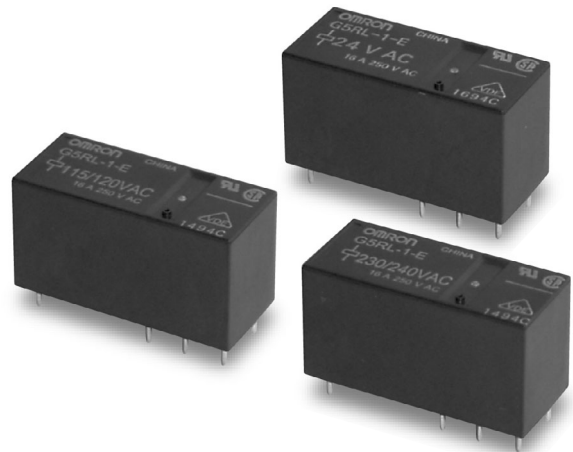


A Single-pole, 16-A Power Relay with AC Coil

- 29.0 × 12.7 × 15.7 mm (L × W × H)
Low profile: 15.7 mm in height
- Clearance and creepage distance
Between coil and contacts: 8 mm/8 mm
Between contacts of the same polarity:
3 mm/4 mm

RoHS Compliant Refer to pages 16 to 17 for details.



Ordering Information

Classification		Enclosure ratings	Contact form	
			SPST-NO	SPDT
Class F	High capacity	Flux protection	---	G5RL-1-E

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

Examples: G5RL-1-E 100 VAC
└─ Rated coil voltage

Model Number Legend:

G5RL- - VAC
1 2 3 4 5

1. Number of Poles

1: 1 pole

2. Contact Form/Contact Construction

None: SPDT

3. Enclosure Rating

None: Flux protection

4. Classification

E: High-capacity

5. Rated Coil Voltage

24, 100, 115/120, 200, 230/240 VAC

Specifications

■ Coil Ratings

Rated voltage	24 VAC	100 VAC	115 VAC/120 VAC		200 VAC	230 VAC/240 VAC	
Rated current at 50 Hz (mA)	31.30	7.50	5.85	6.25	3.75	3.00	3.13
Rated current at 60 Hz (mA)	28.30	6.88	5.35	5.70	3.45	2.76	2.88
Coil resistance (Ω)	443	8,220	11,600		33,000	47,600	
Must operate voltage	75% of rated voltage (max.)						
Must release voltage	15% of rated voltage (min.)						
Max. voltage	90% to 110% of rated voltage						
Power consumption	Approx. 0.75 VA						

- Note:**
1. The above items are measured at a coil temperature of 23°C.
 2. The tolerance of the rated current is +15%/–20%.
 3. Power consumption drop was measured at 50 Hz.
 4. Coil resistances are provided as reference values.

■ Contact Ratings

Contact material	Ag alloy (Cd free)
Load	Resistive load (cos φ=1)
Rated load	16 A at 250 VAC (NO), 16 A at 24 VDC (NO), 5 A at 250 VAC (NC), 5 A at 24 VDC (NC)
Rated carry current	16 A (NO), 5 A (NC)
Max. switching voltage	250 VAC, 24 VDC
Max. switching current	16 A (NO), 5 A (NC)
Max. switching power	4,000 VA AC (NO), 1,250 VA AC (NC) 384 W DC (NO), 120 W DC (NC)
Failure rate (reference value)	40 mA at 24 VDC

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

■ Characteristics

Contact resistance	100 mΩ max.
Operate time	20 ms max.
Release time	20 ms max.
Max. switching frequency	Mechanical: 18,000 operations/hr Electrical: 1,800 operations/hr (under rated load)
Insulation resistance	1,000 MΩ min. (at 500 VDC)
Dielectric strength	1,000 VAC, 50/60 Hz for 1 min. between contacts of same polarity 6,000 VAC, 50/60 Hz for 1 min. between coil and contacts
Impulse withstand voltage	10,000 V between coil and contacts, 1.2 × 50 μs
Vibration resistance	Destruction: 10 to 55 to 10 Hz, 1.5-mm double amplitude Malfunction: 10 to 55 to 10 Hz, 1.5-mm double amplitude
Shock resistance	Destruction: 1,000 m/s ² (approx. 100 G) Malfunction: 100 m/s ² (approx. 10 G)
Endurance	Mechanical: 10,000,000 operations min. (at 18,000 operations/hr) Electrical: 50,000 operations min. (Resistive load, 16 A, 250 VAC, NO contact, at 1 sec. ON/4 sec. OFF) (Resistive load, 16 A, 24 VDC, NO contact, at 1 sec. ON/4 sec. OFF) (Resistive load, 5 A, 250 VAC, NC contact, at 1 sec. ON/4 sec. OFF) (Resistive load, 5 A, 24 VDC, NC contact, at 1 sec. ON/4 sec. OFF) 100,000 operations min. (Resistive load, 12 A, 24 VDC, NO contact, at 1 sec. ON/4 sec. OFF)
Ambient temperature	Operating: -40°C to 70°C (with no icing)
Ambient humidity	Operating: 5% to 85%
Weight	Approx.: 10 g

■ Approved Standards

UL 508 (File No. E41643 Vol. 4 Sec.38) and CSA C22.2 No. 1, C22.2 No. 14 (Certificate No.: 1419093)

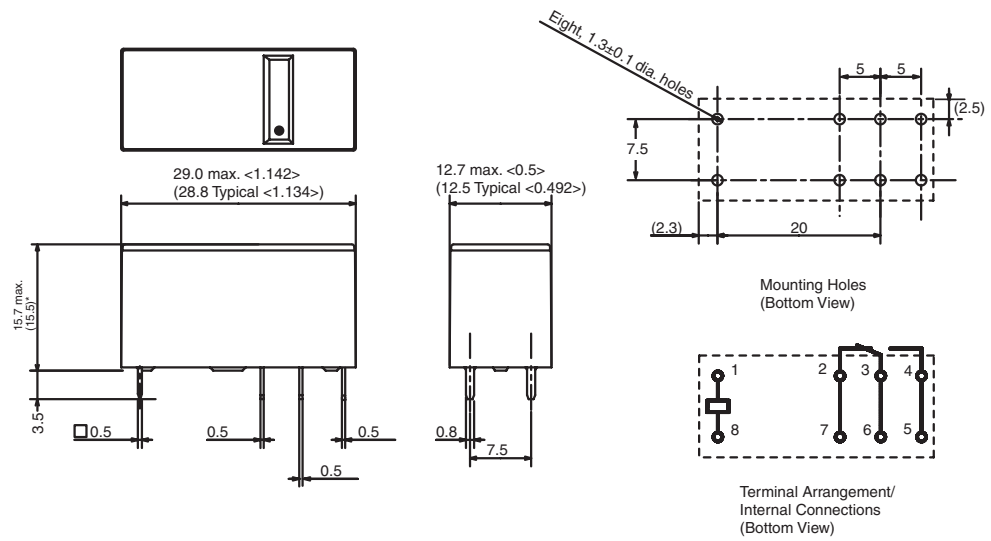
Model	Coil Rating	Contact rating
G5RL-1-E	24 to 240 VAC	16 A, 277 VAC General, 50,000 c - NO 16 A, 250 VAC General, 50,000 c - NO TV-5, 25,000 c - NO A 300 Pilot Duty, 720 VA, 240 VAC, 30,000 c - NO 1/2 Hp, 120 VAC, 6,000 c - NO 60 LRA/10 FLA, 250 VAC, 6,000 c - NO 5 A, 250 VAC General, 50,000 c - NC 5 A, 24 VDC Resistive, 50,000 c - NC

VDE DIN EN 61810-1 Edition 2 and EN60255-25 (Reg. No. A662)

Model	Coil Rating	Contact rating
G5RL-1-E	24, 100, 115/120, 200, 230/240 VAC (50 Hz)	16 A, 250 VAC 15,000 c

Dimensions

Note: All units are in millimeters unless otherwise indicated.



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

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