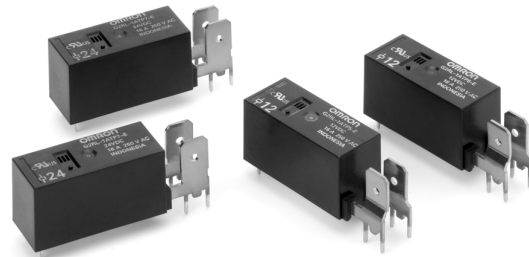


### PCB Power Relay with Quick-connect Terminals

- High switching capacity: 250 VAC, 16 A at 105°C.
- Ideal for high temperature applications.
- Coil insulation: Class F (UL508).
- Low profile for total size reduction.
- Easy wiring with quick-connect terminals.
- Model with 5-mm pitch (RAST5) is also available.



RoHS Compliant



Application: Cooking ovens, electric heating, power supplies.

### Ordering Information

Classification	Contact form	Enclosure ratings	Model
5-mm pitch	SPST-NO	Flux protection	G2RL-1ATP5-E
7.5-mm pitch			G2RL-1ATP7-E

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

Example: G2RL-1ATP7-E 12 VDC

Rated coil voltage

#### Model Number Legend

G2RL-□□□-□□VDC  
1 2 3 4 5

##### 1. Number of Poles

1: 1 pole

##### 2. Contact Form

A: SPST-NO

##### 3. Quick-connect Terminal Pitch

TP5: 5-mm pitch

TP7: 7.5-mm pitch

##### 4. Classification

E: High capacity

##### 5. Rated Coil Voltage

12, 24 VDC

# Specifications

## ■ Coils Ratings

Rated voltage	12 VDC	24 VDC
Rated current	33.3 mA	16.7 mA
Coil resistance	360 Ω	1,440 Ω
Must operate voltage	70% max. of the rated voltage	
Must release voltage	10% min. of the rated voltage	
Max. voltage	130% at 105°C of the rated voltage	
Power consumption	Approx. 400 mW	

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

## ■ Contact Ratings

Contact material	Ag alloy (Cd free)
Load	Resistive load (cosφ=1)
Rated load	16 A at 250 VAC
Rated carry current	16 A
Max. switching voltage	440 VAC
Max. switching current	16 A
Max. switching power	4,000 VA

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

## ■ Characteristics

Contact resistance	100 mΩ max.
Operate time	15 ms max.
Release time	5 ms max.
Max. operating frequency	Mechanical: 18,000 operations/hr Electrical: 900 operations/hr at rated load
Insulation resistance	1,000 MΩ min. (at 500 VDC)
Dielectric strength	5,000 VAC, 1 min between coil and contacts 1,000 VAC, 1 min between contacts of same polarity
Impulse withstand voltage	10 kV (1.2 × 50 μs) between coil and contact
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)
Shock resistance	Destruction: 1,000 m/s <sup>2</sup> Malfunction: Energized:100 m/s <sup>2</sup> Not energized:100 m/s <sup>2</sup>
Endurance	Mechanical: 20,000,000 operations min. (at 18,000 operations/hr) Electrical: 50,000 operations min. (at 900 operations/hr)
Ambient temperature	-40 to 105°C (with no icing)
Ambient humidity	5% to 85%
Weight	Approx. 12 g

Note: Values in the above table are the initial values.

## ■ Approved Standards

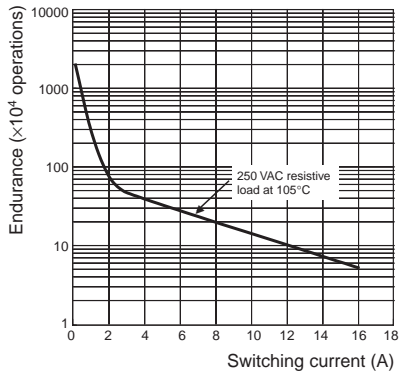
### UL508 (File No. E41643)/CSA C22.2 (No.14) (File No. LR31928)

Model	Contact form	Coil ratings	Contact ratings
G2RL-1ATP7-E	SPST-NO (High capacity)	12 to 24 VDC	16 A at 250 VAC (General use)
G2RL-1ATP5-E			16 A at 24 VDC (Resistive) 16 A at 250 VAC (Resistive) 105°C

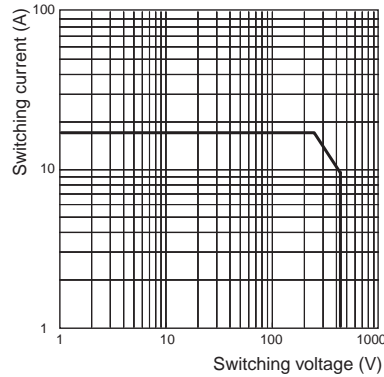
VDE (EN61810-1): Pending

# Engineering Data

## Endurance at 105°C

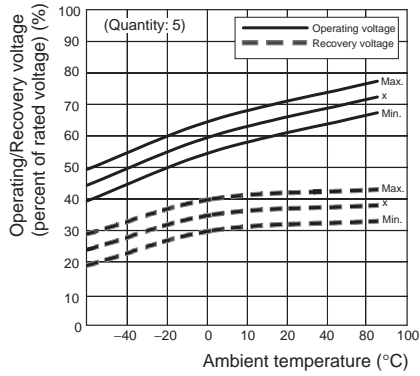


## Maximum Switching Power

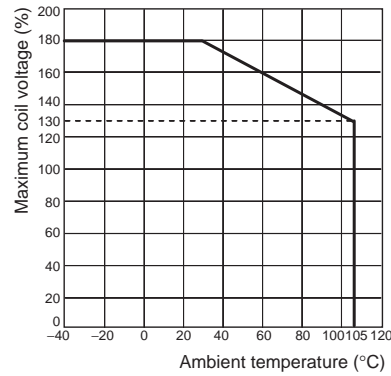


## Ambient temperature vs. Operating/Recovery Voltage

G2RL-1ATP5-E/G2RL-1ATP7-E



## Ambient Temperature vs. Maximum Coil Voltage

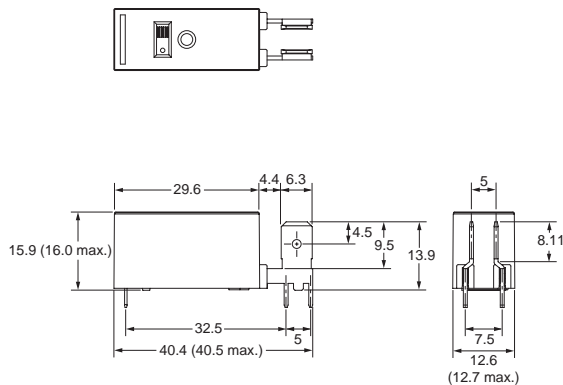
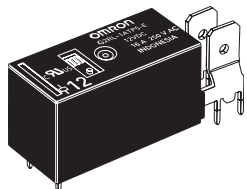


**Note:** The maximum coil voltage refers to the maximum value in a varying range of operating power voltage, not a continuous voltage.

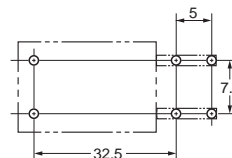
## Dimensions

Note: All units are in millimeters unless otherwise indicated.

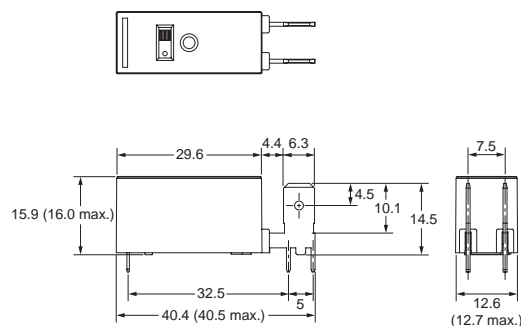
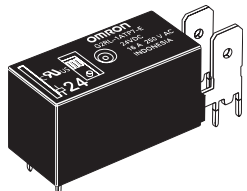
### G2RL-1ATP5-E



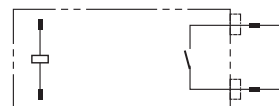
#### PCB Mounting Holes (Bottom View)



### G2RL-1ATP7-E



#### Terminal Arrangement/ Internal Connection (Bottom View)



## Precautions

### Disclaimer:

All technical performance data applies to the product as such; specific conditions of individual applications are not considered. Always check the suitability of the product for your intended purpose. OMRON does not assume any responsibility or liability for noncompliance herein, and we recommend prior technical clarification for applications where requirements, loading, or ambient conditions differ from those applying to general electric applications. Any responsibility for the application of the product remains with the customer alone. THIS COMPONENT CAN NOT BE USED FOR AUTOMOTIVE APPLICATIONS.

**ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.**

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Cat. No. J161-E1-01 In the interest of product improvement, specifications are subject to change without notice.

## OMRON RELAY & DEVICES Corporation

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