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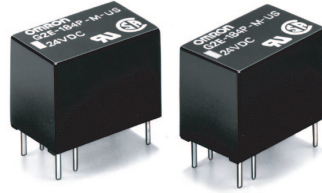
 **MASTER**TM
ELECTRONICS

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Miniature, Low-cost, Single-pole PCB Relay

- ROHS compliant.
- Miniature: 15.5 x 10.5 x 11.5 mm (L x W x H).
- Low power consumption: 200 mW.
- Bifurcated crossbar contacts.
- Gold-clad contacts.
- Fully sealed type available.
- Ideal for telecommunications equipment and security systems.



Ordering Information

Contact		General-purpose	High-sensitivity
		Fully sealed	Fully sealed
SPDT	Single crossbar	G2E-184P-M-US	G2E-184P-H-M-US
	Bifurcated crossbar	G2E-134P-M-US	G2E-134P-H-M-US

Note: When ordering, add the rated coil voltage to the model number.
 Example: G2E-184P-M-US 12 VDC

Rated coil voltage

Model Number Legend

G2E - - - - VDC
 1 2 3 4 5 6 7 8

- | | | |
|--|---|--|
| <p>1. Contact Form
1: SPDT</p> <p>2. Contact Type
3: Bifurcated crossbar
8: Single crossbar</p> <p>3. Enclosure Ratings
4: Fully sealed</p> | <p>4. Terminals
P: Straight PCB</p> <p>5. Power Consumption
None: General-purpose (450 mW)
H: High-sensitivity (200 mW)</p> | <p>6. Classification
M: General-purpose</p> <p>7. Approved Standards
US: UL, CSA certified</p> <p>8. Rated Coil Voltage
1.5, 3, 5, 6, 9, 12, 24 VDC</p> |
|--|---|--|

Specifications

Coil Rating

General-purpose Relays

Rated voltage	1.5 VDC	3 VDC	5 VDC	6 VDC	9 VDC	12 VDC	24 VDC
Rated current	300 mA	150 mA	89.3 mA	75 mA	50 mA	37.5 mA	18.8 mA
Coil resistance	5 Ω	20 Ω	56 Ω	80 Ω	180 Ω	320 Ω	1,280 Ω
Coil inductance (H) (ref. value)	Armature OFF	0.005	0.017	0.044	0.067	0.137	0.94
	Armature ON	0.009	0.034	0.091	0.136	0.297	2.1
Must operate voltage	70% max. of rated voltage						
Must release voltage	10% min. of rated voltage						
Max. voltage	120% of rated voltage at 23°C, 110% at 60°C						
Power consumption	Approx. 450 mW						

High-sensitivity Relays

Rated voltage	1.5 VDC	3 VDC	5 VDC	6 VDC	9 VDC	12 VDC	24 VDC	
Rated current	125 mA	66.7 mA	41.7 mA	33.3 mA	22.5 mA	17.1 mA	8.6 mA	
Coil resistance	12 Ω	45 Ω	120 Ω	180 Ω	400 Ω	700 Ω	2,800 Ω	
Coil inductance (H) (ref. value)	Armature OFF	0.005	0.022	0.055	0.083	0.165	0.228	1.465
	Armature ON	0.009	0.035	0.092	0.129	0.303	0.504	2.287
Must operate voltage	80% max. of rated voltage							
Must release voltage	10% min. of rated voltage							
Max. voltage	140% of rated voltage at 23°C, 130% at 65°C							
Power consumption	Approx. 200 mW							

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

■ Contact Ratings

Item	Single crossbar	Bifurcated crossbar
Load	Resistive load ($\cos\phi = 1$)	Resistive load ($\cos\phi = 1$)
Rated Load	0.5 A at 110 VAC; 1 A at 24 VDC	0.5 A at 110 VAC; 1 A at 24 VDC
Contact Material	AgPd (Au-clad)	
Rated Carry Current	2 A	
Max. switching voltage	125 VAC, 60 VDC	
Max. switching current	1 A	
Max. switching power	120 VA, 30 W	120 VA, 30 W
Failure rate (reference value)	1 mA at 5 VDC	0.1 mA at 0.1 VDC

Note: P level: $\lambda_{60} = 0.1 \times 10^{-6}$ /operation.

■ Characteristics

Contact resistance	50 mΩ max.
Operate time	General-purpose type: 5 ms max. (mean value: approx. 2.5 ms) High-sensitivity type: 7 ms max. (mean value: approx. 3.5 ms)
Release time	3 ms max. (mean value: approx. 0.8 ms)
Max. switching frequency	Mechanical: 18,000 operations/hr Electrical: 1,800 operations/hr at rated load
Insulation resistance	100 MΩ min. (at 500 VDC)
Dielectric withstand voltage	500 VAC, 50/60 Hz for 1 min between coil and contacts 500 VAC, 50/60 Hz for 1 min between contacts of same polarity
Vibration resistance	Destruction: 10 to 55 to 10 Hz, 1.65mm single amplitude (3.3mm double amplitude) Malfunction: 10 to 55 to 10 Hz, 1.65mm single amplitude (3.3mm double amplitude)
Shock resistance	Destruction: 1,000 m/s ² (approx. 100G) Malfunction: 200 m/s ² (approx. 20G)
Endurance	Mechanical: 10,000,000 operations min. (at 18,000 operations/hr) Electrical: DC: 500,000 operations min. (1 A at 24 VDC resistive load) AC: 200,000 operations min. (0.5 A at 110 VAC resistive load) (at 1,800 operations/hr)
Ambient temperature	Operating: -25°C to 60°C (with no icing) (high-sensitivity type: -25°C to 65°C)
Ambient humidity	Operating: 5% to 85%
Weight	Approx. 3.7 g

■ Approved Standards

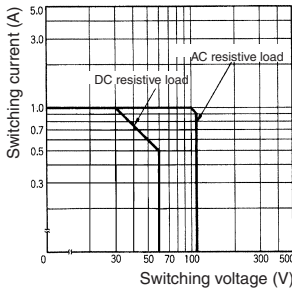
UL114, UL478, UL1950 (File No. E41515)/CSA C22.2 No.0, No.14 (File No. LR34815-97)

Model	Contact form	Coil ratings	Contact ratings
G2E-184P-M-US G2E-184P-H-M-US G2E-134P-M-US G2E-134P-H-M-US	SPDT	1.5 to 24 VDC	0.5 A, 125 VAC (general use) 1 A, 28 VDC (resistive)

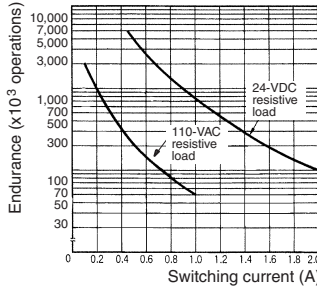
Signal Relays

Engineering Data

Maximum Switching Power
G2E-184P-M-US

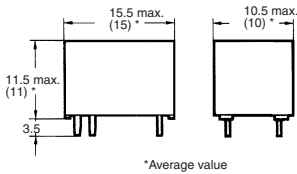
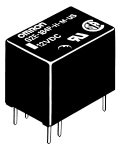


Endurance
G2E-184P-M-US

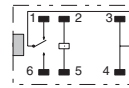


Dimensions

- Note: 1. All units are in millimeters unless otherwise indicated.
2. Orientation marks are indicated as follows:



Terminal Arrangement/
Internal Connections
(Bottom View)



Mounting Holes
(Bottom View)

