240	240 AC	30,000		10 A	
G2R-1-E-DC5	5 DC	47	530mW	16 A	SPDT
-DC12	12 DC	275		16 A	PCB
-DC24	24 DC	1,100		16 A	High-Capacity
-DC48	48 DC	4,170		16 A	Semi-Sealed
-AC24	24 AC	260	0.9 VA	16 A	
-AC120	120 AC	6,500		16 A	
G2R-14-H-DC5	5 DC	70	360mW	5 A	SPDT
-DC6	6 DC	100		5 A	PCB
-DC12	12 DC	400		5 A	High-Sensitivity
-DC24	24 DC	1,600		5 A	Sealed
G2R-1A-DC5	5 DC	47	530mW	10 A	SPST-NO
-DC6	6 DC	68		10 A	PCB
-DC12	12 DC	275		10 A	General
-DC24	24 DC	1,100		10 A	Purpose
					Semi-Sealed
G2R-1A4-DC5	5 DC	47	530mW	10 A	SPST-NO
-DC12	12 DC	275		10 A	PCB
-DC24	24 DC	1,100		10 A	General
-AC24	24 AC	260	0.9 VA	10 A	Purpose
-AC120	120 AC	6,500		10 A	Sealed
G2R-1A-E-DC5	5 DC	47	530mW	16 A	SPST-NO
-DC12	12 DC	275		16 A	PCB
-DC24	24 DC	1,100		16 A	High-Capacity
					Semi-Sealed
G2R-1-S-DC5	5 DC	47	530mW	10 A	SPDT
-DC6	6 DC	68		10 A	Plug-in
-DC12	12 DC	275		10 A	General
-DC24	24 DC	1,100		10 A	Purpose
-AC12	12 AC	65		10 A	Unsealed
-AC24	24 AC	260	0.9 VA	10 A	
-AC120	120 AC	6,500		10 A	

Note: 1. Other coil voltages available.

Part number	Rated voltage (V)	Coil res. (Ohms)	Power	Contact rating	Type
G2R-1-T-DC5	5 DC	47	530mW	10 A	SPDT
-DC12	12 DC	275		10 A	Quick
-DC24	24 DC	1,100		10 A	Connect
-AC24	24 AC	260	0.9 VA	10 A	Upper
-AC120	120 AC	6,500		10 A	Mounting Bracket
					Unsealed
G2R-2-DC5	5 DC	47	530mW	5 A	DPDT
-DC12	12 DC	275		5 A	PCB
-DC24	24 DC	1,100		5 A	General
-AC24	24 AC	260	0.9 VA	5 A	Purpose
-AC120	120 AC	6,500		5 A	Semi-Sealed
G2R-24-DC5	5 DC	47	530mW	5 A	DPDT
-DC6	6 DC	68		5 A	PCB
-DC12	12 DC	275		5 A	General
-DC24	24 DC	1,100		5 A	Purpose
-DC48	48 DC	4,170		5 A	Sealed
-AC24	24 AC	260	0.9 VA	5 A	
-AC120	120 AC	6,500		5 A	
G2R-24-H-DC5	5 DC	70	360mW	3 A	DPDT
-DC6	6 DC	100		3 A	PCB
-DC12	12 DC	400		3 A	High-Sensitivity
-DC24	24 DC	1,600		3 A	Sealed
G2R-2A4-DC5	5 DC	47	530mW	5 A	DPST-NO
-DC12	12 DC	275		5 A	PCB
-DC24	24 DC	1,100		5 A	General
-AC24	24 AC	260	0.9 VA	5 A	Purpose
-AC120	120 AC	6,500		5 A	Sealed
G2R-2-S-DC5	5 DC	47	530mW	5 A	DPDT
-DC12	12 DC	275		5 A	Plug-in
-DC24	24 DC	1,100		5 A	General
-AC24	24 AC	260	0.9 VA	5 A	Purpose
-AC120	120 AC	6,500		5 A	Unsealed
G2RK-1-DC5	5 DC	47	850mW (Set)	5 A	SPDT
-DC12	12 DC	275		5 A	PCB
-DC24	24 DC	1,100	600mW (Reset)	5 A	Dual Coil
					Latching
					Semi-Sealed
G2RK-2-DC5	5 DC	47	850mW (Set)	3 A	DPDT
-DC12	12 DC	275		3 A	PCB
-DC24	24 DC	1,100	600mW (Reset)	3 A	Dual Coil
					Latching
					Semi-Sealed

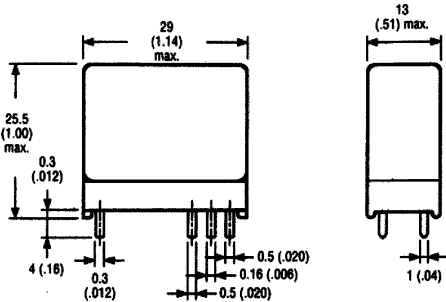
G2R

Power PCB Relay

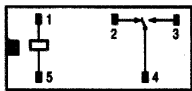
Dimensions [Unit: mm (inch)]

PCB Terminal: SPDT

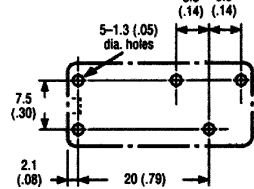
(General Purpose, High Sensitivity)



Terminal arrangement/ Internal connections (bottom view)

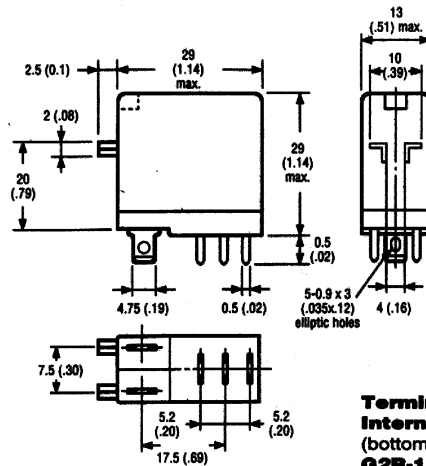


Mounting holes (bottom view)

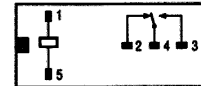


Note: 1. For SPST-NO, standard version, remove terminal no. 2.
2. ■ and □ indicate mounting orientation marks.

Plug-in: SPDT

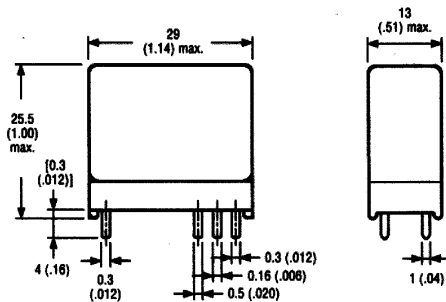


Terminal arrangement/ Internal connections (bottom view) G2R-1-S

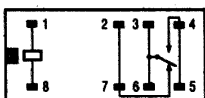


Note: 1. ■ and □ indicate mounting orientation marks.

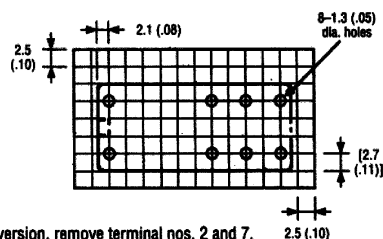
PCB: SPDT High Capacity



Terminal arrangement/ Internal connections (bottom view)

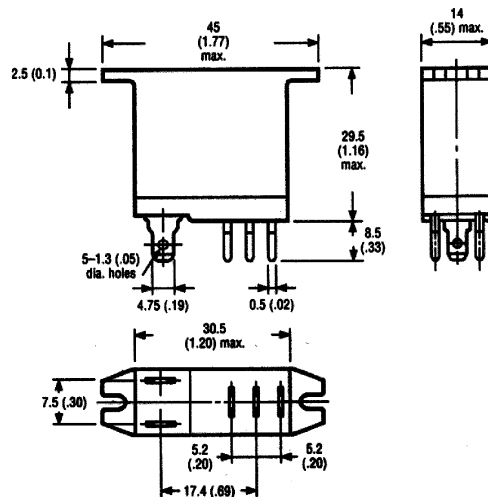


Mounting holes (bottom view)

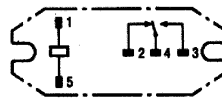


Note: 1. For SPST-NO, high-capacity version, remove terminal nos. 2 and 7.
2. ■ and □ indicate mounting orientation marks.

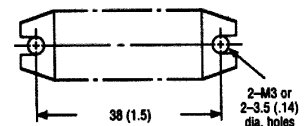
Quick Connect: SPDT



Terminal arrangement/ Internal connections (bottom view)



Mounting holes (bottom view)



Note: 1. For SPST-NO, quick connect version, remove terminal no. 2.

G2R

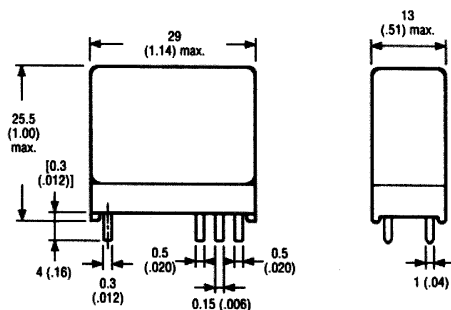
Power PCB Relay

7 RELAYS

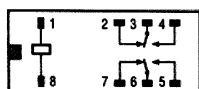
Dimensions [Unit: mm (inch)]

PCB Terminal: DPDT

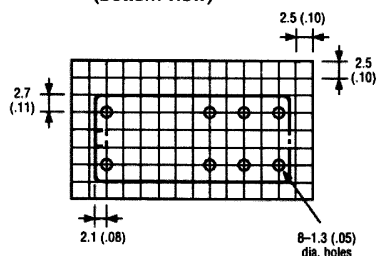
(General Purpose, High Sensitivity)



Terminal arrangement/ Internal connections (bottom view)

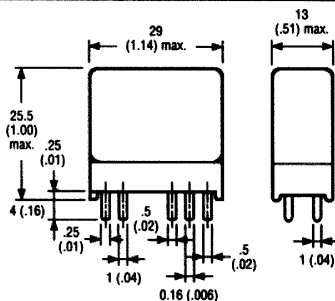


Mounting holes (bottom view)

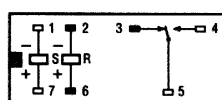


Note: 1. For DPST-NO, general purpose and high-sensitivity versions, remove terminal nos. 2 and 7.
2. ■ and □ indicate mounting orientation marks.

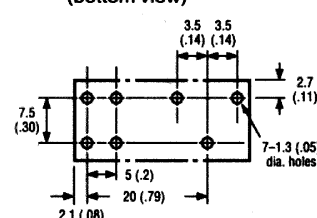
SPDT Dual Coil Latching



Terminal arrangement/ Internal connections (bottom view)

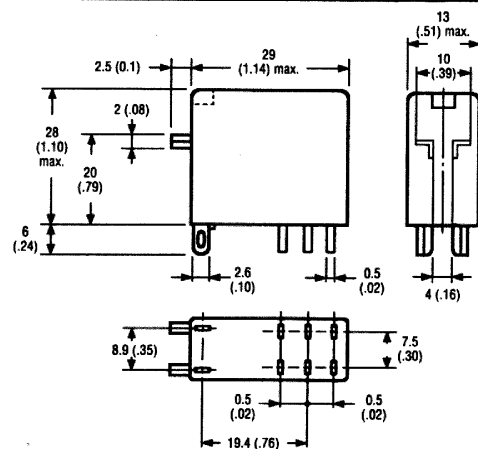


Mounting holes (bottom view)

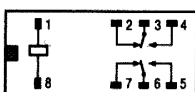


Note: 1. For SPST-NO, latching version, remove terminal no. 3.
2. ■ and □ indicate mounting orientation marks.

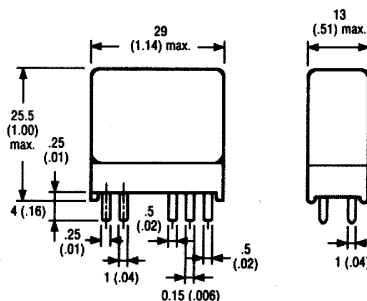
Plug-In: DPDT



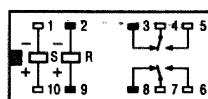
Terminal arrangement/ Internal connections G2R-2-S (bottom view)



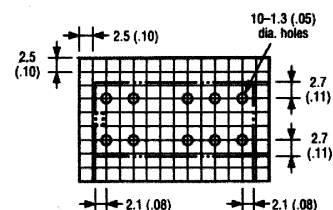
DPDT Dual Coil Latching



Terminal arrangement/ Internal connections G2R-2-S (bottom view)



Mounting holes (bottom view)



Note: 1. For DPST-NO, latching version, remove terminal nos. 3 and 8.
2. ■ and □ indicate mounting orientation marks.

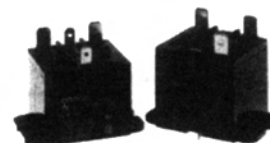
Note: 1. ■ and □ indicate mounting orientation marks.

G4B

General Purpose Relay

Features

- Creepage distance of more than .08"
- Upper mounting bracket type for easy wiring and mounting



Contact Data

Contact ratings

SPST-NO/SPDT, Standard: 15 A, 220 VAC, 24 VDC (Resistive); 10 A, 220 VAC, 7 A, 24 VDC (Inductive); 5 A, 120 VAC, Tungsten (TV-5); 1 HP, 120 VAC; 10 A, 277 VAC (Ballast)
SPST-NO/SPDT, High-capacity: 25 A, 220 VAC, 24 VDC (Resistive); 20 A, 220 VAC, 15 A, 24 VDC (Inductive); 2 HP, 250 VAC

Maximum operating voltage 250 VAC, 125 VDC

Maximum operating current

Standard: 20 A
High-capacity: 25 A

Maximum switching capacity

Standard, Resistive: 3,300 VA, 360 W
High-capacity: 5,500 VA, 600 W

Minimum permissible load (Ref. value) 100mA at 5 VDC

Coil Data [% of rated voltage]

Pickup voltage 80% max. (AC and DC)

Dropout voltage 30% min. (AC); 10% min. (DC)

Maximum voltage 110% at 55°C

Characteristic Data

Initial contact resistance 30mΩ max.

Insulation resistance 100MΩ min. (at 500VDC)

Dielectric strength 2,000 VAC, 50/60 Hz for 1 minute
Between non-continuous contacts: 1,000 VAC

Service life

Mechanical: 10,000,000 operations min.

Electrical: Standard - 200,000 operations min. at 15 A, 220 VAC, 24 VDC

High-capacity - 100,000 operations min. at 25 A, 220 VAC, 24 VDC

Construction Data

Termination PC board terminals or quick-connect terminals

Weight 1.55 oz. (44 g)

Packaging method Trays

Ordering Information

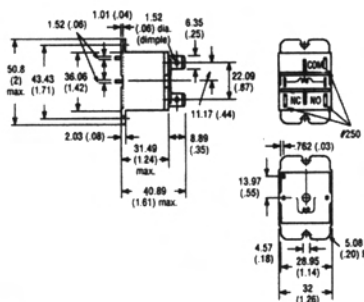
Part number	Rated voltage (V)	Coil res. (Ohms)	Power	Contact rating	Type
G4B-112T-C-US-DC12	12 DC	135	1.2 W	15 A	SPDT
-DC24	24 DC	480	1.2 W	15 A	Standard
-AC24	24 AC	—	1.3 VA	15 A	Quick
-AC120	120 AC	—	1.3 VA	15 A	Connect #110 Coil Terminals
G4B-112TI-C-US-DC12	12 DC	135	1.2 W	15 A	SPDT
-DC24	24 DC	480	1.2 W	15 A	Standard
-AC24	24 AC	—	1.3 VA	15 A	Quick
-AC120	120 AC	—	1.3 VA	15 A	Connect #187 Coil Terminals
G4B-112TP-C-US-DC12	12 DC	135	1.2 W	15 A	SPDT
-DC24	24 DC	480	1.2 W	15 A	Standard
-AC24	24 AC	—	1.3 VA	15 A	PCB Coil
-AC120	120 AC	—	1.3 VA	15 A	Terminals
G4B-112T-FD-C-US-RP-DC12	12 DC	135	1.2 W	25 A	SPDT
-DC24	24 DC	480	1.2 W	25 A	High Capacity
-AC24	24 AC	—	1.3 VA	25 A	Quick
-AC120	120 AC	—	1.3 VA	25 A	Connect #110 Coil Terminals
G4B-112TI-FD-C-US-RP-DC12	12 DC	135	1.2 W	25 A	SPDT
-DC24	24 DC	480	1.2 W	25 A	High Capacity
-AC24	24 AC	—	1.3 VA	25 A	Quick
-AC120	120 AC	—	1.3 VA	25 A	Connect #187 Coil Terminals
G4B-112TP-FD-C-US-RP-DC12	12 DC	135	1.2 W	25 A	SPDT
-DC24	24 DC	480	1.2 W	25 A	High Capacity
-AC24	24 AC	—	1.3 VA	25 A	PCB Coil
-AC120	120 AC	—	1.3 VA	25 A	Terminals

Note: 1. For SPST-NO version, delete "C" in the part number.

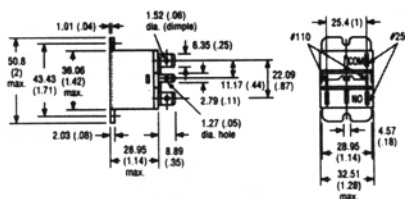
2. Other coil voltages available.

Dimensions [Unit: mm (inch)]

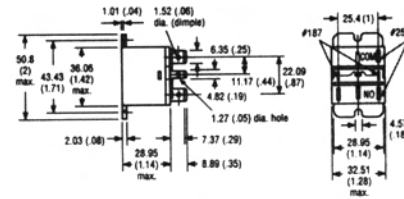
PCB Coil Terminals



Quick Connect #110 Coil Terminals



Quick Connect #187 Coil Terminals



G5L

Features

- Ideal for applications in security equipment, household electrical appliances, garage door openers, and audio equipment
- Sealed and semi-sealed versions are resistant to flux wicking
- Low profile

Contact Data

Contact ratings

Standard: 5 A, 120 VAC, 30 VDC (Resistive); 5 A, 250 VAC;

1/8 HP, 120 VAC; 125 VA, 120 VAC (Pilot duty)

High-capacity: 10 A, 120 VAC; 8 A, 30 VDC (Resistive); 10 A, 250 VAC; 1/3 HP, 120 VAC

Contact material

AgCdO

Maximum operating voltage

250 VAC, 125 VDC

Maximum operating current

Standard: 5 A (AC/DC)

High-capacity: 10 A (AC), 8 A (DC)

Maximum switching capacity

Standard: 600 VA, 150 W

High-capacity: 1,200 VA, 240 W

Minimum permissible load

100 mA at 5 VDC

Coil Data (% of rated voltage)

Pickup voltage 75% max.

Droopout voltage 10% min.

Maximum voltage 130% at 70°C

Characteristic Data

Initial contact resistance 100mΩ max.

Operate time 10ms max. (mean value: approx. 5.1ms)

Release time 5ms max. (mean value: approx. 2.1ms)

Insulation resistance 100MΩ min. (at 500 VDC)

Dielectric strength

Between coil and contacts: 2,000 VAC, 50/60 Hz for 1 minute

Between contacts of same polarity: 750 VAC, 50/60 Hz for 1 minute

Ambient temperature -40° to 70°C (with no icing)

Service life

Mechanical: 10,000,000 operations min.

(at operating frequency of 18,000 operations/hour)

Electrical: 100,000 operations for resistive loads

Construction Data

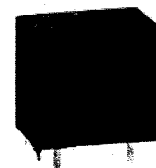
Termination PCB terminals

Construction Sealed, unsealed, semi-sealed

Weight .42 oz. (12 g)

Packaging method Trays

Power PCB Relay



7

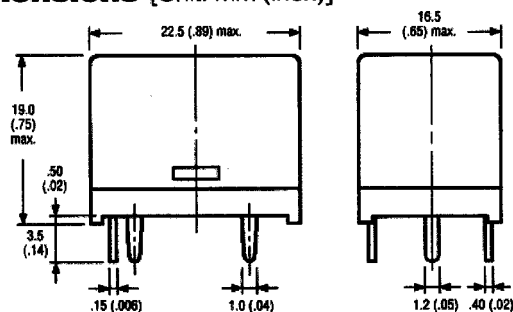
RELAYS

Ordering Information

Part number	Rated voltage (V)	Coil res. (Ohms)	Power (mW)	Contact rating	Type
G5L-117P-PS-DC12	12 DC	360	400	5 A	SPDT
-DC24	24 DC	1,440	400	5 A	Standard
					Semi-Sealed
G5L-114P-PS-DC5	5 DC	63	400	5 A	SPDT
-DC6	6 DC	90	400	5 A	Standard
-DC12	12 DC	360	400	5 A	Sealed
-DC24	24 DC	1,440	400	5 A	
-DC48	48 DC	5,760	400	5 A	
G5L-1114P-PS-DC5	5 DC	63	400	5 A	SPST-NO
-DC12	12 DC	360	400	5 A	Standard
-DC24	24 DC	1,440	400	5 A	Sealed
G5LE-114P-PS-DC5	5 DC	63	400	10 A	SPDT
-DC12	12 DC	360	400	10 A	High-Capacity
-DC24	24 DC	1,440	400	10 A	Sealed
G5LE-1114P-PS-DC12	12 DC	360	400	10 A	SPST-NO
-DC24	24 DC	1,440	400	10 A	High-Capacity
					Sealed

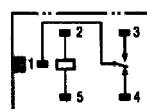
Note: 1. Other coil voltages available.
2. Class B insulation available.
3. Gold-plated contacts available.

Dimensions [Unit: mm (inch)]

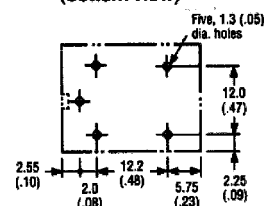


Terminal arrangement/ Internal connections (bottom view)

SPDT



Mounting holes (bottom view)



Note: 1. For SPST-NO version, remove terminal no. 4.
2. ■ and □ indicate mounting orientation marks.

G5P

Features

- Enables dense packaging, requiring 30% less space than G2R
- Withstands surges of 10,000 V for 1 minute
- TV-5 and TV-8 available
- Semi-sealed construction

Contact Data

Contact ratings

Standard: 5 A, 250 VAC, 30 VDC (Resistive); 1/6 HP, 120 VAC;
1/2 HP, 240 VAC; 5 A, 120 VAC; 600 W, 120 VAC (Tungsten); TV-5
High-capacity: 10 A, 250 VAC, 30 VDC (Resistive);
960 W, 120 VAC (Tungsten); TV-8

Contact material AgInSn

Maximum operating voltage 250 VAC, 30 VDC

Maximum operating current 5 A

Maximum switching capacity 1,250 VA, 150 W; 2,500 VA, 300 W (High-capacity)

Minimum permissible load 100 mA at 5 VDC

Coil Data (% of rated voltage)

Pickup voltage 75% max.

Dropout voltage 10% min.

Maximum voltage 110% at 70°C

Characteristic Data

Initial contact resistance 30mΩ max.

Operate time 15ms max. (mean value: approx. 6.2ms)

Release time 5ms max. (mean value: approx. 1.8ms)

Insulation resistance 1,000MΩ min. (at 500 VDC)

Dielectric strength

Between coil and contacts: 4,000 VAC, 50/60 Hz for 1 minute

Between contacts of same pole: 1,000 VAC, 50/60 Hz for 1 minute

Ambient temperature -40° to 70°C

Service life

Mechanical: 2,000,000 operations min.

Electrical: 100,000 operations min. at 5 A, 250 VAC, 30 VDC (Resistive);

100,000 operations min. at 10 A, 250 VAC, 30 VDC (High-capacity)

Construction Data

Termination PCB terminals

Construction Semi-sealed

Weight .39 oz. (11 g)

Packaging method Trays

Power PCB Relay



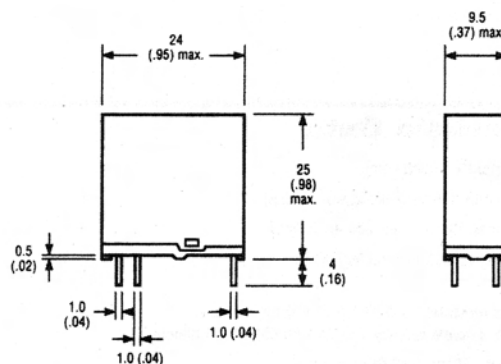
Ordering Information

Part number	Rated voltage (V)	Coil res. (Ohms)	Power (mW)	Contact rating	Type
G5P-1-DC6	6 DC	67	530	5 A	Standard
-DC12	12 DC	271	530	5 A	SPST-NO
-DC24	24 DC	1,086	530	5 A	Semi-Sealed
G5PE-1-DC12	12 DC	183	800	10 A	High-Capacity
-DC24	24 DC	721	800	10 A	SPST-NO Semi-Sealed

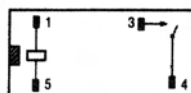
Note: 1. Other coil voltages available.

2. High-sensitivity coil (350mW) available.

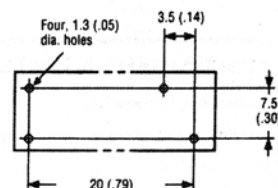
Dimensions [Unit: mm (inch)]



Terminal arrangement/ Internal connections (bottom view)



Mounting holes (bottom view)



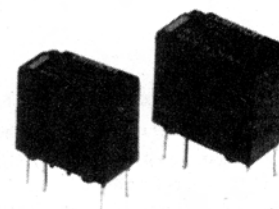
G5V-1

Low Signal Relay

7 RELAYS

Features

- Ultra-miniature, highly sensitive SPDT relay for low signal circuits
- 150mW nominal power consumption with 96mW pick-up power
- Small size at 10 mm (.394 in.) H x 7.5 mm (.295 in.) W x 12.5 mm (.492 in.) L
- Conforms to FCC part 68 voltage surge
- Fully-sealed construction
- Ideal for use in telecommunications, security and computer/peripheral equipment
- UL listed, CSA certified



Contact Data

Contact ratings

125 VAC, 0.5 A (General use);
69 VDC, 0.3 A, 30 VDC (Resistive)

Contact material Ag + Au-clad

Carry current 2 A

Maximum operating voltage 125 VAC, 60 VDC

Maximum operating current 1 A

Maximum switching capacity 62.5 VA, 30 W

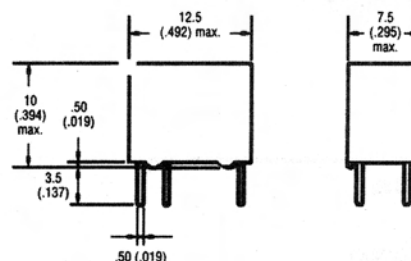
Minimum permissible load 1mA, 5 VDC

Ordering Information

Part number	Rated voltage (V)	Coil res. (Ohms)	Power (mW)	Contact form	Type
G5V-1-DC5	5 DC	166.7	150	SPDT	Non-Latching
-DC12	12 DC	960	150	SPDT	Latching
-DC24	24 DC	3,840	150	SPDT	Sealed

Dimensions [Unit: mm (inch)]

PC Board Relay (top and side views)



Coil Data (% of rated voltage)

Pickup voltage 80% max.

Dropout voltage 10% min.

Maximum voltage 200% at 55°C max.

* 70% max. pick-up voltage version also available.

Characteristic Data

Initial contact resistance 100mΩ max. (Initial)

Operate time 5ms max. (mean value: approx. 2.5ms)

Release time 5ms max. (mean value: approx. 0.9ms)

Insulation resistance 1,000mΩ min. (at 500 VDC)

Dielectric strength

Between coil and contacts: 1,000 VAC, 50/60 Hz for 1 minute

Between contacts of same pole: 400 VAC, 50/60 Hz for 1 minute

Ambient temperature -30° to 70°C

Service life

Mechanical: 5,000,000 operations min. (at 36,000 operations/hour)

Electrical: 100,000 operations min. at 1 A, 30 VDC

Construction Data

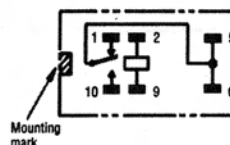
Termination PCB terminals

Construction Fully-sealed

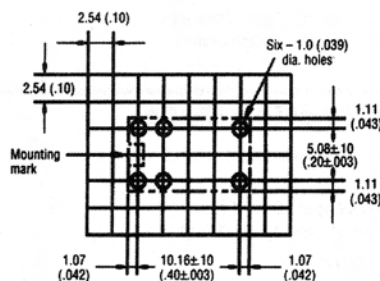
Weight 2.2 g

Packaging method Tubes

Terminal arrangement/ Internal connections (bottom view)



Mounting holes (bottom view)



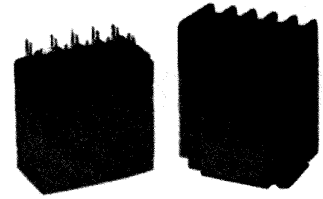
Note: 1. ■ and □ indicate mounting orientation marks.

G5V-2

Low Signal Relay

Features

- Ideal for 3-phase motor control applications
- No contact chattering for momentary voltage drops up to 50% of rated voltage
- Withstanding more than 4 kV between contacts that are different in polarity and between the coil and contacts
- Push-to-test button is a standard feature to check contact operation



Contact Data

Contact ratings

NO: 25 A, 220 VAC (24 A, 230 VAC) (Resistive – $\cos \phi = 1$ /Inductive – $\cos \phi = 0.4$);
25 A, 30 VDC (Resistive)
NC: 8 A, 220 VAC (7.5 A, 230 VAC) (Resistive – $\cos \phi = 1$ /Inductive – $\cos \phi = 0.4$);
8 A, 30 VDC (Resistive)

Maximum operating voltage

250 VAC (Resistive – $\cos \phi = 1$ /Inductive – $\cos \phi = 0.4$); 125 VDC (Resistive)

Maximum operating current

NO: 25 A
NC: 8 A

Maximum switching capacity

NO: 5,500 VA (Resistive – $\cos \phi = 1$ /Inductive – $\cos \phi = 0.4$); 750 W DC
NC: 1,760 VA (Resistive – $\cos \phi = 1$ /Inductive – $\cos \phi = 0.4$); 240 W DC

Minimum permissible load 100mA, 24 VDC

Coil Data (% of rated voltage)

Pickup voltage 75% max.

Dropout voltage 15% min.

Maximum voltage 110%

Characteristic Data

Initial contact resistance 50mΩ max.

Insulation resistance 1,000MΩ min. (at 500 VDC)

Dielectric strength

Between coil and contacts: 4,000 VAC, 50/60 Hz for 1 minute

Between contacts of different polarity: 4,000 VAC, 50/60 Hz for 1 minute

Between contacts of same polarity: 2,000 VAC, 50/60 Hz for 1 minute

Service life

Mechanical: 1,000,000 operations min.

Electrical: 100,000 operations min.

Construction Data

Termination PC board terminals or screw terminals

Weight

PCB terminal type: 4.9 oz. (140 g)

Screw terminal type: 5.8 oz. (165 g)

Packaging method Trays

Ordering Information

Part number	Rated voltage (V)	Coil res. (Ohms)	Power	Contact rating	Type
G7J-4A-P-DC12	12 DC	72	2.0 W	25 A	4PST-NO
-DC24	24 DC	288	Approx.	25 A	with PCB
-AC100/120	100/120 AC	—	—	25 A	Terminals,
-AC200/240	200/240 AC	—	1.8 to 2.6 VA	25 A	Mounting Bracket
			Approx.		Optional
G7J-4A-B-DC12	12 DC	72	2.0 W	25 A	4PST-NO
-DC24	24 DC	288	Approx.	25 A	with Screw
-AC100/120	100/120 AC	—	—	25 A	Terminals,
-AC200/240	200/240 AC	—	1.8 to 2.6 VA	25 A	Mounting Bracket
			Approx.		Required
G7J-3A1B-P-DC12	12 DC	72	2.0 W	25 A/8 A	3PST-NO/
-DC24	24 DC	288	Approx.	25 A/8 A	SPST-NC
-AC100/120	100/120 AC	—	—	25 A/8 A	with PCB
-AC200/240	200/240 AC	—	1.8 to 2.6 VA	25 A/8 A	Terminals,
			Approx.		Mounting Bracket
					Optional
G7J-3A1B-B-DC12	12 DC	72	2.0 W	25 A/8 A	3PST-NO/
-DC24	24 DC	288	Approx.	25 A/8 A	SPST-NC
-AC100/120	100/120 AC	—	—	25 A/8 A	with Screw
-AC200/240	200/240 AC	—	1.8 to 2.6 VA	25 A/8 A	Terminals,
			Approx.		Mounting Bracket
					Required
G7J-2A2B-P-DC12	12 DC	72	2.0 W	25 A/8 A	DPST-NO/
-DC24	24 DC	288	Approx.	25 A/8 A	DPST-NC
-AC100/120	100/120 AC	—	—	25 A/8 A	with PCB
-AC200/240	200/240 AC	—	1.8 to 2.6 VA	25 A/8 A	Terminals,
			Approx.		Mounting Bracket
					Optional
G7J-2A2B-B-DC12	12 DC	72	2.0 W	25 A/8 A	DPST-NO/
-DC24	24 DC	288	Approx.	25 A/8 A	DPST-NC
-AC100/120	100/120 AC	—	—	25 A/8 A	with Screw
-AC200/240	200/240 AC	—	1.8 to 2.6 VA	25 A/8 A	Terminals,
			Approx.		Mounting Bracket
					Required

Note: 1. These relays need a W-bracket (sold separately) for mounting. (R99-04-FOR-G5F)

2. Relay and bracket packed together can be ordered by adding "WJ" to above part numbers.

G5Y-1

Features

- Fully-sealed relay with excellent high-frequency characteristics
- Miniature 9.0 mm (.354 in.) H x 11.5 mm (.453 in.) W x 20.5 mm (.807 in.) L
- Shield plate and resin-molded relay base provide excellent high-frequency characteristics: isolation of 68dB (typ.), insertion loss of 0.20dB (typ.), and VSWR of 1.30 (typ.) at 900MHz
- Ultrasmall and lightweight with pickup coil power of 170mW (110mW for high-sensitivity type)
- High shock resistance

Contact Data

Contact ratings 24 VAC, 0.01 A; 24 VDC, 0.01 A, 1 W at 900MHz*

Contact material Au clad Cu alloy

Carry current 0.1 A

Maximum operating voltage 30 VAC, 30 VDC

Maximum operating current 0.1 A

Maximum switching capacity 1 VA, 1 W

Minimum permissible load 10µA, 10mVDC

Coil Data (% of rated voltage)

Pickup voltage 75% max.

Droopout voltage 10% min.

Maximum voltage 150% at 3°C max.

Characteristic Data

Initial contact resistance 100mΩ max.

Operate time 10ms max.

Release time 5ms max.

Insulation resistance 100MΩ min. (at 500 VDC)

Dielectric strength

Between contacts: 500 VAC, 50/60 Hz for 1 minute

Between coil and contacts: 1,000 VAC, 50/60 Hz for 1 minute

Between contacts and ground: 500 VAC, 50/60 Hz for 1 minute

Ambient temperature -25° to 60°C

Service life

Mechanical: 1,000,000 operations min.

(at operating frequency of 1,800 operations/hour)

Electrical: 300,000 operations min. at 0.01 A, 24 VDC

High-Frequency Characteristic Data

Isolation

250MHz: 70dB min.

900MHz: 60dB min.

Insertion loss 0.5dB max.

VSWR

250MHz: 1.5 max.

900MHz: 1.8 max.

Carry power 10 W max.

Construction Data

Termination PCB terminals

Construction Fully-sealed

Weight .212 oz (6 g)

Packaging method Tubes

Note: 1. *Denotes the value at VSWR ≤ 1.2.

2. Line impedance (Z0) of the measuring instrument is 50Ω.

Low Signal Relay



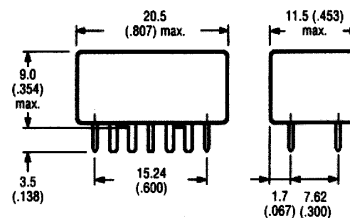
7 RELAYS

Ordering Information

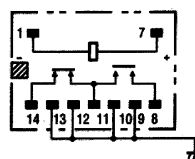
Part number	Rated voltage (V)	Coil res. (Ohms)	Power (mW)	Contact form	Type
G5Y-1 -DC5	5 DC	83	300	SPDT	Non-Latching
-DC12	12 DC	480	300	SPDT	Sealed
-DC24	24 DC	1,920	300	SPDT	Sealed
G5Y-1-H-DC5	5 DC	125	200	SPDT	Non-Latching
-DC12	12 DC	720	200	SPDT	High-Sensitivity
-DC24	24 DC	2,800	200	SPDT	Sealed

Note: 1. Also available in 2-pole versions.

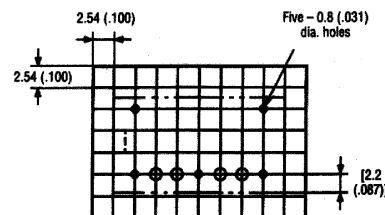
Dimensions [Unit: mm (inch)]



Terminal arrangement/ Internal connections (bottom view)



Mounting holes (bottom view)



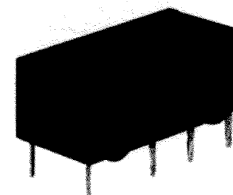
Note: 1. [Solid square] and [Hatched square] indicate mounting orientation marks.

G6A

Low Signal Relay

Features

- High-sensitivity telecom relay – can be driven by digital circuits
- Low-profile design allows use in 1/2-inch PC board rack
- Surge withstand voltage meets FCC Part 68 Regulation
- Units can be mounted side by side due to low magnetic leakage
- Single- and dual coil latching types also available
- Special models available for ultrasonic cleaning and low thermo-electromotive force
- Unique moving loop (permanent magnet) armature reduces relay size, magnetic interference and contact bounce time
- Reliable bifurcated crossbar contacts
- UL listed, CSA certified



Contact Data

Contact ratings

G6A(K)-234P: AgPd (Au clad): 125 VAC, 0.3 A; 30 VDC, 1 A

G6A(K)-274P: Ag (Au clad): 125 VAC, 0.5 A; 30 VDC, 2 A

Carry current 3 A

Maximum operating voltage 250 VAC, 220 VDC

Maximum operating current 2 A (DC), 1 A (AC)

Maximum switching capacity 125 VA, 60 W

Minimum permissible load 10µA, 10mVDC

Coil Data (% of rated voltage)

Pickup voltage 70% max.

Dropout voltage 10% min.

Set voltage 70% max.

Reset voltage 70% max.

Maximum voltage 200% at 23°C max.

Characteristic Data

Initial contact resistance 50mΩ max.

Operate time 5ms max. (actual value: approx. 3ms)

Release time 3ms max. (actual value: approx. 1.2ms)

Set time – latching 5ms max. (actual value: approx. 2.5ms)

Reset time – latching 5ms max. (actual value: approx. 2.5ms)

Insulation resistance 1,000MΩ min. (at 500 VDC)

Dielectric strength

Between coil and contacts, between contacts of different poles, and between contacts of same pole: 1,000 VAC, 50/60 Hz for 1 minute
Between set and reset coils: 250 VAC, 50/60 Hz for 1 minute

Surge withstand voltage 1,500 V 10 x 160µs (conforms to FCC Part 68 Regulation)

Ambient temperature -40° to 70°C

Service life

Mechanical: 100,000,000 operations min.

(at operating frequency of 36,000 operations/hour)

Electrical: G6A-234P: 1,000,000 operations min. at 1 A, 30 VDC

G6A-274P: 4,000,000 operations min. at 1 A, 30 VDC

Construction Data

Termination PCB terminals

Construction Fully-sealed

Weight

.12 oz. (3.5 g)

Packaging method Tubes

Ordering Information

Part number	Rated voltage (VDC)	Coil res. (Ω)	Power (mW)	Contact form	Type
G6A-234P-ST-US -DC5	5 DC	125	200	DPDT	Non-Latching
-DC12	12 DC	720	200	DPDT	Sealed
-DC24	24 DC	2,880	200	DPDT	
-DC48	48 DC	9,750	235	DPDT	
G6A-234P-ST15-US -DC5	5 DC	167	150	DPDT	Non-Latching
-DC12	12 DC	960	150	DPDT	High-Sensitivity
-DC24	24 DC	3,840	150	DPDT	Sealed
-DC48	48 DC	15,000	150	DPDT	
G6A-234P-ST40-US -DC5	5 DC	62.5	400	DPDT	Non-Latching
-DC12	12 DC	360	400	DPDT	Low-Sensitivity
-DC24	24 DC	1,440	400	DPDT	Sealed
-DC48	48 DC	5,760	400	DPDT	
G6AK-234P-ST-US -DC5	5 DC	139	180	DPDT	Dual
-DC12	12 DC	800	180	DPDT	Coil
-DC24	24 DC	3,200	180	DPDT	Latching
-DC48	48 DC	11,520	200	DPDT	Sealed
G6AK-234P-ST40-US -DC5	5 DC	69	360	DPDT	Dual
-DC12	12 DC	400	360	DPDT	Coil
-DC24	24 DC	1,600	360	DPDT	Latching
-DC48	48 DC	6,400	360	DPDT	Low-Sensitivity
G6A-274P-ST-US -DC5	5 DC	125	200	DPDT	Non-Latching
-DC12	12 DC	720	200	DPDT	Standard
-DC24	24 DC	2,880	200	DPDT	
-DC48	48 DC	9,750	235	DPDT	
G6A-274P-ST40-US -DC5	5 DC	62.5	400	DPDT	Non-Latching
-DC12	12 DC	360	400	DPDT	Low-Sensitivity
-DC24	24 DC	1,440	400	DPDT	
-DC48	48 DC	5,760	400	DPDT	
G6AK-274P-ST-US -DC5	5 DC	139	180	DPDT	Dual
-DC12	12 DC	800	180	DPDT	Coil
-DC24	24 DC	3,200	180	DPDT	Latching
-DC48	48 DC	11,520	200	DPDT	Standard

Note: 1. Single coil latching versions also available.
 2. 4-pole versions also available.

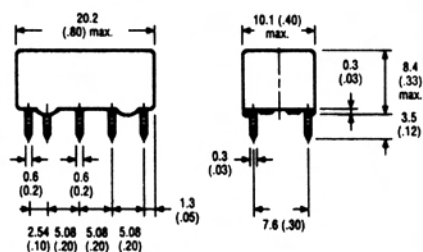
G6A

Low Signal Relay

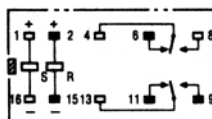
7

Dimensions [Unit: mm (inch)]

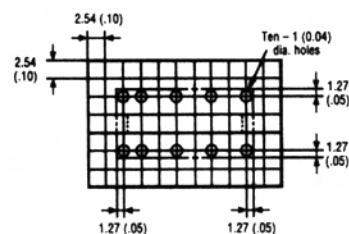
Dual Coil Latching



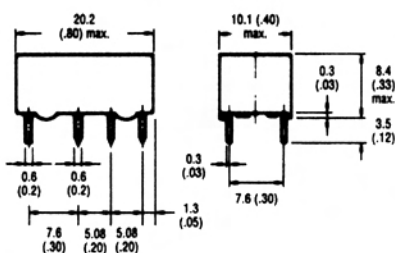
Terminal arrangement/ Internal connections (bottom view)



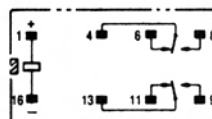
Mounting holes (bottom view)



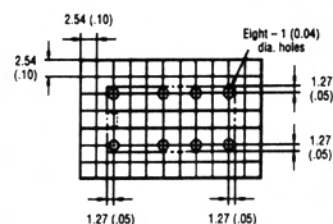
Non-Latching



Terminal arrangement/ Internal connections (bottom view)



Mounting holes (bottom view)



R E L A Y S

G6B

Power PCB Relay

Features

- Meets FCC Part 68 requirements
- Subminiature 20.06 mm (.79 in.) L x 9.90 mm (.39 in.) W x 9.90 mm (.39 in.) H
- Low power consumption
- Sealed construction permits automatic soldering and cleaning of the PC board
- High-capacity type available
- Unique moving magnet armature (Moving Loop System) reduces relay size, magnetic interference and contact bounce time
- Reverse coil polarity available with some models



Contact Data

Contact ratings

Standard (Latching & Non-latching): 5 A, 250 VAC, 30 VDC (Resistive); 2 A, 250 VAC, 30 VDC (Inductive); 1/6 HP, 250 VAC; 2 A, 125 VAC, Pilot duty; 3 A, 120 VAC (Tungsten)

Contact material

AgCdO

Maximum operating voltage

380 VAC, 125 VDC

Maximum operating current

Standard: 5 A

Maximum switching capacity

Standard, resistive: 1,250 VA, 150 W

Minimum permissible load

10 mA at 5 VDC

Construction Data

Termination

PCB terminals

Construction

Fully-sealed

Weight

Standard: .12 oz (3.5 g)

Two-pole: .16 oz (4.5 g)

Latching: .13 oz (3.7 g)

Packaging method

Tubes

Coil Data (% of rated voltage)

Pickup voltage 70% max. (SPST-NO); 80% max.

Dropout voltage 10% min.

Set voltage 70% max.

Reset voltage 70% max.

Maximum voltage 130% (SPST-NO, latching); 110% (2-pole type)

Characteristic Data

Initial contact resistance 30mΩ max.

Operate time 10ms max. (mean value: approx. 3.5ms)

Release time 10ms max. (mean value: approx. 1.5ms)

***Set time-latching** 10ms max. (mean value: approx. 3ms)

***Reset time-latching** 10ms max. (mean value: approx. 3ms)

Insulation resistance 1,000MΩ min. (at 500 VDC)

Dielectric strength

Between coil and contacts: 3,000 VAC, 50/60 Hz for 1 minute

Between contact sets: 2,000 VAC, 50/60 Hz for 1 minute

Between contacts of same pole: 1,000 VAC, 50/60 Hz for 1 minute

Between set and reset coils: 250 VAC, 50/60 Hz for 1 minute

Ambient temperature -25° to 70°C

Service life

Mechanical: 50,000,000 operations min.

Electrical: 100,000 operations min. at 5 A, 250 VAC, 30 VDC (Standard)

Note: 1. * Minimum set and reset signal width is 15ms.

Ordering Information

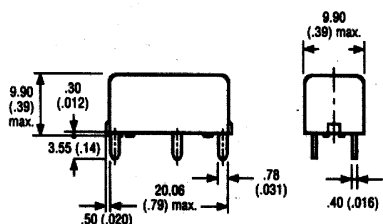
Part number	Rated voltage (V)	Coil res. (Ohms)	Power (mW)	Contact rating	Type
G6B-1114P-US-DC5	5 DC	125	200	5 A	SPST-NO
-DC6	6 DC	180	200	5 A	Non-
-DC12	12 DC	720	200	5 A	Latching
-DC24	24 DC	2,880	200	5 A	Standard
G6B-2114P-US-DC5	5 DC	83.3	300	5 A	SPST-NO +
-DC6	6 DC	120	300	5 A	SPST-NC
-DC12	12 DC	480	300	5 A	Non-
-DC24	24 DC	1,920	300	5 A	Latching Standard
G6B-2214P-US-DC5	5 DC	83.3	300	5 A	DPST-NO
-DC6	6 DC	120	300	5 A	Non-
-DC12	12 DC	480	300	5 A	Latching
-DC24	24 DC	1,920	300	5 A	Standard
G6BK-1114P-US-DC5	5 DC	89.2	280	5 A	SPST-NO
-DC12	12 DC	515	280	5 A	Dual-Coil
-DC24	24 DC	2,060	280	5 A	Latching
G6BU-1114P-US-DC5	5 DC	125	200	5 A	SPST-NO
-DC12	12 DC	720	200	5 A	Single Coil
-DC24	24 DC	2,880	200	5 A	Latching

Note: 1. Other coil voltages available.

G6B

Dimensions [Unit: mm (inch)]

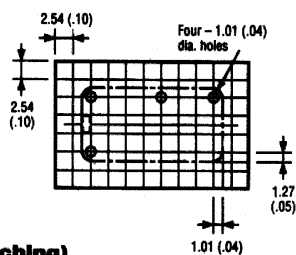
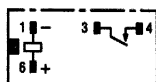
One-Pole Type - Non-Latching and Single Coil Latching



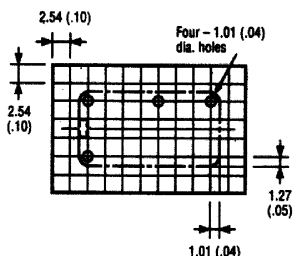
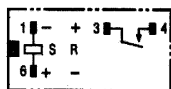
**Terminal arrangement/
Internal connections**
(bottom view)

Mounting holes
(bottom view)

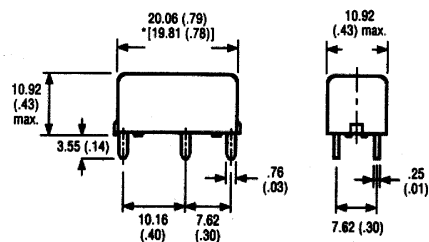
SPST-NO (Non-latching)



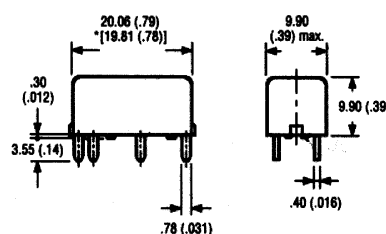
G6BU-1114P (Single coil latching)



Two-Pole Type



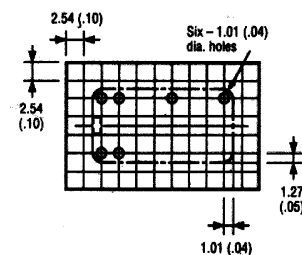
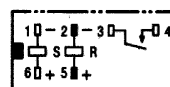
Dual Coil Latching



**Terminal arrangement/
Internal connections**
(bottom view)

Mounting holes
(bottom view)

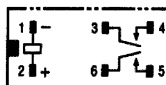
G6BK-1114P (Dual coil latching)



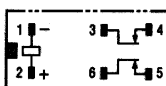
**Terminal arrangement/
Internal connections**
(bottom view)

Mounting holes
(bottom view)

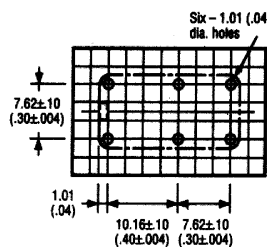
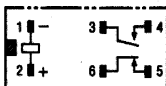
DPST-NO



DPST-NC



SPST-NO+SPST-NC



Note: 1. and indicate mounting orientation marks.
2. Pay attention to the polarity of the coil.
3. *** indicates average value.

RELAYS

G6E

Low Signal Relay

Features

- Unique moving loop armature reduces relay size, magnetic interference and contact bounce time
- Subminiature: 7.87 mm (.31 in.) H x 9.91 mm (.39 in.) W x 16.0 mm (.63 in.) L
- High sensitivity with pickup coil power of 98mW
- Surge withstand voltage meets FCC Part 68 rule
- Packaged for automatic insertion
- Minimal loss of latching capability due to highly efficient magnetic circuit; also, highly resistant to shock and vibration
- Sealed construction: allows automatic solder and cleaning; assures high reliability even in adverse environments
- Terminal arrangement fits international standard 100-mil grid
- Surge withstand voltage – meets FCC Part 68 Rule
- UL listed, CSA certified

Contact Data

Contact ratings 125 VAC, 0.4 A; 30 VDC, 2 A

Contact material Ag (Au clad)

Carry current 3 A

Maximum operating voltage 250 VAC, 220 VDC

Maximum operating current 3 A (AC), 3 A (DC)

Maximum switching capacity 50 VA, 60 W

Minimum permissible load 10 μ A, 10mVDC

Coil Data (% of rated voltage)

Pickup voltage 70% max.

Dropout voltage 10% min.

Set voltage 70% max.

Reset voltage 70% max.

Maximum voltage 190% at 23°C max.

Characteristic Data

Initial contact resistance 50m Ω max.

Operate time 5ms max. (mean value: approx. 2.9ms)

Release time 5ms max. (mean value: approx. 1.3ms)

Set time – latching 5ms max. (mean value: approx. 1.3ms)

Reset time – latching 5ms max. (mean value: approx. 1.3ms)

Insulation resistance 1,000M Ω min. (at 500 VDC)

Dielectric strength

Between coil and contacts: 1,500 VAC, 50/60 Hz for 1 minute

Between contacts of same pole: 1,000 VAC, 50/60 Hz for 1 minute

Surge withstand voltage

1,500 V 10 x 160 μ s (conforms to FCC Part 68)

2,500 V 2 x 10 μ s (Belcore TA-NWT-001089)

Ambient temperature -40° to 70°C

Service life

Mechanical: 100,000,000 operations min.

(at operating frequency of 36,000 operations/hour)

Electrical: 500,000 operations min. at 2 A, 30 VDC

Construction Data

Termination PCB terminals

Construction Fully-sealed

Weight .095 oz. (2.7 g)

Packaging method Tubes

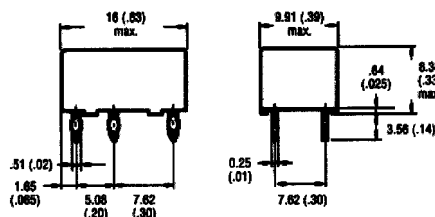


Ordering Information

Part number	Rated voltage (V)	Coil res. (Ohms)	Power (mW)	Contact form	Type
G6E-134P-ST-US-DC5	5 DC	125	200	SPDT	Non-Latching
-DC12	12 DC	720	200	SPDT	Latching
-DC24	24 DC	2,880	200	SPDT	Sealed
-DC48	48 DC	5,760	400	SPDT	Sealed
G6E-134P-ST-US-H-DC48	48 DC	11,520	200	SPDT	Non-Latching Sealed
G6EK-134P-ST-US-DC5	5 DC	125	200	SPDT	Dual
-DC12	12 DC	720	200	SPDT	Coil
-DC24	24 DC	2,880	200	SPDT	Latching Sealed

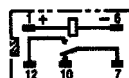
Note: Latching versions, and low-sensitivity (400mW) version available.

Dimensions [Unit: mm (inch)]

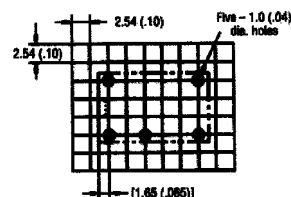


Non-Latching

Terminal arrangement/ Internal connections (bottom view)

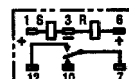


Mounting holes (bottom view) Tolerance: ± 0.1

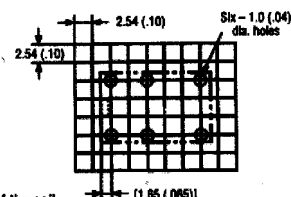


Dual Coil Latching

Terminal arrangement/ Internal connections (bottom view)



Mounting holes (bottom view)



Note: 1. Pay attention to the polarity of the coil.
2. and indicate mounting orientation marks.

G6H

Low Signal Relay

Features

- Compact, with low 5 mm (.197 in.) profile
- Low power consumption (140mW)
- Low thermoelectromotive force
- Low magnetic interference enables high-density mounting
- Utilizes OMRON's moving loop design
- Highly stable magnetic circuit for latching endurance and excellent resistance to vibration and shock
- High sensitivity with low nominal power consumption
- UL listed, CSA certified

Contact Data

Contact ratings 125 VAC, 0.5 A; 30 VDC, 1 A
Contact material Ag (Au clad)
Carry current 1 A
Maximum operating voltage 125 VAC, 110 VDC
Maximum operating current 1 A
Maximum switching capacity 62.5 VA, 33 W
Minimum permissible load 10 μ A, 10mVDC

Coil Data (% of rated voltage)

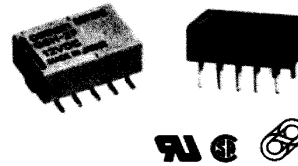
Pickup voltage 75% max.
Droop voltage 10% min.
Set voltage 75% max.
Reset voltage 75% max.
Maximum voltage 200% max.

Characteristic Data

Initial contact resistance 50m Ω max.
Operate time 3ms max. (mean value: approx. 2.0ms)
Release time 2ms max. (mean value: approx. 1.0ms)
Set time - latching 3ms max. (mean value: approx. 2.0ms)
Reset time - latching 2ms max. (mean value: approx. 1.0ms)
Insulation resistance 1,000M Ω max. (at 500 VDC)
Dielectric strength
Between coil and contacts, and between contacts of different polarity:
 1,000 VAC, 50/60 Hz for 1 minute
Between contacts of same polarity: 750 VAC, 50/60 Hz for 1 minute
Surge withstand voltage 1,500 V 10 x 160 μ s (conforms to FCC Part 68)
Ambient temperature -40° to 70°C
Service life
Mechanical: 100 million operations min.
Electrical: 100,000 operations min. at 1 A, 30 VDC

Construction Data

Termination PCB terminals
Construction Fully-sealed
Weight .05 oz. (1.5 g)
Packaging method Tubes; tape and reel (surface mount only)

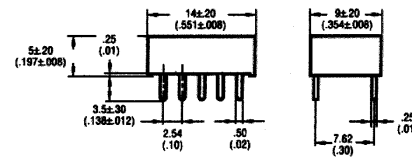


Ordering Information

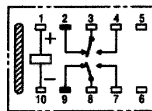
Part number	Rated voltage (VDC)	Coil res. (Ohms)	Power (mW)	Contact form	Type
G6H-2-DC5	5 DC	178	140	DPDT	Non-Latching
-DC12	12 DC	1,028	140	DPDT	Latching
-DC24	24 DC	2,880	200	DPDT	Sealed
G6HK-2-DC5	5 DC	125	200	DPDT	Dual
-DC12	12 DC	720	200	DPDT	Coil
-DC24	24 DC	1,920	300	DPDT	Latching Sealed
G6H-2-F-DC5	5 DC	178	140	DPDT	Surface Mount
-DC12	12 DC	1,028	140	DPDT	
-DC24	24 DC	2,880	200	DPDT	

Note: 1. For high ambient (+85°C) version, replace "-2-" with "-2-100-" in part number.
 2. Single coil latching versions also available.

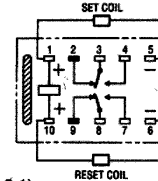
Dimensions [Unit: mm (inch)]



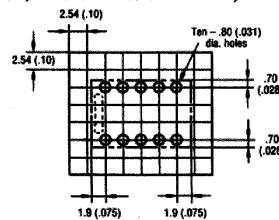
Non-Latching Terminal arrangement/ Internal connections (bottom view)



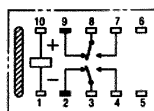
Dual Coil-Latching Terminal arrangement/ Internal connections (bottom view)



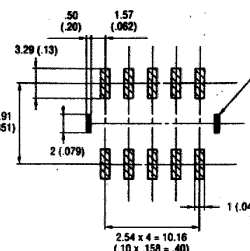
Mounting holes (bottom view, dimensional tolerance ± 0.1)



Terminal arrangement/ Internal connections (bottom view)



Mounting pads (bottom view, dimensional tolerance ± 0.1)



Note: 1. A tolerance of ± 4 mm applies to all dimensions shown.
 2. and indicate mounting orientation marks.

G7G

Power PCB Relay

Features

- Compact, low-cost power relay capable of switching up to 30 A loads
- PCB coil terminals with QC load terminals; ideal for heavy duty loads
- Class B insulation standard, sealed versions available, Class F versions available
- Typical applications include home appliances, industrial equipment, and HVAC products

Contact Data

Contact ratings

SPST-NO: 30 A, 250 VAC, 28 VDC (Resistive); 15 A, 125 VAC (Resistive); 10 A, 277 VAC (Resistive); 1 HP, 125 VAC; 1 HP, 240 VAC; 5 A, 240 VAC (Tungsten); 6 A, 277 VAC (Ballast)
***SPDT:** 20 A/10 A, 240 VAC, 28 VDC (Resistive); 15 A/15 A, 125 VAC (Resistive); 10 A/6 A, 277 VAC (Resistive); 1 HP/1/2 HP, 125 VAC; 2 HP/1/2 HP, 240 VAC; 5 A/3 A, 125 VAC (Tungsten); 5 A/3 A, 240 VAC (Tungsten); 6 A/3 A, 277 VAC (Ballast)

Maximum operating voltage 250 VAC, 28 VDC

Maximum operating current

SPST-NO: 30 A (AC) 20 A (DC)
SPDT: 20 A/10 A (AC) 20 A/10 A (DC)*

Maximum switching capacity

SPST-NO: 7,500 VA, 840 W
SPDT: 5,000/2,500 VA, 560/280 W*

Minimum permissible load 500 mA at 5 VDC

Note: 1. * NO contact/NC contact

Coil Data (% of rated voltage)

Pickup voltage 75% max.

Droopout voltage 10% min.

Maximum voltage 120%

Characteristic Data

Initial contact resistance 50mΩ max.

Insulation resistance 1,000MΩ min. (at 500 VDC)

Dielectric strength

Between contacts of same pole: 1,500 VAC, 50/60 Hz for 1 minute

Between coil and contacts: 2,500 VAC, 50/60 Hz for 1 minute

Service life

Mechanical: 10,000,000 operations min.

Electrical: 100,000 operations min. at all resistive ratings

Construction Data

Termination PCB+Quick connect terminals

Construction Fully-sealed and unsealed

Weight 1.13oz (32g)

Packaging method Trays

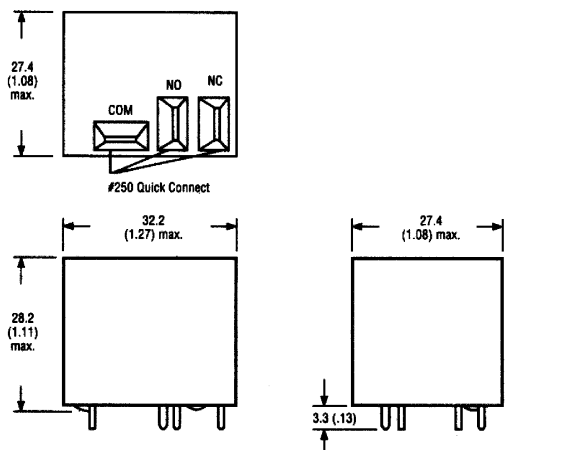


Ordering Information

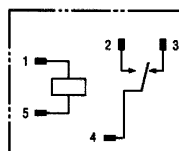
Part number	Rated voltage (V)	Coil res. (Ohms)	Power (mW)	Contact rating	Type
G7G-1A2-CB-DC6	6 DC	40	900	30 A	SPST-NO
-DC12	12 DC	155	900	30 A	Unsealed
-DC24	24 DC	660	900	30 A	
G7G-1A4-CB-DC6	6 DC	40	900	30 A	SPST-NO
-DC12	12 DC	155	900	30 A	Sealed
-DC24	24 DC	660	900	30 A	
G7G-1C2-CB-DC6	6 DC	40	900	20 A/10 A*	SPDT
-DC12	12 DC	155	900	20 A/10 A*	Unsealed
-DC24	24 DC	660	900	20 A/10 A*	
G7G-1C4-CB-DC6	6 DC	40	900	20 A/10 A*	SPDT
-DC12	12 DC	155	900	20 A/10 A*	Sealed
-DC24	24 DC	660	900	20 A/10 A*	

Note: 1. Other coil voltages available.
 2. Class F coil insulation available.
 3. * NO contact/NC contact

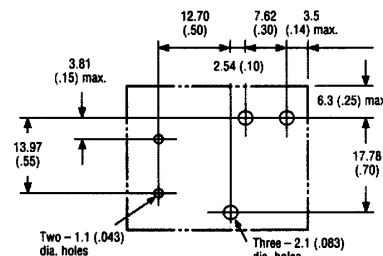
Dimensions [Unit: mm (inch)]



Terminal arrangement/ Internal connections (bottom view)



Mounting holes (bottom view)



Note: 1. For SPST-NO version, remove terminal no. 3.

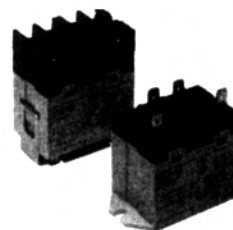
G7L

General Purpose Relay

7 RELAYS

Features

- Allows switching of 25 A and 30 A loads
- A high-capacity, high-withstand voltage relay compatible with momentary voltage drops
- No contact chattering for momentary voltage drops up to 50% of rated voltage
- UL Class B construction standard
- Wide-range AC-activated coil that handles 100 to 120 VAC at either 50 or 60 Hz
- Quick-connect, screw, and PCB terminals available
- Conforming to IEC 950
- VDE approved versions available,



Contact Data

Contact ratings

SPST-NO: 30 A, 250 VAC (Resistive); 25 A, 250 VAC (Inductive);
25 A, 277 VAC General Use; 1.5 kW, 120 VAC Tungsten;
3 HP 240/265/277 VAC; 20 FLA/120 LRA, 120 VAC;
17 FLA/102 LRA, 277 VAC
DPST-NO: 25 A, 250 VAC (Resistive); 25 A, 250 VAC (Inductive);
25 A, 277 VAC General Use; 1.5 kW, 120 VAC Tungsten;
3 HP 240/265/277 VAC; 20 FLA/120 LRA, 120 VAC;
17 FLA/102 LRA, 277 VAC

Maximum operating voltage 250 VAC

Maximum operating current

SPST-NO: 30 A
DPST-NO: 25 A

Maximum switching capacity

SPST-NO: Resistive: 6,600 VA
DPST-NO: Resistive: 5,500 VA

Minimum permissible load 100 mA, 5 VDC

Coil Data (% of rated voltage)

Pickup voltage 75% max.

Dropout voltage 15% min.

Maximum voltage 110%

Characteristic Data

Initial contact resistance 50mΩ max.

Insulation resistance 1,000MΩ min. (at 500VDC)

Dielectric strength

Between coil and contacts: 4,000 VAC min./5,000 VAC typical, 50/60 Hz for 1 minute

Between contacts of same pole: 2,000 VAC, 50/60 Hz for 1 minute

Between contacts of different poles (DPST-NO type): 2,000 VAC, 50/60 Hz for 1 minute

Service life

Mechanical: 5,000,000 operations min.

Electrical: 100,000 operations min. for all resistive and inductive ratings

Construction Data

Termination #250 Quick-connect terminals or screw terminals

Weight

#250 QC type: Approx. 3.17 oz. (90 g)

Screw terminal type: Approx. 4.23 oz. (120 g)

Packaging method Trays

Ordering Information

Part number	Rated voltage (V)	Coil res. (Ωhms)	Power	Contact rating	Type
'G7L-1A-TJ-CB -DC12	12 DC	75	1.9 W	30 A	SPST-NO
-DC24	24 DC	303	Approx.	30 A	E Mounting
-AC24	24 AC	303	1.7 to	30 A	Bracket
-AC100/120	100/120 AC	5,260	2.5 VA	30 A	Required
-AC200/240	200/240 AC	21,000	Approx.	30 A	#250 QC Terminals
'G7L-1A-BJ-CB -DC12	12 DC	75	1.9 W	30 A	SPST-NO
-DC24	24 DC	303	Approx.	30 A	E Mounting
-AC24	24 AC	303	1.7 to	30 A	Bracket
-AC100/120	100/120 AC	5,260	2.5 VA	30 A	Required
-AC200/240	200/240 AC	21,000	Approx.	30 A	Screw Terminals
'G7L-2A-TJ-CB -DC12	12 DC	75	1.9 W	25 A	DPST-NO
-DC24	24 DC	303	Approx.	25 A	E Mounting
-AC24	24 AC	303	1.7 to	25 A	Bracket
-AC100/120	100/120 AC	5,260	2.5 VA	25 A	Required
-AC200/240	200/240 AC	21,000	Approx.	25 A	#250 QC Terminals
'G7L-2A-BJ-CB -DC12	12 DC	75	1.9 W	25 A	DPST-NO
-DC24	24 DC	303	Approx.	25 A	E Mounting
-AC24	24 AC	303	1.7 to	25 A	Bracket
-AC100/120	100/120 AC	5,260	2.5 VA	25 A	Required
-AC200/240	200/240 AC	21,000	Approx.	25 A	Screw Terminals
G7L-1A-TUBJ-CB-DC12	12 DC	75	1.9 W	30 A	SPST-NO
-DC24	24 DC	303	Approx.	30 A	Upper
-AC24	24 AC	303	1.7 to	30 A	Flange
-AC100/120	100/120 AC	5,260	2.5 VA	30 A	Bracket
-AC200/240	200/240 AC	21,000	Approx.	30 A	#250 QC Terminals
G7L-1A-BUBJ-CB-DC12	12 DC	75	1.9 W	30 A	SPST-NO
-DC24	24 DC	303	Approx.	30 A	Upper Flange
-AC24	24 AC	303	1.7 to	30 A	Bracket
-AC100/120	100/120 AC	5,260	2.5 VA	30 A	Screw
-AC200/240	200/240 AC	21,000	Approx.	30 A	Terminals
G7L-2A-TUBJ-CB-DC12	12 DC	75	1.9 W	25 A	DPST-NO
-DC24	24 DC	303	Approx.	25 A	Upper
-AC24	24 AC	303	1.7 to	25 A	Flange
-AC100/120	100/120 AC	5,260	2.5 VA	25 A	Bracket
-AC200/240	200/240 AC	21,000	Approx.	25 A	#250 QC Terminals
G7L-2A-BUBJ-CB-DC12	12 DC	75	1.9 W	25 A	DPST-NO
-DC24	24 DC	303	Approx.	25 A	Upper Flange
-AC24	24 AC	303	1.7 to	25 A	Bracket
-AC100/120	100/120 AC	5,260	2.5 VA	25 A	Screw
-AC200/240	200/240 AC	21,000	Approx.	25 A	Terminals

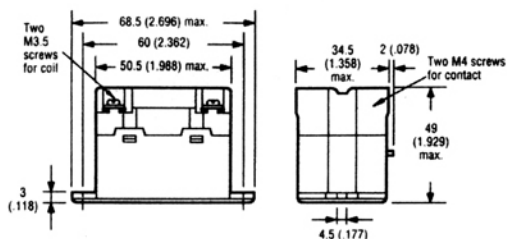
Note: 1. † E Mounting bracket required for mounting (R99-07-G5D).
2. Other coil voltages available.

G7L

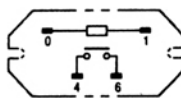
General Purpose Relay

Dimensions [Unit: mm (inch)]

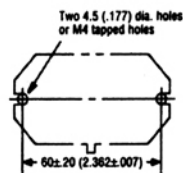
G7L-1A-SUBJ



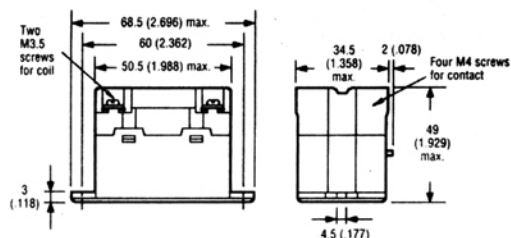
Terminal arrangement/ Internal connections (Top view)



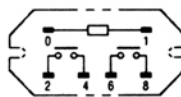
Mounting holes (Bottom view)



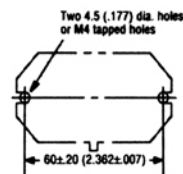
G7L-2A-SUBJ



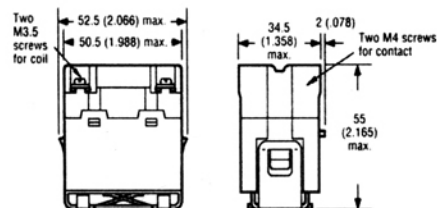
Terminal arrangement/ Internal connections (Top view)



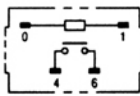
Mounting holes (Bottom view)



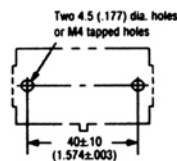
G7L-1A-BJ - E Bracket Attached



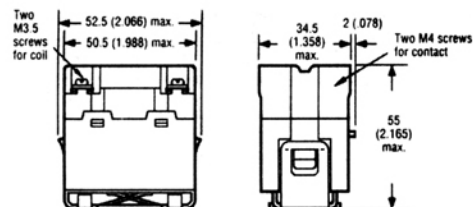
Terminal arrangement/ Internal connections (Top view)



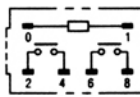
Mounting holes (Bottom view)



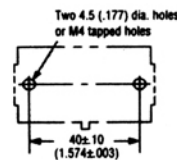
G7L-2A-BJ - E Bracket Attached



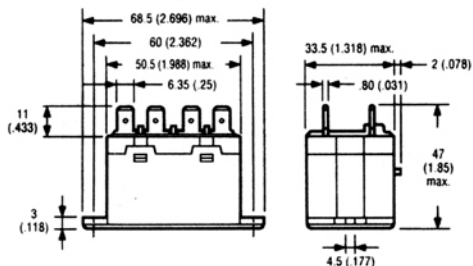
Terminal arrangement/ Internal connections (Top view)



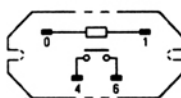
Mounting holes (Bottom view)



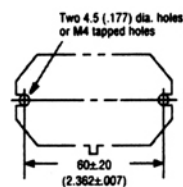
G7L-1A-TUBJ



Terminal arrangement/ Internal connections (Top view)



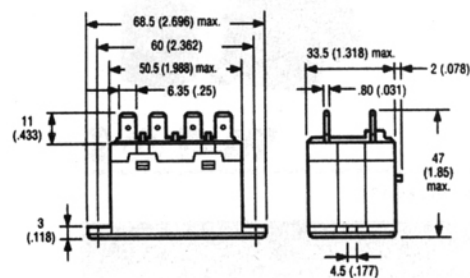
Mounting holes (Bottom view)



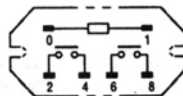
G7L

Dimensions [Unit: mm (inch)]

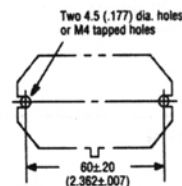
G7L-2A-TUBJ



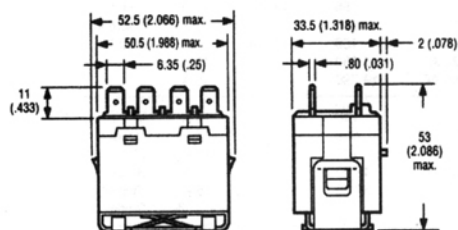
Terminal arrangement/ Internal connections (Top view)



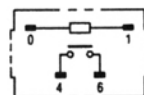
Mounting holes (Bottom view)



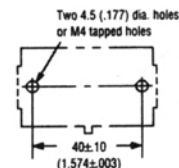
G7L-1A-TJ - E Bracket Attached



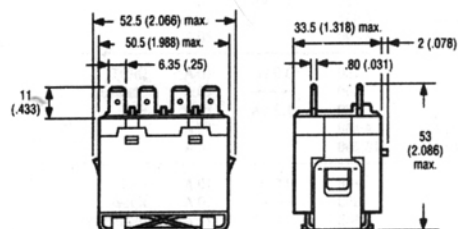
Terminal arrangement/ Internal connections (Top view)



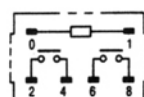
Mounting holes (Bottom view)



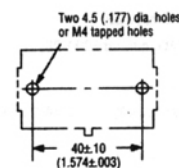
G7L-2A-TJ - E Bracket Attached



Terminal arrangement/ Internal connections (Top view)



Mounting holes (Bottom view)



LY

General Purpose Relay

Features

- Arc barrier equipped relay with high dielectric strength
- Long dependable service life assured by AgCdO contacts
- Choose models with LED indicator, push-to-test button, and upper mounting bracket
- LR approved versions are available



Contact Data

Contact ratings

SPDT (Single contact): 15 A, 110 VAC, 24 VDC (Resistive); 10 A, 110 VAC (Inductive); 7 A, 24 VDC (Inductive); 15 A, 240 VAC, 28 VDC (Resistive); 5 A, 120 VAC Tungsten (TV-5); 1/2 HP, 120 VAC; 470 VA, 120 VAC (Pilot Duty)

DPDT (Single contact): 10 A, 110 VAC, 24 VDC (Resistive); 7.5 A, 110 VAC (Inductive); 5 A, 24 VDC (Inductive); 13 A, 120 VAC, 28 VDC (Resistive); 12 A, 240 VAC (Resistive); 3 A, 120 VAC, Tungsten (TV-3); 1/2 HP, 120 VAC; 1/3 HP, 240 VAC; 345 VA, 120/240 VAC (Pilot duty)

3PDT/4PDT (Single contact): 10 A, 240 VAC, 28 VDC (Resistive); 1/2 HP, 240 VAC; 10 A, 110 VAC, 24 VDC (Resistive); 7.5 A, 110 VAC (Inductive); 5 A, 24 VDC (Inductive)

Maximum operating voltage 250 VAC, 125 VDC

Maximum operating current

SPDT: 15 A

DPDT/3PDT/4PDT: 10 A

Maximum switching capacity

SPDT, Resistive: 1,700 VA, 360 W

DPDT/3PDT/4PDT, Resistive: 1,100 VA, 240 W

Minimum permissible load 100mA at 5 VDC

Coil Data (% of rated voltage)

Pickup voltage 80% max.

Dropout voltage 30% min. (AC); 10% min. (DC)

Maximum voltage 110%

Characteristic Data

Initial contact resistance 50mΩ max.

Insulation resistance 100MΩ min. (at 500 VDC)

Dielectric strength

2,000 VAC, 50/60 Hz for 1 minute

Between contacts of same polarity: 1,000 VAC, 50/60 Hz for 1 minute

Service life

Mechanical: 50,000,000 operations min.

Electrical: SPDT: 200,000 operations min. at 15 A, 110 VAC, 24 VDC (Resistive);

10 A, 110 VAC (Inductive); 7 A, 24 VDC (Inductive)

DPDT: 500,000 operations min. at 10 A, 110 VAC, 24 VDC (Resistive);

7.5 A, 110 VAC (Inductive); 5 A, 24 VDC (Inductive)

3PDT/4PDT: 200,000 operations at 10 A, 110 VAC, 24 VDC (Resistive);

7.5 A, 110 VAC (Inductive); 5 A, 24 VDC (Inductive)

Construction Data

Termination Plug-in/solder terminals or PC board terminals

Weight

SPDT/DPDT: 1.41 oz. (40 g)

3PDT: 1.76 oz. (50 g)

4PDT: 2.47 oz. (70 g)

Packaging method Trays

Ordering Information

Part number	Rated voltage (V)	Coil res. (Ohms)	Power	Contact rating	Type
LY1-DC12	12 DC	160	0.9 W	15 A	SPDT
-DC24	24 DC	650	—	15 A	Standard
-AC24	24 AC	180	1.2 VA	15 A	Plug-in/
-AC110/120	110/120 AC	4,430	—	15 A	Solder
-AC220/240	220/240 AC	18,790	—	15 A	—
LY1-0-DC12	12 DC	160	0.9 W	15 A	SPDT
-DC24	24 DC	650	—	15 A	Standard
-AC24	24 AC	180	1.2 VA	15 A	PCB
-AC110/120	110/120 AC	4,430	—	15 A	—
-AC220/240	220/240 AC	18,790	—	15 A	—
LY1F-DC12	12 DC	160	0.9 W	15 A	SPDT
-DC24	24 DC	650	—	15 A	Upper
-AC24	24 AC	180	1.2 VA	15 A	Mounting
-AC110/120	110/120 AC	4,430	—	15 A	Bracket
-AC220/240	220/240 AC	18,790	—	15 A	Plug-in/
					Solder
LY1N-DC12	12 DC	160	0.9 W	15 A	SPDT
-DC24	24 DC	650	—	15 A	LED
-AC24	24 AC	180	1.2 VA	15 A	Indicator
-AC110/120	110/120 AC	4,430	—	15 A	Plug-in/
-AC220/240	220/240 AC	18,790	—	15 A	Solder
LY2-DC12	12 DC	160	0.9 W	10 A	DPDT
-DC24	24 DC	650	—	10 A	Standard
-AC24	24 AC	180	1.2 VA	10 A	Plug-in/
-AC110/120	110/120 AC	4,430	—	10 A	Solder
-AC220/240	220/240 AC	18,790	—	10 A	—
LY2-0-DC12	12 DC	160	0.9 W	10 A	DPDT
-DC24	24 DC	650	—	10 A	Standard
-AC24	24 AC	180	1.2 VA	10 A	PCB
-AC110/120	110/120 AC	4,430	—	10 A	—
-AC220/240	220/240 AC	18,790	—	10 A	—
LY2F-DC12	12 DC	160	0.9 W	10 A	DPDT
-DC24	24 DC	650	—	10 A	Upper
-AC24	24 AC	180	1.2 VA	10 A	Mounting
-AC110/120	110/120 AC	4,430	—	10 A	Bracket
-AC220/240	220/240 AC	18,790	—	10 A	Plug-in/
					Solder
LY2N-DC12	12 DC	160	0.9 W	10 A	DPDT
-DC24	24 DC	650	—	10 A	LED
-AC24	24 AC	180	1.2 VA	10 A	Indicator
-AC110/120	110/120 AC	4,430	—	10 A	Plug-in/
-AC220/240	220/240 AC	18,790	—	10 A	Solder
LY212N-DC12	12 DC	160	0.9 W	10 A	DPDT LED
-DC24	24 DC	650	—	10 A	Indicator
-AC24	24 AC	180	1.2 VA	10 A	Push-to-
-AC110/120	110/120 AC	4,430	—	10 A	test Button
					Plug-in/
					Solder
LY3-DC12	12 DC	107	1.4 W	10 A	3PDT
-DC24	24 DC	410	—	10 A	Standard
-AC24	24 AC	100	1.6 VA	10 A	Plug-in/
-AC120	120 AC	2,450	—	10 A	Solder
-AC240	240 AC	10,400	—	10 A	—

Note: 1. Other coil voltages available.

2. Surge suppression diode available for DC coils.

LY

General Purpose Relay

7 RELAYS

Ordering Information (continued)

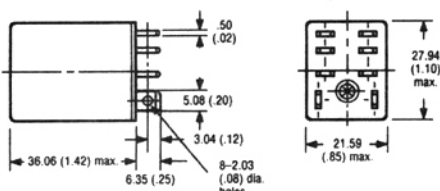
Part number	Rated voltage (V)	Coil res. (Ohms)	Power	Contact rating	Type
LY3-0-DC12	12 DC	107	1.4 W	10 A	3PDT
-DC24	24 DC	410	—	10 A	Standard
-AC24	24 AC	100	1.6 VA	10 A	PCB
-AC120	120 AC	2,450	—	10 A	—
-AC240	240 AC	10,400	—	10 A	—
LY3F-DC12	12 DC	107	1.4 W	10 A	3PDT
-DC24	24 DC	410	—	10 A	Upper
-AC24	24 AC	100	1.6 VA	10 A	Mounting
-AC120	120 AC	2,450	—	10 A	Bracket
-AC240	240 AC	10,400	—	10 A	Plug-in/ Solder
LY3N-DC12	12 DC	107	1.4 W	10 A	3PDT
-DC24	24 DC	410	—	10 A	LED
-AC24	24 AC	100	1.6 VA	10 A	Indicator
-AC120	120 AC	2,450	—	10 A	Plug-in/ Solder
-AC240	240 AC	10,400	—	10 A	—
LY4-DC12	12 DC	100	1.5 W	10 A	4PDT
-DC24	24 DC	350	—	10 A	Standard
-AC24	24 AC	78	1.95 VA	10 A	Plug-in/ Solder
-AC120	120 AC	2,200	—	10 A	—
-AC240	240 AC	9,000	—	10 A	—

Part number	Rated voltage (V)	Coil res. (Ohms)	Power	Contact rating	Type
LY4-0-DC12	12 DC	100	1.5 W	10 A	4PDT
-DC24	24 DC	350	—	10 A	Standard
-AC24	24 AC	78	1.95 VA	10 A	PCB
-AC120	120 AC	2,200	—	10 A	—
-AC240	240 AC	9,000	—	10 A	—
LY4F-DC12	12 DC	100	1.5 W	10 A	4PDT
-DC24	24 DC	350	—	10 A	Upper
-AC24	24 AC	78	1.95 VA	10 A	Mounting
-AC120	120 AC	2,200	—	10 A	Bracket
-AC240	240 AC	9,000	—	10 A	Plug-in/ Solder
LY4N-DC12	12 DC	100	1.5 W	10 A	4PDT
-DC24	24 DC	350	—	10 A	LED
-AC24	24 AC	78	1.95 VA	10 A	Indicator
-AC120	120 AC	2,200	—	10 A	Plug-in/ Solder
-AC240	240 AC	9,000	—	10 A	—
LY412N-DC12	12 DC	100	1.5 W	10 A	4PDT LED
-DC24	24 DC	350	—	10 A	Indicator
-AC24	24 AC	78	1.95 VA	10 A	Push-to- test Button
-AC120	120 AC	2,200	—	10 A	Plug-in/ Solder

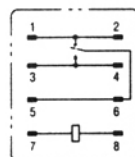
Note: 1. Other coil voltages available.
2. Surge suppression diode available for DC coils.

Dimensions [Unit: mm (inch)]

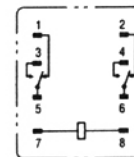
LY1 and LY2



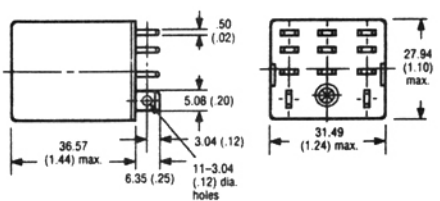
LY1 Terminal arrangement



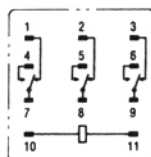
LY2 Terminal arrangement



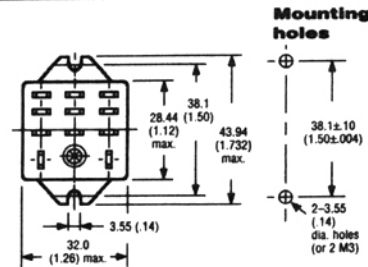
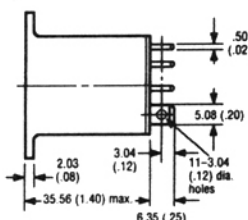
LY3



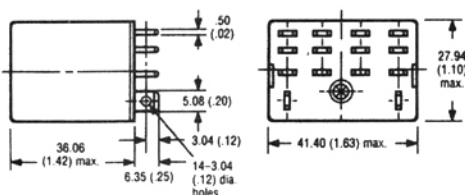
Terminal arrangement (bottom view)



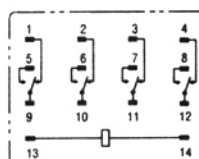
LY3F



LY4



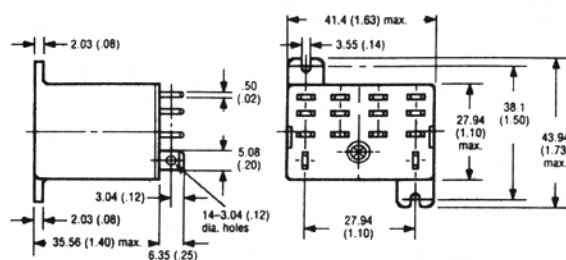
Terminal arrangement (bottom view)



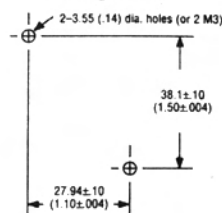
LY

General Purpose Relay

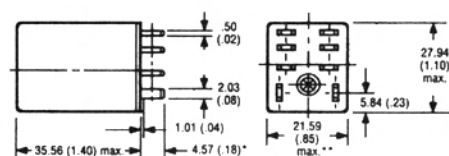
Dimensions [Unit: mm (inch)]

LY4F

Mounting holes

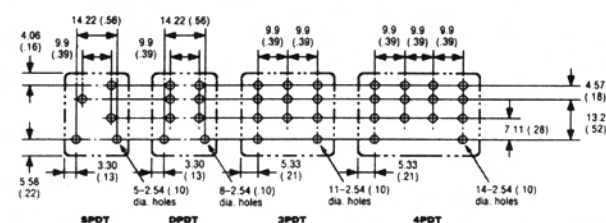


LY1-0, LY2-0, LY3-0, LY4-0

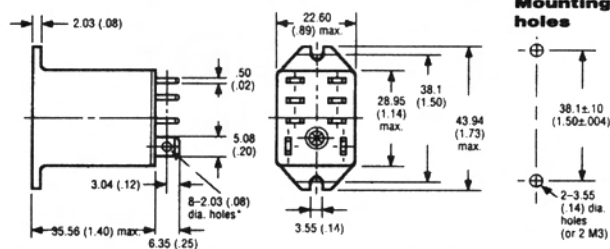


- Note: 1. * The above dimension applies to LY2-0. For LY1-0, this dimension is .25 (6.35)*.
2. ** The above dimension applies to LY1-0 and LY2-0. For LY3-0 and LY4-0, refer to LY3 and LY4 dimensions above.

Mounting holes (bottom view)



LY1F and LY2F

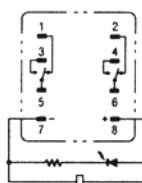


Note: * The above dimension applies to LY1F. For LY2F, this dimension is 8-.12 dia. holes.

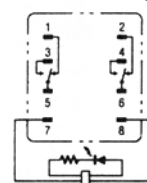
LY2N

Terminal arrangement (bottom view)

DC coil rating type

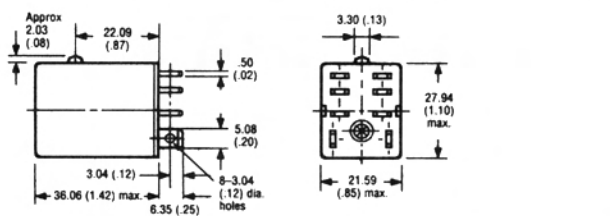


AC coil rating type



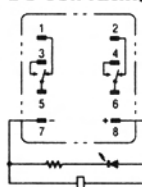
With the LED indicator type, the rated current is approximately 0 to 5.0mA higher than the Standard Type. The coil terminals 10 and 11 of Type LY3N become (-) and (+) and terminals 13 and 14 of Type LY4N become (-) and (+), respectively.

LY212N

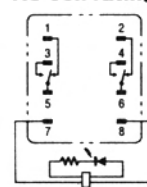


Terminal arrangement (bottom view)

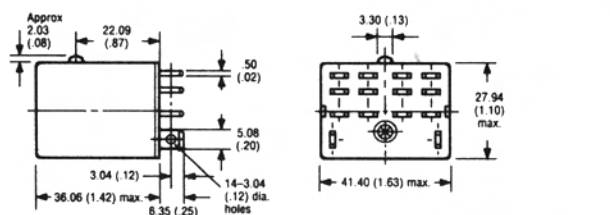
DC coil rating type



AC coil rating type

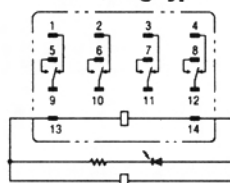


LY412N

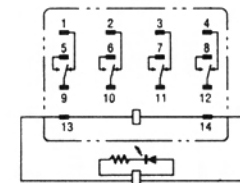


Terminal arrangement (bottom view)

DC coil rating type



AC coll rating type



G8P

Features

- Compact relay – Ideal for home and industrial appliances, HVAC, and many other applications
- Capable of switching up to 30 A load
- A variety of contact forms: SPDT and SPST-NO
- Class B and F insulation, sealed versions, and dust cover available

Contact Data

Contact routines

SPST-NO: 30 A, 250 VAC (Resistive); 20 A, 28 VDC (Resistive); 15 A, 125 VAC (Inductive); 10 A, 250 VAC (Inductive); 5 A, 250 VAC Tungsten; 1 HP, 125 VAC; 2 HP, 250 VAC; 12 A, 277 VAC (Inductive)

SPDT: 20 A/10 A*, 250 VAC, 28 VDC (Resistive); 10 A/10 A*, 250 VAC (Inductive); 1 HP/1/4 HP*, 125 VAC; 2 HP/1/2 HP*, 250 VAC; 12 A/6 A*, 277 VAC (Inductive); 15 A/10 A*, 125 VAC (Inductive); 5 A/3 A*, 250 VAC Tungsten

Maximum operation voltage 250 VAC, 28 VDC

Maximum operating current

SPST-NO: 30 A (AC), 20 A (DC)
SPDT: 20 A/10 A (AC), 20 A/10 A (DC)

Maximum switching capacity

SPST-NO: 7,500 VA, 560 W
SPDT: 5,000/2,500 VA, 560/280 W

Minimum permissible load 500 mA at 5 VDC

Note: 1. * NO contact/NC contact

Coll Data (% of rated voltage)

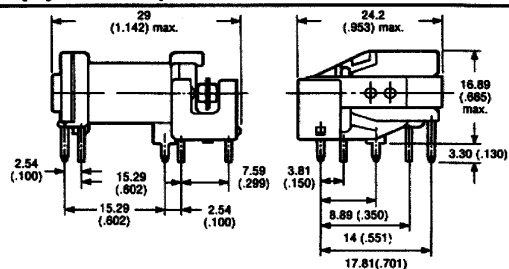
Pickup voltage 75% max.
Dropout voltage 10% min.
Maximum voltage 120% max.

Characteristic Data

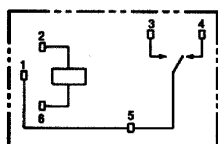
Initial contact resistance 20mΩ max.
Insulation resistance 10MΩ min. (at 500 VDC)
Dielectric strength 1,500 VAC, 50/60 Hz for 1 minute
Service life
Mechanical: 10,000,000 operations min.
Electrical: 100,000 operations min. at 20 A;
 30,000 operations min. at 30 A

Dimensions [Unit: mm (inch)]

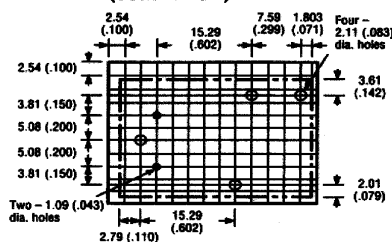
SPDT (Open frame)



**Terminal arrangement/
Internal connections
(bottom view)**



Mounting holes
(bottom view)



Construction Data

Termination PCB terminals

Construction Fully-sealed and open frame

Weight .67oz (19g)

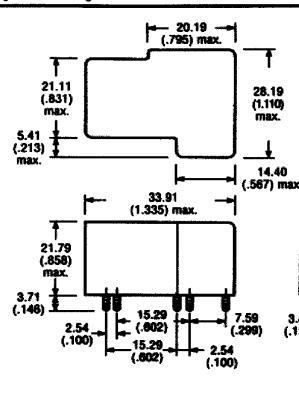
Packaging method Trays

Ordering Information

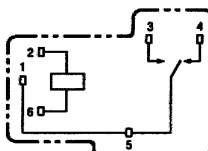
Part number	Rated voltage (V)	Con. res. (Ohms)	Power (mW)	Contact rating	Type
G8P-111P-US -DC6	6 DC	40	900	20 A/10 A	SPDT
-DC12	12 DC	155	900	20 A/10 A	Open
-DC24	24 DC	660	900	20 A/10 A	Frame
G8P-1111P-US -DC6	6 DC	40	900	30 A	SPST-NO
-DC12	12 DC	155	900	30 A	Open
-DC24	24 DC	660	900	30 A	Frame
G8P-114P-US -DC6	6 DC	40	900	20 A/10 A	SPDT
-DC12	12 DC	155	900	20 A/10 A	Sealed
-DC24	24 DC	660	900	20 A/10 A	
G8P-1114P-US -DC6	6 DC	40	900	30 A	SPST-NO
-DC12	12 DC	155	900	30 A	Sealed
-DC24	24 DC	660	900	30 A	

Note: 1. For class B insulation version, insert "-BI" before "US" in the part number.
2. Other coil voltages available.

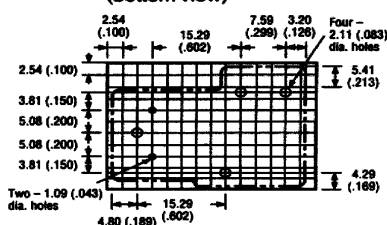
\$PDT (Sealed)



**Terminal arrangement/
Internal connections
(bottom view)**



Mounting holes
(bottom view)



Note: 1. For SPST-NO version, remove terminal no. 4.



7 RELAYS

MK

General Purpose Relay

Features

- Compact relay capable of breaking relatively large load currents
- Long life (minimum 100,000 electrical operations) assured by silver contacts
- The contact operation can be easily checked by mechanical indicator and push-to-test button
- VDE versions available



Contact Data

Contact ratings

DPDT: 10 A, 250 VAC, 28 VDC (Resistive); 7 A, 250 VAC (Inductive)

SPDT: 10 A, 120 VAC, 28 VDC (Resistive); 10 A/5 A (NO/NC),

250 VAC (Resistive); 7 A, 250 VAC (Inductive)

Maximum operating voltage 250 VAC, 250 VDC

Maximum operating current 10 A

Maximum switching capacity

DPDT, Resistive: 2,500 VA, 280 W

SPDT, Resistive: 2,500 VA/1,250 VA, 280 W (NO/NC)

Minimum permissible load 10mA, at 1 VDC

Ordering Information

Part number	Rated voltage (V)	Coil res. (Ohms)	Power	Contact rating	Type
MK2P-S -DC6	6 DC	23.5	1.5 W	10 A	DPDT
-DC12	12 DC	95		10 A	Standard
-DC24	24 DC	430		10 A	with
-DC48	48 DC	1,630		10 A	Mechanical
-AC12	12 AC	16.3	2.7 VA	10 A	Indicator
-AC24	24 AC	68		10 A	and
-AC120	120 AC	1,578		10 A	Push-to-test
-AC240	240 AC	6,737		10 A	Button
MK3P5-S -DC6	6 DC	23.5	1.5 W	10 A	3PDT
-DC12	12 DC	95		10 A	Standard
-DC24	24 DC	430		10 A	with
-DC48	48 DC	1,630		10 A	Mechanical
-AC12	12 AC	16.3	2.7 VA	10 A	Indicator
-AC24	24 AC	68		10 A	and
-AC120	120 AC	1,578		10 A	Push-to-test
-AC240	240 AC	6,737		10 A	Button

Note: 1. Other coil voltages available.

2. For LED version, insert "N" after "P" in the part number.

Coil Data (% of rated voltage)

Pickup voltage 80% max.

Dropout voltage 30% min. [60 Hz], 25% min. [50 Hz] (AC); 15% min. (DC)

Maximum voltage 110%

Characteristic Data

Initial contact resistance 50mΩ max.

Insulation resistance 100MΩ min. (at 500 VDC)

Dielectric strength

Between coil and contacts: 2,000 VAC, 50/60 Hz for 1 minute

Between contacts of same poles, between terminals of the same polarity:

1,000 VAC, 50/60 Hz for 1 minute

Between current-carrying parts, noncurrent-carrying parts, and terminals of opposite polarity: 1,500 VAC, 50/60 Hz for 1 minute

Service life

Mechanical: 5,000,000 operations min.

Electrical: 100,000 operations min. at all contact ratings

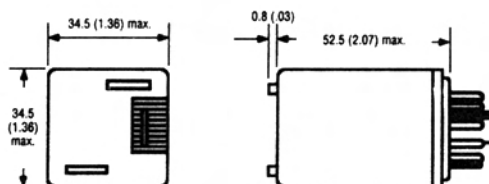
Construction Data

Termination Plug-in terminals

Weight 3.0 oz. (.85 g)

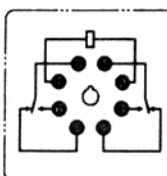
Packaging method Trays

Dimensions [Unit: mm (inch)]

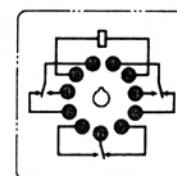


Terminal arrangement (bottom view)

MK2P-S



MK3P5-S



MY

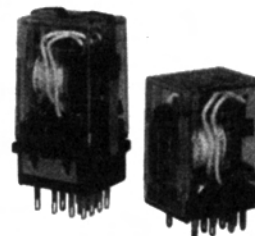
General Purpose Relay

7

RELAYS

Features

- Ultra-high sensitivity relay with quick response
- Designed small, 2- and 3-pole types break 5 A loads and 4-pole type, 3 A load
- High reliability, long life
- High vibration/shock resistance
- Relays with LED indicator, push-to-test button, upper mounting bracket, bifurcated contacts, and latching coil are available



Contact Data

Contact ratings

DPDT/Standard: 5 A, 240 VAC, 28 VDC (Resistive); 2 A, 220 VAC, 24 VDC (Inductive); 1/8 HP, 265 VAC
DPDT/Latching: 3 A, 240 VAC, 28 VDC (Resistive)
3PDT: 5 A, 240 VAC, 28 VDC (Resistive); 2 A, 220 VAC, 24 VDC (Inductive)
4PDT: 3 A, 220 VAC, 24 VDC (Resistive); 0.8 A, 220 VAC, 1.5 A, 24 VDC (Inductive); 5 A, 240 VAC, 28 VDC (Resistive)

Maximum operating voltage 250 VAC, 125 VDC

Maximum operating current

DPDT/3PDT: 5 A
4PDT: 3 A

Maximum switching capacity

DPDT/3PDT, Resistive: 1,100 VA, 120 W
4PDT, Resistive: 660 VA, 72 W

Minimum permissible load

1, 2 and 3 Pole types: 100mA, 5 VDC
4 Pole types: 1mA, 1 VDC
Bifurcated types: 100µA, 1 VDC

Coil Data (% of rated voltage)

Pickup voltage 80% max.

Dropout voltage 30% min. (AC); 10% min. (DC)

Set voltage 80% max. (MY2K)

Reset voltage 80% max. (MY2K)

Maximum voltage 110%

Characteristic Data

Initial contact resistance 50mΩ max.

Insulation resistance 100MΩ min. (at 500 VDC)

Dielectric strength

Single contact type: 2,000 VAC, 50/60 Hz for 1 minute
Between contacts of same polarity: 1,000 VAC, 50/60 Hz for 1 minute
Bifurcated contact type: 1,500 VAC, 50/60 Hz for 1 minute
 (1,000 VAC, 50/60 Hz for 1 minute between non-continuous contacts)

Service life

Mechanical: 20,000,000 operations min.
Electrical: DPDT/3PDT: 500,000 operations min. at 5 A, 220 VAC, 24 VDC (Resistive); 2 A, 220 VAC, 24 VDC (Inductive)
 4PDT: 200,000 operations min. at 3 A, 220 VAC, 24 VDC (Resistive); 0.8 A, 220 VAC (Inductive); 1.5 A, 24 VDC (Inductive)

Construction Data

Termination Plug-in/solder terminals or PC board terminals

Weight 1.23 oz. (35 g)

Packaging method Trays

Ordering Information

Part number	Rated voltage (V)	Coil res. (Ωhms)	Power	Contact rating	Type
MY2-DC12	12 DC	160	0.9 W	5 A	DPDT
-DC24	24 DC	650	—	5 A	Standard
-AC24	24 AC	180	1.2 VA	5 A	Plug-in/
-AC110/120	110/120 AC	4,430	—	5 A	Solder
-AC220/240	220/240 AC	18,790	—	5 A	—
MY2-02-DC12	12 DC	160	0.9 W	5 A	DPDT
-DC24	24 DC	650	—	5 A	Standard
-AC24	24 AC	180	1.2 VA	5 A	PCB
-AC110/120	110/120 AC	4,430	—	5 A	—
-AC220/240	220/240 AC	18,790	—	5 A	—
MY2F-DC12	12 DC	160	0.9 W	5 A	DPDT
-DC24	24 DC	650	—	5 A	Upper
-AC24	24 AC	180	1.2 VA	5 A	Mounting
-AC110/120	110/120 AC	4,430	—	5 A	Bracket
-AC220/240	220/240 AC	18,790	—	5 A	Plug-in/
					Solder
MY2N-DC12	12 DC	160	0.9 W	5 A	DPDT
-DC24	24 DC	650	—	5 A	LED
-AC24	24 AC	180	1.2 VA	5 A	Indicator
-AC110/120	110/120 AC	4,430	—	5 A	Plug-in/
-AC220/240	220/240 AC	18,790	—	5 A	Solder
MY3-DC12	12 DC	160	0.9 W	5 A	3PDT
-DC24	24 DC	650	—	5 A	Standard
-AC24	24 AC	180	1.2 VA	5 A	Plug-in/
-AC110/120	110/120 AC	4,430	—	5 A	Solder
-AC220/240	220/240 AC	18,790	—	5 A	—
MY3-02-DC12	12 DC	160	0.9 W	5 A	3PDT
-DC24	24 DC	650	—	5 A	Standard
-AC24	24 AC	180	1.2 VA	5 A	PCB
-AC110/120	110/120 AC	4,430	—	5 A	—
MY4-DC12	12 DC	160	0.9 W	3 A	4PDT
-DC24	24 DC	650	—	3 A	Standard
-AC24	24 AC	180	1.2 VA	3 A	Plug-in/
-AC110/120	110/120 AC	4,430	—	3 A	Solder
-AC220/240	220/240 AC	18,790	—	3 A	—
MY4-02-DC12	12 DC	160	0.9 W	3 A	4PDT
-DC24	24 DC	650	—	3 A	Standard
-AC24	24 AC	180	1.2 VA	3 A	PCB
-AC110/120	110/120 AC	4,430	—	3 A	—
-AC220/240	220/240 AC	18,790	—	3 A	—
MY4F-DC12	12 DC	160	0.9 W	3 A	4PDT
-DC24	24 DC	650	—	3 A	Upper
-AC24	24 AC	180	1.2 VA	3 A	Mounting
-AC110/120	110/120 AC	4,430	—	3 A	Bracket
					Plug-in/
					Solder

Note: 1. Other coil voltages available.

MY

General Purpose Relay

Ordering Information (continued)

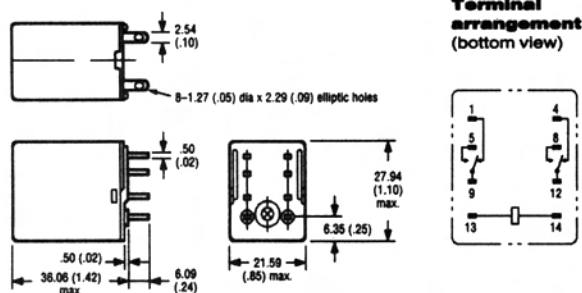
Part number	Rated voltage (V)	Coil res. (Ωhms)	Power	Contact rating	Type
MY4N-DC12	12 DC	160	0.9 W	3 A	4PDT
-DC24	24 DC	650	—	3 A	LED
-AC24	24 AC	180	1.2 VA	3 A	Indicator
-AC110/120	110/120 AC	4,430	—	3 A	Plug-in/
-AC220/240	220/240 AC	18,790	—	3 A	Solder
MY4Z-DC12	12 DC	160	0.9 W	3 A	4PDT
-DC24	24 DC	650	—	3 A	Bifurcated
-AC24	24 AC	180	1.2 VA	3 A	Contact
-AC110/120	110/120 AC	4,430	—	3 A	Plug-in/
-AC220/240	220/240 AC	18,790	—	3 A	Solder

Part number	Rated voltage (V)	Coil res. (Ωhms)	Power	Contact rating	Type
MY4ZN-DC12	12 DC	160	0.9 W	3 A	4PDT
-DC24	24 DC	650	—	3 A	Bifurcated
-AC24	24 AC	180	1.2 VA	3 A	Contact LED
-AC110/120	110/120 AC	4,430	—	3 A	Indicator
-AC220/240	220/240 AC	18,790	—	3 A	Plug-in/ Solder
MY2K-US-DC12	12 DC	110/235 ¹	1.3 W	3 A	DPDT
-DC24	24 DC	470/940 ¹	—	3 A	Dual Coil
-AC24	24 AC	320/550 ¹	0.9 VA	3 A	Latching
-AC120	120 AC	8,300/3,000 ¹	—	3 A	Plug-in/ Solder

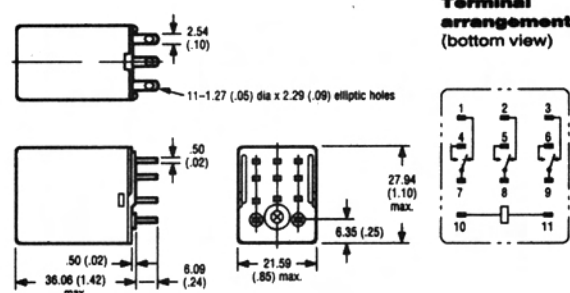
Note: 1. Other coil voltages available
2. ¹ Set Coil/Reset Coil.

Dimensions [Unit: mm (inch)]

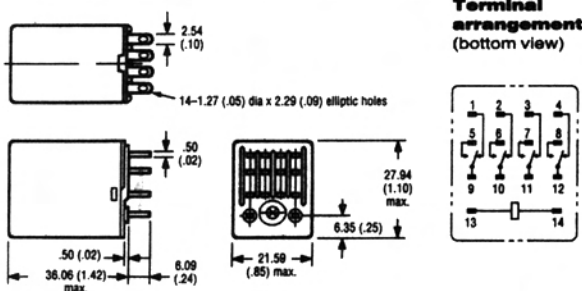
MY2



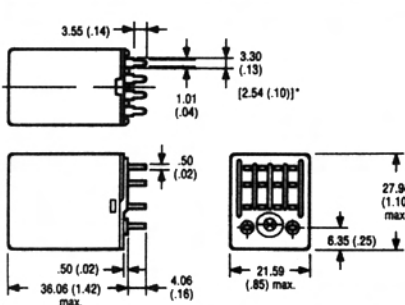
MY3



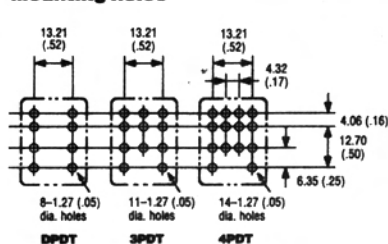
MY4



MY-02



Mounting holes



Note: 1. * The above dimension applies to MY4-02.

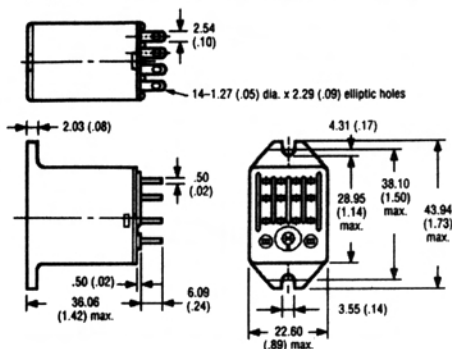
MY

General Purpose Relay

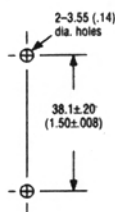
7
RELAYS

Dimensions [Unit: mm (inch)]

MY□F

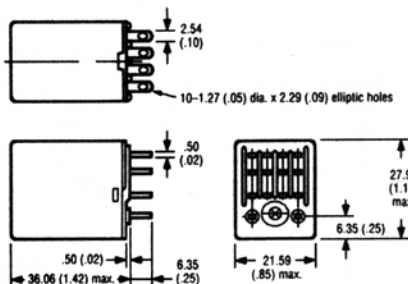


Mounting holes

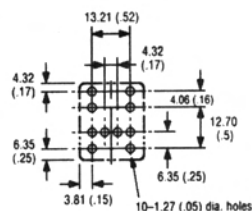


Note: The above dimensional drawing shows the 4-pole type.
The dimensions of the 2- and 3-pole types are identical to the 4-pole type.

MY2K-US

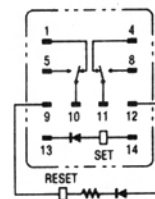


Mounting holes



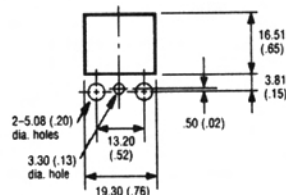
Terminal arrangement/ Internal connections (bottom view)

For AC

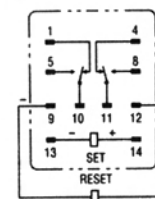


Note: The dimensional drawing above shows the 4-pole type.
The dimensions of the 2- and 3-pole types are identical to the 4-pole type.

Mounting holes



For DC

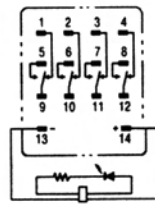
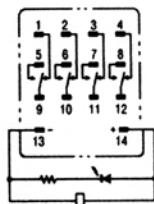


Note: 1. Resistor is for ampere-turn compensation and is incorporated in the relay rated at 50 VAC or above.
2. Pay attention to the polarity of each of the set and reset coils, as incorrect connection of positive and negative terminal will result in the relay malfunctioning.

MY4N

DC coil rating type

AC coil rating type



In MY2N and MY3N, only the contact circuit is different from the illustration at right. The coil terminals 10 and 11 of MY3N become (-) and (+), respectively.

Note: 1. Pay special attention to the polarities when using the DC type.
2. The AC coil-type is provided with a self-diagnostic function that detects a breakage in the coil.