

## ●Contacts

| Load                   | Resistive load                    |                                                                                              |
|------------------------|-----------------------------------|----------------------------------------------------------------------------------------------|
| Contact form           | SPST-NO (1a)                      | SPDT (1c)                                                                                    |
| Contact type           | Single                            |                                                                                              |
| Contact material       | Ag Alloy (Cd free)                |                                                                                              |
| Rated load             | 16 A at 250 VAC<br>16 A at 24 VDC | 16 A at 250 VAC (N.O)<br>5 A at 250 VAC (N.C)<br>16 A at 24 VDC (N.O)<br>5 A at 24 VDC (N.C) |
| Rated carry current    | 16 A                              | 16 A (N.O), 5A (N.C)                                                                         |
| Max. switching voltage | 250 VAC, 24 VDC                   |                                                                                              |
| Max. switching current | 16 A                              | 16 A (N.O), 5 A (N.C)                                                                        |

## ■Characteristics

| Item                          | Classification<br>Relay function      | SPST-NO (1a), SPDT (1c)                                                                                                                                                                       |
|-------------------------------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               |                                       | Single-winding Latching, Double-winding Latching                                                                                                                                              |
| Contact resistance *1         |                                       | 100 mΩ max.                                                                                                                                                                                   |
| Set time                      |                                       | 10 ms max.                                                                                                                                                                                    |
| Reset time                    |                                       | 10 ms max.                                                                                                                                                                                    |
| Minimum pulse width *2        |                                       | 30 ms                                                                                                                                                                                         |
| Maximum pulse width *2        |                                       | 1 min                                                                                                                                                                                         |
| Insulation resistance *3      |                                       | 1,000 MΩ min.                                                                                                                                                                                 |
| Dielectric strength           | Between coil and contacts             | 6,000 VAC, 50/60 Hz for 1 min                                                                                                                                                                 |
|                               | Between contacts of the same polarity | 1,000 VAC, 50/60 Hz for 1 min                                                                                                                                                                 |
| Impulse withstand voltage     | Between coil and contacts             | 10 kV (1.2 × 50 μs)                                                                                                                                                                           |
| Insulation distance           | Between coil and contacts             | Clearance: 6.4 mm, Creepage: 8 mm                                                                                                                                                             |
| Vibration resistance          | Destruction                           | 10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude)                                                                                                                         |
|                               | Malfunction                           | 10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude) at Set status<br>10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude) at Reset status (Except SPST-NO) |
| Shock resistance              | Destruction                           | 1,000 m/s <sup>2</sup>                                                                                                                                                                        |
|                               | Malfunction                           | 150 m/s <sup>2</sup> at Set status<br>50 m/s <sup>2</sup> at Reset status (Except SPST-NO)                                                                                                    |
| Durability                    | Mechanical *4                         | 5,000,000 operations min.                                                                                                                                                                     |
|                               | Electrical *4                         | 50,000 operations min.                                                                                                                                                                        |
| Ambient operating temperature |                                       | -40° to 85°C (with no icing or condensation)                                                                                                                                                  |
| Ambient operating humidity    |                                       | 5% to 85%                                                                                                                                                                                     |
| Weight                        |                                       | Approx. 10 g                                                                                                                                                                                  |

Note. Values in the above table are initial values.

\*1. The contact resistance is measured with 1 A applied at 5 VDC using a fall-of-potential method.

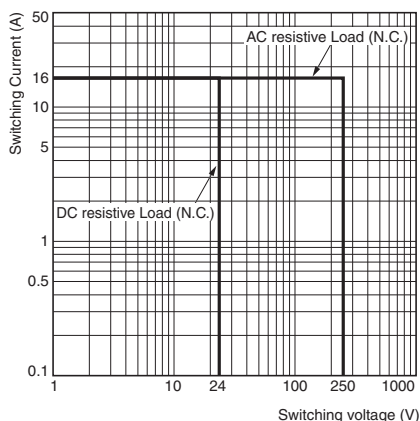
\*2. These are measured at a coil temperature of 23°C and rated coil voltage.  
Pulse duty factor should be 10% MAX.

\*3. The insulation resistance is measured between coil and contacts and between contacts of same polarity at 500 VDC.

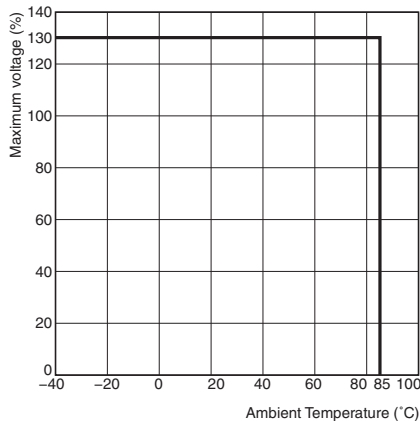
\*4. Operated with input pulse width "30 ms".

## ■Engineering Data

## ●Maximum Switching Power

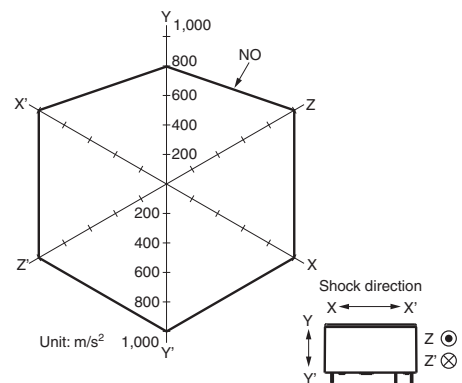


## ●Ambient Temperature vs. Maximum Coil Voltage



Note. Maximum voltage of Set pulse and Reset pulse at duty factor 10%.

## ●Malfunction Shock



Sample: G5RL-K1A-E 12VDC

No. of relays: 5 pcs

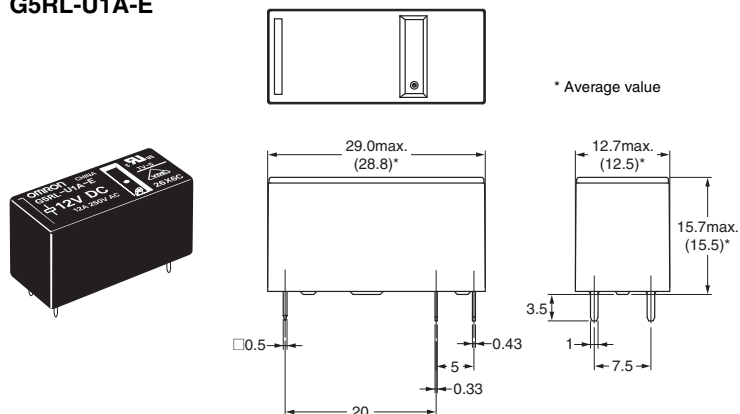
Test Conditions: Shock is applied in ±X, ±Y, and ±Z directions three times each with Set and Reset status to check the number of contact malfunctions.

Standard value: 50 m/s<sup>2</sup> with Set status  
100 m/s<sup>2</sup> with Reset status

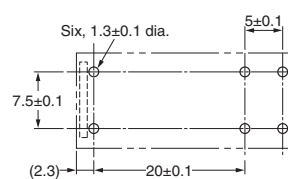
### ■Dimensions

(Unit: mm)

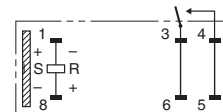
#### G5RL-U1A-E



#### PCB Mounting Holes (BOTTOM VIEW)

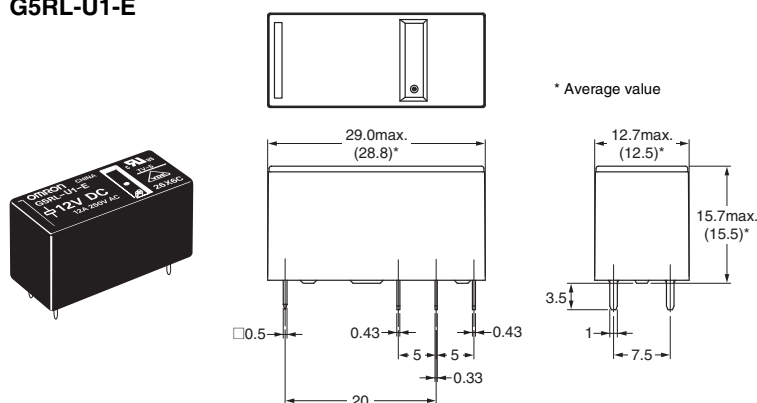


#### Terminal Arrangement/ Internal Connections (BOTTOM VIEW)

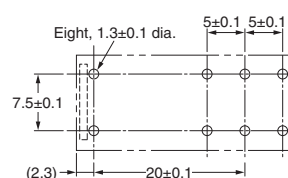


Note. Orientation marks are indicated as follows: □ ▨

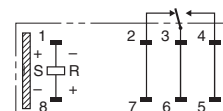
#### G5RL-U1-E



#### PCB Mounting Holes (BOTTOM VIEW)

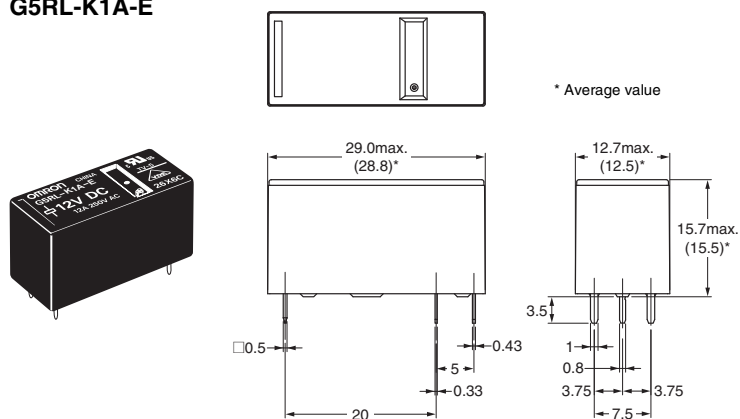


#### Terminal Arrangement/ Internal Connections (BOTTOM VIEW)

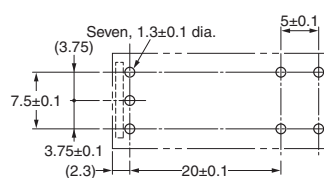


Note. Orientation marks are indicated as follows: □ ▨

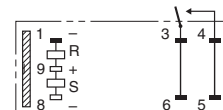
#### G5RL-K1A-E



#### PCB Mounting Holes (BOTTOM VIEW)

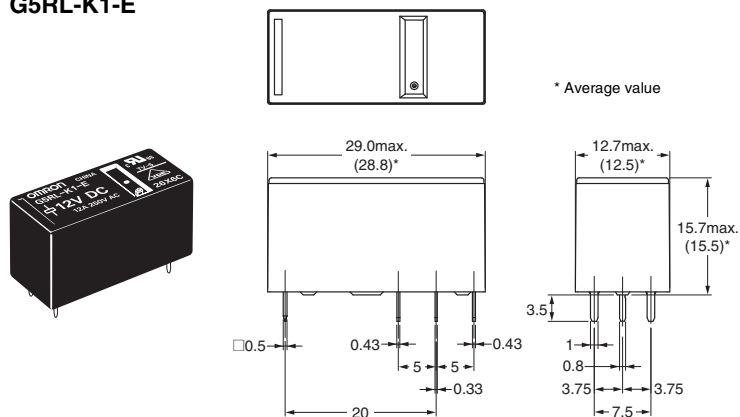


#### Terminal Arrangement/ Internal Connections (BOTTOM VIEW)

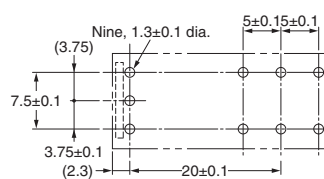


Note. Orientation marks are indicated as follows: □ ▨

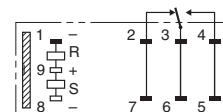
#### G5RL-K1-E



#### PCB Mounting Holes (BOTTOM VIEW)



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



Note. Orientation marks are indicated as follows: □ ▨