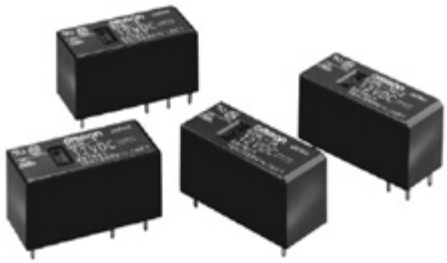
OMRON

PCB Relay
G2RL

High Capacity, Low Profile Relay

- Low profile: 15.7 mm max. in height.
- Cadmium-free contacts ensuring environment-friendly use.
- 10 kV impulse surge withstand.
- Clearance and creepage distance: 10 mm/10 mm.
- Tracking resistance: CTI>250.
- Choose from UL Class-B or Class-F insulation systems.
- Low coil power of 400 mW.
- UL, CSA and VDE approved.



Ordering Information

Classification		Enclosure ratings	Contact form			
			SPST-NO	SPDT	DPST-NO	DPDT
			Model			
Class-B	General-purpose	Flux protection	**G2RL-1A**	**G2RL-1**	**G2RL-2A**	**G2RL-2**
		Fully sealed	**G2RL-1A4**	**G2RL-14**	**G2RL-2A4**	**G2RL-24**
	High-capacity	Flux protection	**G2RL-1A-E**	**G2RL-1-E**	---	---
		Fully sealed	**G2RL-1A4-E**	**G2RL-14-E**	---	---
Class-F	General-purpose	Flux protection	**G2RL-1A-CF**	**G2RL-1-CF**	**G2RL-2A-CF**	**G2RL-2-CF**
		Fully sealed	**G2RL-1A4-CF**	**G2RL-14-CF**	**G2RL-2A4-CF**	**G2RL-24-CF**
	High-capacity	Flux protection	**G2RL-1A-E-CF**	**G2RL-1-E-CF**	---	---
		Fully sealed	**G2RL-1A4-E-CF**	**G2RL-14-E-CF**	---	---

Note: When ordering, add the rated coil voltage to the part number. Example: G2RL-1A *DC12*

■ MODEL NUMBER LEGEND

G2RL-□□□-□-□

1 2 3 4 5

1. Number of Poles

1: 1 pole
2: 2 poles

2. Contact Form

None: □PDT
A: □PST-NO

3. Enclosure Ratings

None: Flux protection (vented)
4: Fully sealed (with “knock off vent nib”)

4. Classification

None: General purpose
E: High capacity (1 pole)

5. Approved Standards

None: UL, CSA, VDE, UL Class B Insulation
CF: UL, CSA, VDE, UL Class F Insulation

Specifications

■ COIL RATINGS

Rated voltage		5 VDC	12 VDC	24 VDC	48 VDC
Rated current		80.0 mA	33.33 mA	16.7 mA	8.96 mA
Coil resistance		62.5 Ω	360 Ω	1,440 Ω	5,358 Ω
Coil inductance (H) (ref. value)	Armature OFF	0.18	1.01	4.19	15.91
	Armature ON	0.44	2.47	9.72	33.65
Must operate voltage		70% max. of the rated voltage			
Must release voltage		10% min. of the rated voltage			
Max. voltage		130% of the rated voltage (at 85°C)			
Power consumption		Approx. 400 mW			Approx. 430 mW

■ CONTACT RATINGS

Number of poles	1 pole	2 poles
Contact material	$AgSnO_2$	AgNi
Load	Resistive load (cosϕ=1)	Resistive load (cosϕ=1)
Rated load	12 A (16 A) at 250 VAC 12 A (16 A) at 24 VDC	8 A at 250 VAC 8 A at 30 VDC
Rated carry current	12 A (16 A)	8 A (70°C)/5 A (85°C)
Max. operating voltage	440 VAC, 300 VDC	
Max. operating current	12 A (16 A)	8 A
Max. switching power	3,000 VA (4,000 VA), 288 W (384 W)	2,000 VA, 240 W

Note: Values in parentheses are those for the high-capacity model.

■ CHARACTERISTICS

Item	1 pole	2 poles
Contact resistance	100 mΩ max.	
Operate (set) time	Approx. 7 ms	
Release (reset) time	Approx. 2 ms	
Max. operating frequency	Mechanical: 18,000 operation/hr Electrical: 1,800 operation/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	5,000 VAC, 1 min between coil and contacts 2,500 VAC, 1 min between contacts of different polarity 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 Hz, 1.5-mm double amplitude Malfunction: 10 to 55 Hz, 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	
Life expectancy (Mechanical)	20,000,000 operations (at 18,000 operations/hr)	
Ambient temperature	Operating: −40°C to 85°C (with no icing) Storage: −40°C to 85°C (with no icing)	
Ambient humidity	35% to 85%	
Weight	Approx. 12 g	
Packaging	Standard: 20 relays/stick	