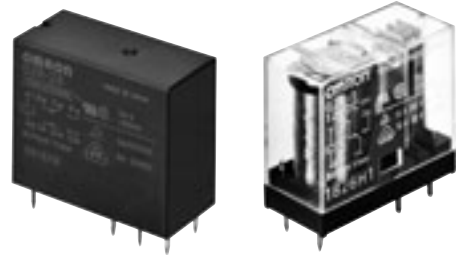


## The Best Seller G2R



- 1 General purpose power Relays of single-pole 10 A and double-pole 5 A.
- Safety-oriented design with dielectric strength of 5,000 V between coil and contacts, and surge resistance of 10,000 V.
- AC and DC types are both available for operational coils.

**RoHS Compliant**



### Model Number Legend

G2R-□-□□□□-□□  
1 2 3 4 5 6 7

#### 1. Relay Function

- None: Single-side stable
- K : Double-winding latching

#### 2. Number of poles

- 1: 1-pole
- 2: 2-pole

#### 3. Contact Form

- None: NO/NC
- A : NO

#### 4. Contact Type

- None: Single
- Z : Bifurcated contact

#### 5. Enclosure rating

- None: Flux protection (T-type is an enclosed relay)
- 4 : Fully sealed

#### 6. Terminal Shape

- None: PCB terminals
- T : Quick-connect (upper bracket mounting #187)

#### 7. Classification

- None: Standard
- E : High-capacity
- H : High-sensitivity
- U : For ultrasonically cleanable
- Z : Full-wave rectifier

G  
2  
R

### Model Configuration

Terminal Shape	Classification	Number of poles		1-pole		2-pole		Minimum packing unit
		Enclosure rating	Contact form	SPST-NO (1a)	SPDT (1c)	DPST-NO (2a)	DPDT (2c)	
PCB terminals	Standard	Flux protection	AC	G2R-1A	G2R-1	G2R-2A	G2R-2	100 pcs/tray
			DC					
		Fully sealed	AC	G2R-1A4	G2R-14	G2R-2A4	G2R-24	
			DC					
	Bifurcated contact	Flux protection	AC	G2R-1AZ	G2R-1Z	-	-	50 pcs/tray
			DC					
	Fully sealed	Flux protection	AC	G2R-1AZ4	G2R-1Z4	-	-	
			DC					
	High-capacity	Flux protection	AC	G2R-1A-E	G2R-1-E	-	-	100 pcs/tray
			DC					
High-sensitivity	Flux protection	AC	G2R-1A-H	G2R-1-H	G2R-2A-H	G2R-2-H		
		DC						
Double-winding latching	Flux protection	AC	G2RK-1A	G2RK-1	G2RK-2A	G2RK-2		
		DC						
Quick-connect	Standard	Unsealed	AC	G2R-1A-T	G2R-1-T	-	-	100 pcs/tray
			DC					

Note 1. Full-wave rectifier and supersonic cleaner compatible models are also available. Refer to page 3.  
 2. Sockets for PCB terminal models are not provided.

### ● Quick-connect Terminal (#187)

Classification	Enclosure rating	Number of poles Contact form	1-pole	
			Model	Rated coil voltage
Standard	Unsealed	NO	G2R-1A-T	12, 24, 100/(110) VAC
				200/(220) VAC
				5, 6, 12, 24, 48 VDC
				100 VDC
		NO/NC	G2R-1-T	12, 24, 100/(110) VAC
				200/(220) VAC
				5, 6, 12, 24, 48 VDC
				100 VDC

### ● Full-wave Rectifier

Classification	Enclosure rating	Number of poles Contact form	1-pole		2-pole	
			Model	Rated coil voltage	Model	Rated coil voltage
Standard	Flux protection	NO	G2R-1A-Z	5, 12, 24 VDC	G2R-2A-Z	5, 6, 12, 24, 48 VDC
				100 VDC		100 VDC
		NO/NC	G2R-1-Z	5, 12, 24, 48 VDC	G2R-2-Z	12, 24, 48 VDC
				100 VDC		100 VDC
	Fully sealed	NO	G2R-1A4-Z	5, 12, 48 VDC	G2R-2A4-Z	24, 48 VDC
				100 VDC		100 VDC
		NO/NC	G2R-14-Z	5, 12, 24, 48 VDC	G2R-24-Z	5, 12, 24 VDC
				100 VDC		100 VDC
High-capacity	Flux protection	NO	G2R-1A-EZ	5, 12, 24 VDC	-	
				100 VDC		
		NO/NC	G2R-1-EZ	12, 24, 48 VDC		

### ● For Ultrasonically Cleanable

Classification	Enclosure rating	Number of poles Contact form	1-pole		2-pole	
			Model	Rated coil voltage	Model	Rated coil voltage
Standard	Fully sealed	NO	G2R-1A4-U	12, 24, 100/(110) VAC	G2R-2A4-U	100/(110) VAC
				200/(220) VAC		-
				5, 6, 12, 24, 48 VDC		5, 12, 24 VDC
		NO/NC	G2R-14-U	100/(110) VAC	G2R-24-U	24, 100/(110) VAC
				200/(220) VAC		200/(220) VAC
				5, 12, 24, 48 VDC		5, 12, 24, 48 VDC
				100 VDC		100 VDC

Note: When ordering, add the rated coil voltage to the model number.

Example: G2R-1A-T AC12

Rated coil voltage

However, the notation of the coil voltage on the product case as well as on the packing will be marked as □□ VAC.

## ● Contacts: Flux Protection Type

Classification Number of poles Load Item	Standard type Quick-connect Terminal (1 single-pole type)				High-capacity type		Bifurcated contact type		High-sensitivity type			
	1-pole		2-pole		1-pole		2-pole		1-pole		2-pole	
	Resistive load	Inductive load ( $\cos\phi = 0.4$ ; L/R = 7 ms)	Resistive load	Inductive load ( $\cos\phi = 0.4$ ; L/R = 7 ms)	Resistive load	Inductive load ( $\cos\phi = 0.4$ ; L/R = 7 ms)	Resistive load	Inductive load ( $\cos\phi = 0.4$ ; L/R = 7 ms)	Resistive load	Inductive load ( $\cos\phi = 0.4$ ; L/R = 7 ms)	Resistive load	Inductive load ( $\cos\phi = 0.4$ ; L/R = 7 ms)
Contact type	Single				Single		Bifurcated		Single			
Contact material	Ag-alloy (Cd free)											
Rated load	10 A at 250 VAC 10 A at 30 VDC	7.5 A at 250 VAC 5 A at 30 VDC	5 A at 250 VAC 5 A at 30 VDC	2 A at 250 VAC 3 A at 30 VDC	16 A at 250 VAC 16 A at 30 VDC	8 A at 250 VAC 8 A at 30 VDC	5 A at 250 VAC 5 A at 30 VDC	2 A at 250 VAC 3 A at 30 VDC	5 A at 250 VAC 5 A at 30 VDC	2 A at 250 VAC 3 A at 30 VDC	3 A at 250 VAC 3 A at 30 VDC	1 A at 250 VAC 1.5 A at 30 VDC
Rated carry current	10 A		5 A		16 A		5 A		5 A		3 A	
Max. switching voltage	380 VAC, 125 VDC				380 VAC, 125 VDC				380 VAC, 125 VDC			
Max. switching current	10 A		5 A		16 A		5 A		5 A		3 A	
Failure rate (P level) (reference value) *	100 mA at 5 VDC		10 mA at 5 VDC		100 mA at 5 VDC		1 mA at 5 VDC		100 mA at 5 VDC		10 mA at 5 VDC	

\* This value was measured at a switching frequency of 120 operations/min.

## ● Contacts: Fully Sealed Type

Classification Number of poles Load Item	Standard type (Single contact type)				Bifurcated contact type	
	1-pole		2-pole		1-pole	
	Resistive load ( $\cos\phi = 1$ )	Inductive load ( $\cos\phi = 0.4$ ; L/R = 7 ms)	Resistive load ( $\cos\phi = 1$ )	Inductive load ( $\cos\phi = 0.4$ ; L/R = 7 ms)	Resistive load ( $\cos\phi = 1$ )	Inductive load ( $\cos\phi = 0.4$ ; L/R = 7 ms)
Contact type	Single				Bifurcated	
Contact material	Ag-alloy (Cd free)					
Rated load	8 A at 250 VAC 8 A at 30 VDC	6 A at 250 VAC 4 A at 30 VDC	4 A at 250 VAC 4 A at 30 VDC	1.5 A at 250 VAC 2.5 A at 30 VDC	5 A at 250 VAC 5 A at 30 VDC	2 A at 250 VAC 3 A at 30 VDC
Rated carry current	8 A		4 A		5 A	
Max. switching voltage	380 VAC, 125 VDC				380 VAC, 125 VDC	
Max. switching current	8 A		4 A		5 A	
Failure rate (P level) (reference value) *	100 mA at 5 VDC		10 mA at 5 VDC		1 mA at 5 VDC	

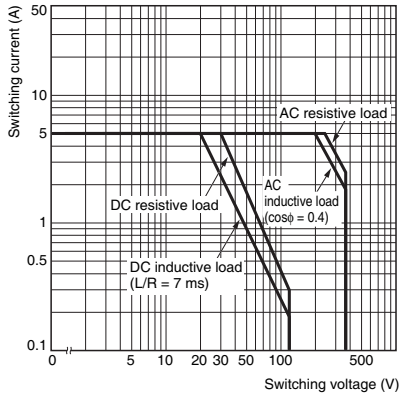
\* This value was measured at a switching frequency of 120 operations/min.

## ● Contacts: Latching Type

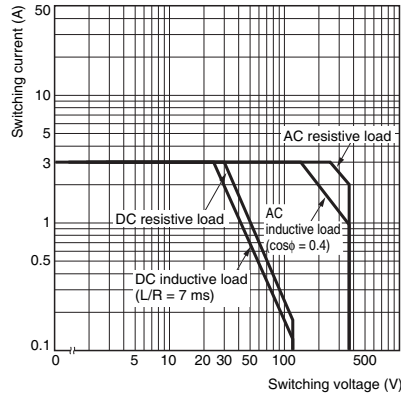
Classification Number of poles Load Item	1-pole		2-pole	
	Resistive load ( $\cos\phi = 1$ )	Inductive load ( $\cos\phi = 0.4$ ; L/R = 7 ms)	Resistive load ( $\cos\phi = 1$ )	Inductive load ( $\cos\phi = 0.4$ ; L/R = 7 ms)
Contact type	Single		Single	
Contact material	Ag-alloy (Cd free)			
Rated load	5 A at 250 VAC 5 A at 30 VDC	3.5 A at 250 VAC 2.5 A at 30 VDC	3 A at 250 VAC 3 A at 30 VDC	1.5 A at 250 VAC 2 A at 30 VDC
Rated carry current	5 A		3 A	
Max. switching voltage	380 VAC, 125 VDC			
Max. switching current	5 A		3 A	
Failure rate (P level) (reference value) *	100 mA at 5 VDC		10 mA at 5 VDC	

\* This value was measured at a switching frequency of 120 operations/min.

## G2RK-1A, G2RK-1

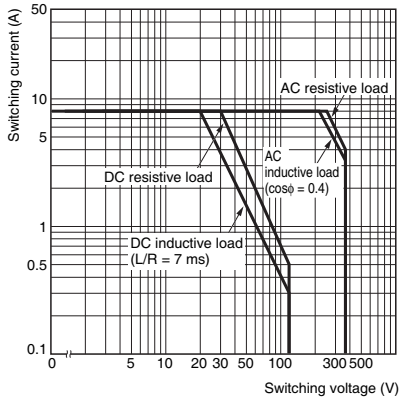


## G2RK-2A, G2RK-2

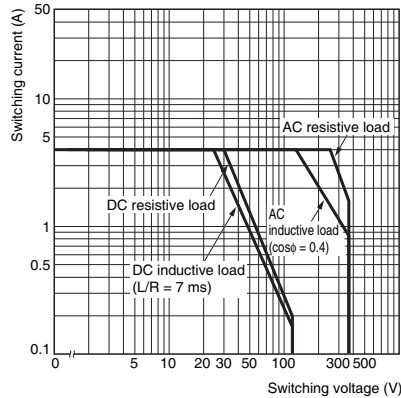


### Fully Sealed Relays

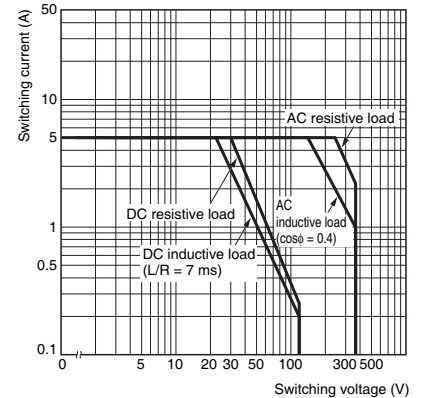
## G2R-14, G2R-1A4



## G2R-24, G2R-2A4



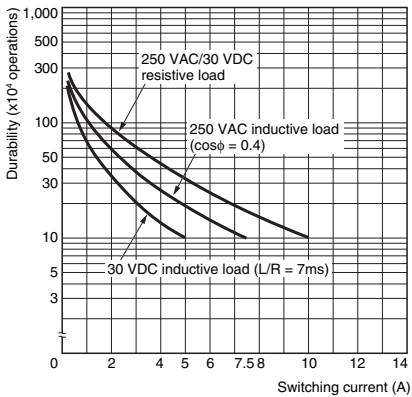
## G2R-1Z4, G2R-1AZ4



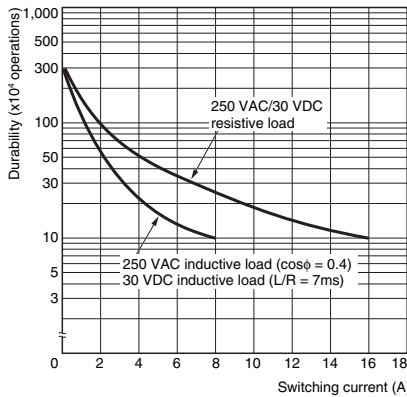
### ● Durability

### Flux Protection/Plug-in Relays

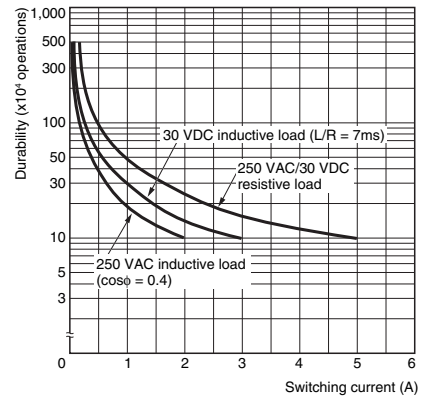
## G2R-1, G2R-1A, G2R-1-T, G2R-1A-T



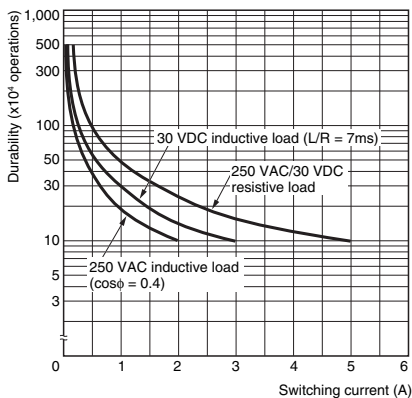
## G2R-1-E, G2R-1A-E



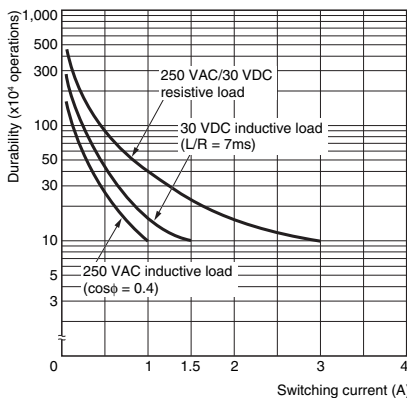
## G2R-1Z, G2R-1AZ



## G2R-1-H, G2R-1A-H, G2R-2, G2R-2A



## G2R-2-H, G2R-2A-H



## ■ Dimensions

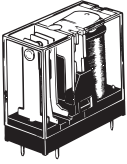
### Relays with PCB Terminals

#### (SPDT (1c) Relays)

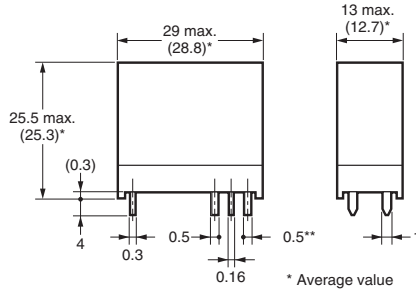
#### G2R-1(-Z)

#### G2R-1Z

#### G2R-1-H



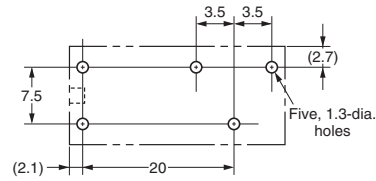
This illustration is the G2R-1 model.



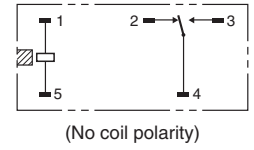
\* Average value  
\*\* With AC coil or "-H" models: 0.3.

#### PCB Mounting Holes (BOTTOM VIEW)

Tolerance:  $\pm 0.1$  mm



#### Terminal Arrangement/ Internal Connections (BOTTOM VIEW)



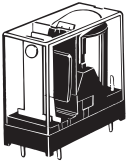
### Relays with PCB Terminals

#### (SPST-NO (1a) Relays)

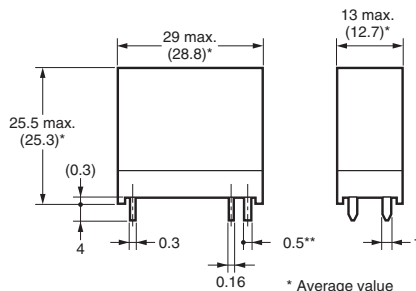
#### G2R-1A(-Z)

#### G2R-1AZ

#### G2R-1A-H



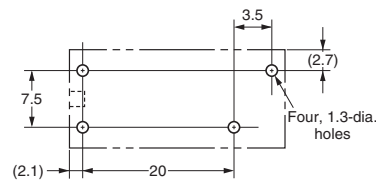
This illustration is the G2R-1A model.



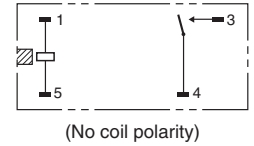
\* Average value  
\*\* With AC coil or "-H" models: 0.3.

#### PCB Mounting Holes (BOTTOM VIEW)

Tolerance:  $\pm 0.1$  mm



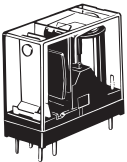
#### Terminal Arrangement/ Internal Connections (BOTTOM VIEW)



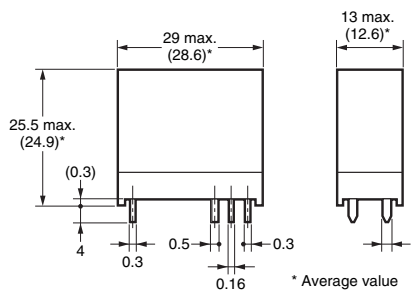
### Relays with PCB Terminals

#### (SPDT (1c) /High-capacity Relays)

#### G2R-1-E(Z)

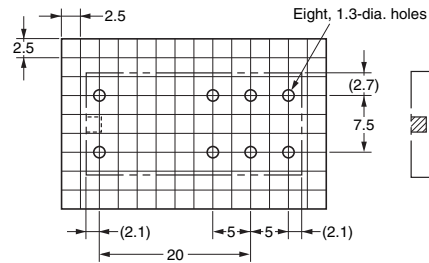


This illustration is the G2R-1-E model.

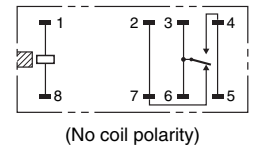


#### PCB Mounting Holes (BOTTOM VIEW)

Tolerance:  $\pm 0.1$  mm



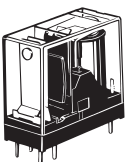
#### Terminal Arrangement/ Internal Connections (BOTTOM VIEW)



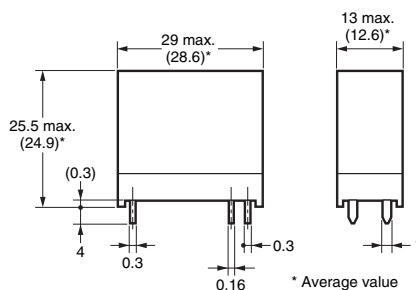
### Relays with PCB Terminals

#### (SPST-NO (1a)/High-capacity Relays)

#### G2R-1A-E(Z)

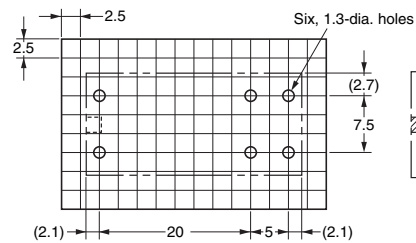


This illustration is the G2R-1A-E model.

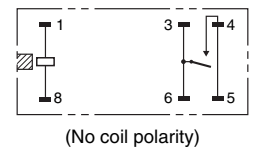


#### PCB Mounting Holes (BOTTOM VIEW)

Tolerance:  $\pm 0.1$  mm

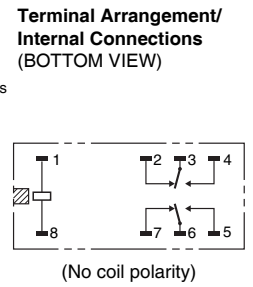
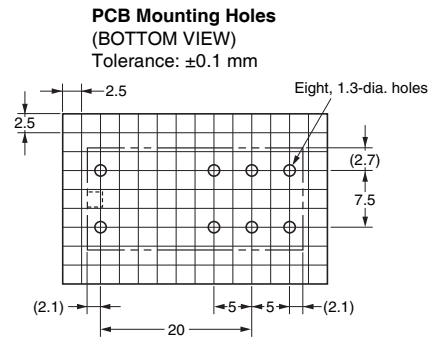
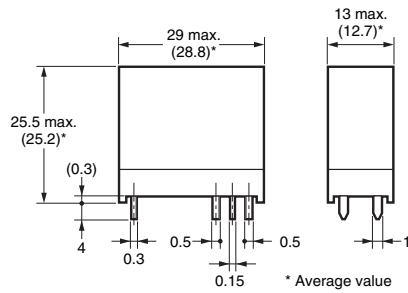
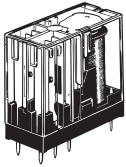


#### Terminal Arrangement/ Internal Connections (BOTTOM VIEW)

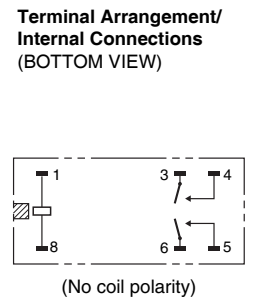
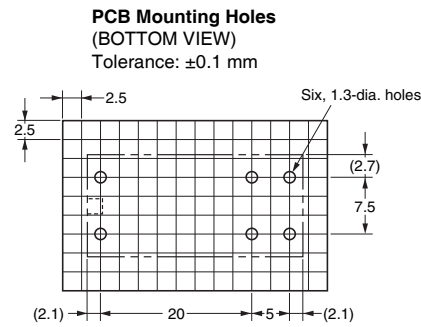
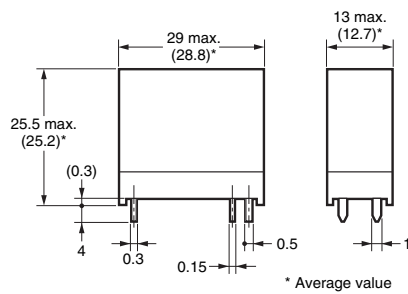
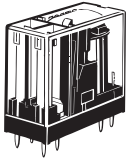


Note: Orientation marks are indicated as follows:

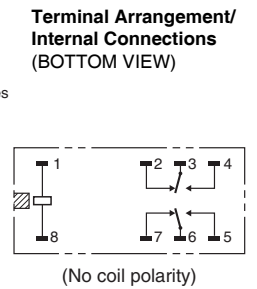
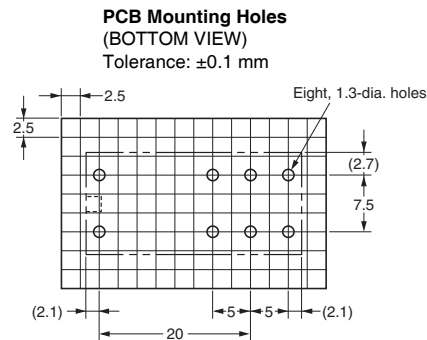
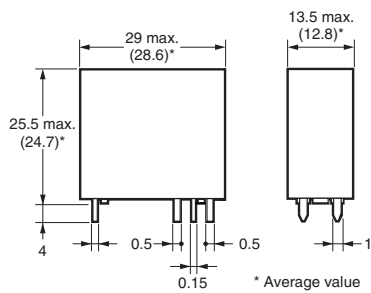
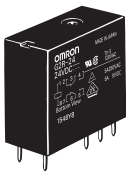
**Relays with PCB Terminals  
(DPDT (2c) Relays)  
G2R-2(-Z)  
G2R-2-H**



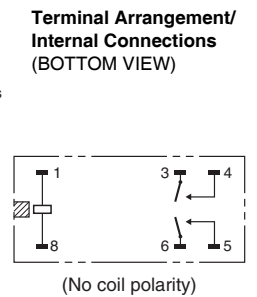
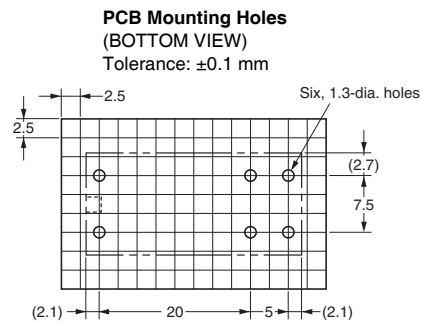
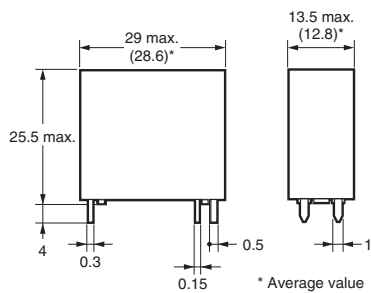
**Relays with PCB Terminals  
(DPST-NO (2a) Relays)  
G2R-2A  
G2R-2A-H  
G2R-2A-Z**



**Relays with PCB Terminals  
(DPDT (2c) Relays)  
G2R-24(-Z)(-U)**



**Relays with PCB Terminals  
(DPST-NO (2a) Relays)  
G2R-2A4(-Z)(-U)**



Note: Orientation marks are indicated as follows:

## Approved Standards

- The approval rating values for overseas standards are different from the performance values determined individually. Confirm the values before use.

**UL Recognized:**  File No. E41643

### 1-pole

Model	Contact form	Coil ratings	Contact ratings	Number of test operations		
G2R-1A	SPST-NO (1a)	5 to 110 VDC 12 to 220 VAC	10 A, 250 VAC (General Use) at 40°C	100,000		
G2R-1A4			5 A, 277 VAC (General Use) at 40°C	6,000		
G2R-1A-H			10 A, 30 VDC (Resistive) at 40°C	100,000		
G2R-1A-T				25,000		
G2R-1	SPDT (1c)	5 to 110 VDC 12 to 220 VAC	10 A, 30 VDC (Resistive) at 40°C	100,000		
G2R-14			TV-3 (N. O. only) at 40°C	25,000		
G2R-1-H				6,000		
G2R-1-T						
G2R-1AZ	SPST-NO (1a)	5 to 110 VDC 12 to 220 VAC	5 A, 250 VAC (General Use) at 40°C	6,000		
G2R-1AZ4			5 A, 30 VDC (Resistive) at 40°C			
G2R-1Z			SPDT (1c)	5 to 110 VDC 12 to 220 VAC	16 A, 250 VAC (General Use) at 40°C	30,000
G2R-1Z4					16 A, 30 VDC (Resistive) at 40°C	
G2R-1A-E	SPST-NO (1a)	5 to 110 VDC 12 to 220 VAC	16 A, 250 VAC (General Use) at 40°C	6,000		
G2R-1-E			SPDT (1c)	16 A, 30 VDC (Resistive) at 40°C	25,000	
				TV-3 (N. O. only) at 40°C		

### 2-pole

Model	Contact form	Coil ratings	Contact ratings	Number of test operations
G2R-2A	DPST-NO (2a)	5 to 110 VDC 12 to 220 VAC	5 A, 250 VAC (General Use) at 40°C	6,000
G2R-2A4			5 A, 30 VDC (Resistive) at 40°C	100,000
G2R-2A-H				
G2R-2	DPDT (2c)	5 to 110 VDC 12 to 220 VAC	5 A, 30 VDC (Resistive) at 40°C	100,000
G2R-24			TV-3 (N. O. only) at 40°C	25,000
G2R-24-H				


**CSA Certified:**  File No. LR31928

### 1-pole

Model	Contact form	Coil ratings	Contact ratings	Number of test operations
G2R-1A	SPST-NO (1a)	5 to 110 VDC 12 to 220 VAC	10 A, 250 VAC (General Use) at 40°C	100,000
G2R-1A4			10 A, 30 VDC (Resistive) at 40°C	100,000
G2R-1A-H				TV-3 (N. O. only) at 40°C
G2R-1A-T				
G2R-1	SPDT (1c)	5 to 110 VDC 12 to 220 VAC	10 A, 30 VDC (Resistive) at 40°C	100,000
G2R-14			TV-3 (N. O. only) at 40°C	25,000
G2R-1-H				6,000
G2R-1-T				
G2R-1AZ	SPST-NO (1a)	5 to 110 VDC 12 to 220 VAC	5 A, 250 VAC (General Use) at 40°C	6,000
G2R-1AZ4			5 A, 30 VDC (Resistive) at 40°C	
G2R-1Z			SPDT (1c)	5 to 110 VDC 12 to 220 VAC
G2R-1Z4	16 A, 30 VDC (Resistive) at 40°C			
G2R-1A-E	SPST-NO (1a)	5 to 110 VDC 12 to 220 VAC	16 A, 250 VAC (General Use) at 40°C	6,000
G2R-1-E			SPDT (1c)	
				TV-3 (N. O. only) at 40°C

### 2-pole

Model	Contact form	Coil ratings	Contact ratings	Number of test operations
G2R-2A	DPST-NO (2a)	5 to 110 VDC 12 to 220 VAC	5 A, 250 VAC (General Use) at 40°C	6,000
G2R-2A4			5 A, 30 VDC (Resistive) at 40°C	100,000
G2R-2A-H				
G2R-2	DPDT (2c)	5 to 110 VDC 12 to 220 VAC	5 A, 30 VDC (Resistive) at 40°C	100,000
G2R-24			TV-3 (N. O. only) at 40°C	25,000
G2R-24-H				

**EN/IEC, VDE Certified:**  Certificate No. 40015012

Model	Contact form	Coil ratings	Contact ratings	Number of test operations
G2R-1(A)-E	1	5, 6, 12, 24, 48, 100 VDC 12, 24, 100/110, 200/220 VAC	16 A, 250 VAC (cosφ = 1.0) at 70°C	100,000
G2R-( )	1	5, 6, 12, 24, 48, 100 VDC 12, 24, 100/110, 200/220 VAC	10 A, 250 VAC (cosφ = 1.0) at 40°C	
			10 A, 30 VDC (0 ms) at 40°C	
G2R-( )	2	5, 6, 12, 24, 48, 100 VDC 12, 24, 100/110, 200/220 VAC	5 A, 250 VAC (cosφ = 1.0) at 40°C	
			5 A, 30 VDC (0 ms) at 40°C	

**EN, TÜV Certified:** Registration No. R50030327

Model	Contact form	Coil ratings	Contact ratings	Number of test operations
G2R-1(A)-E	1	5 to 110 VDC 12 to 220 VAC	16 A, 250 VAC (cosφ = 1.0) at 70°C	100,000
G2R-( )	1	5 to 110 VDC 12 to 220 VAC	10 A, 250 VAC (cosφ = 1.0) at 70°C	
			10 A, 30 VDC (0 ms) at 70°C	
G2R-( )	2	5 to 110 VDC 12 to 220 VAC	5 A, 250 VAC (cosφ = 1.0) at 40°C	
			5 A, 30 VDC (0 ms) at 40°C	