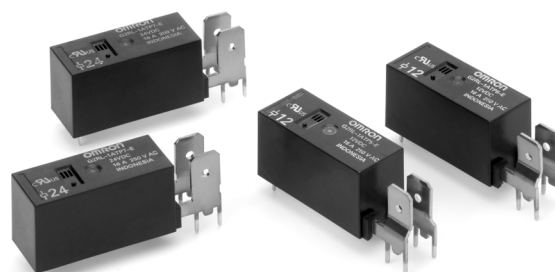


PCB Relay G2RL-TP

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.
- Low profile for total size reduction.
- Easy wiring with quick-connect terminals.
- Model with 5-mm pitch (RAST5) is also available.



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 DC12
└───┬─── Rated coil voltage

Model Number Legend

G2RL- -DC

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 ² Malfunction: Energized: 100 m/s ² Not energized: 100 m/s ²
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

UL Recognized (File No. E41643) / CSA Certified (File No. LR31928)

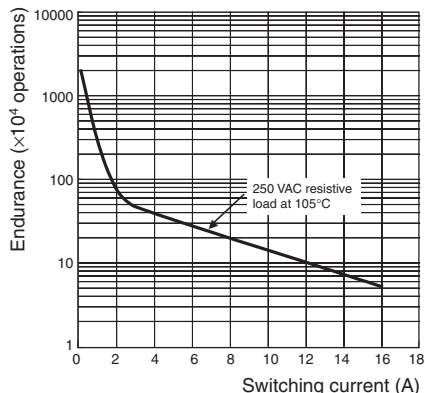
Model	Contact form	Coil ratings	Contact ratings	Number of test operations
G2RL-1ATP□-E	SPST-NO (High capacity)	12 to 24 VDC	16 A at 250 VAC (General use), 40°C	100,000
			16 A at 24 VDC (Resistive), 40°C	50,000
			16 A at 250 VAC (Resistive), 105°C	100,000

VDE (EN61810-1): Pending

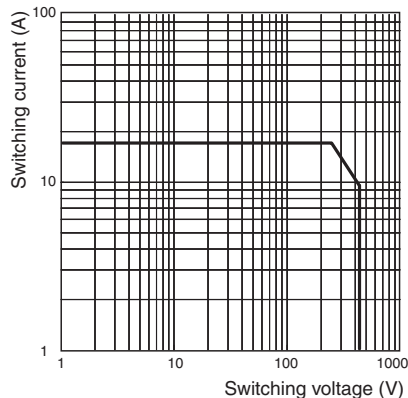
Engineering Data

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

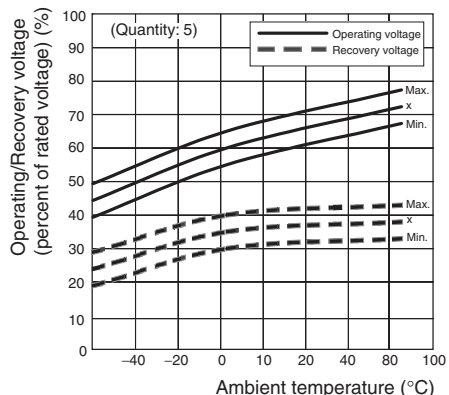
■ Endurance at 105°C



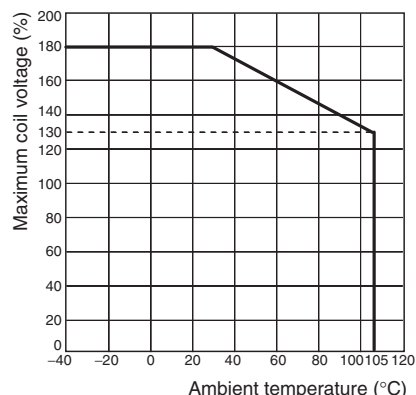
■ Maximum Switching Power



■ Ambient temperature vs. Operating/Recovery Voltage



■ Ambient Temperature vs. Maximum Coil Voltage

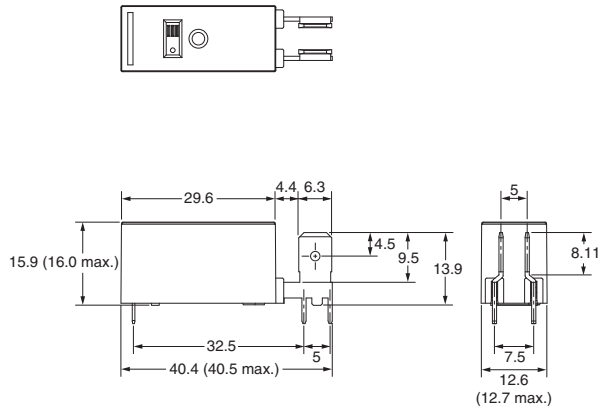
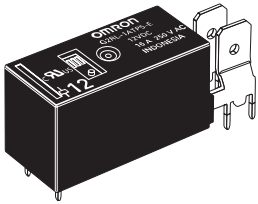


Note: The maximum coil voltage refers to the maximum value in a varying range of operating power voltage, not a continuous voltage.

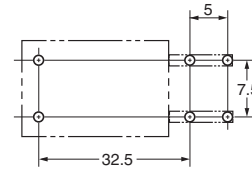
Dimensions

Note: All units are in millimeters unless otherwise indicated.

G2RL-1ATP5-E



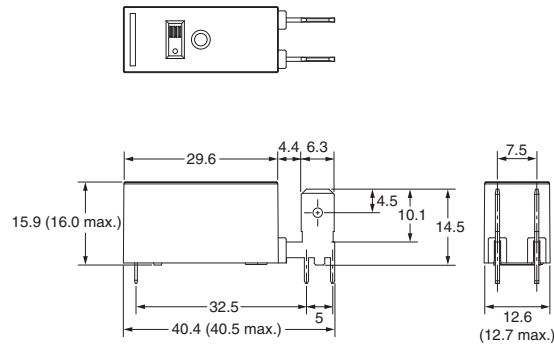
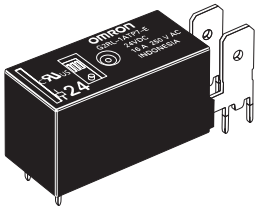
PCB Mounting Holes
(Bottom View)



Terminal Arrangement/
Internal Connection
(Bottom View)



G2RL-1ATP7-E





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ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

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

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