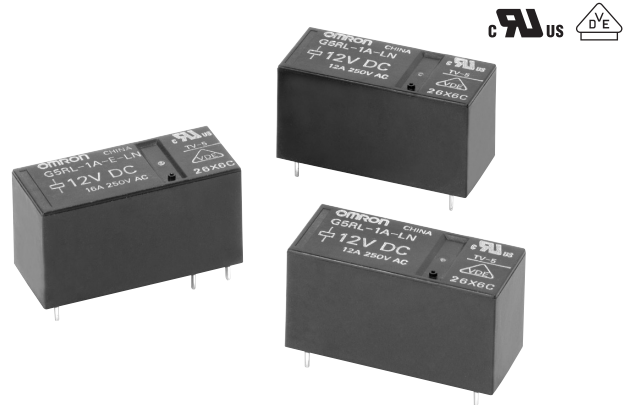


# G5RL

PCB Power Relay

## Low-profile Relay with Various Models

- Low profile: 15.7 mm in height.
- Creepage distance 8mm between coil and contacts
- 10 kV Impulse withstand voltage
- Models with AC coil available.
- High-Inrush model available (Inrush peak currents up to 100 A)
- Low Noise models available (Approx. 10 to 20 dB less sound pressure than standard G5RL-Series Relays)
- TV8 Rating models available (TV8 for UL standard)



RoHS Compliant

### Model Number Legend

G5RL-□□-□-□  
1 2 3 4

#### 1. Number of poles

1: 1-pole

#### 3. Classification

None: Standard

E : High-capacity

#### 2. Contact Form

None: SPDT (1c)

A : SPST-NO (1a)

#### 4. Additional Models

None: Standard

HR: High-inrush

LN: Low Noise

TV8: TV8 rating

### Application Examples

- Housing equipments
- Audio-visual products
- Office automation machines
- Air-conditioners
- Lighting

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### Ordering Information

| Classification | Terminal Shape | Contact form | Enclosure rating | Model                | Rated coil voltage                                  | Minimum packing unit |
|----------------|----------------|--------------|------------------|----------------------|---|----------------------|
| Standard       | PCB terminals  | SPST-NO (1a) | Flux protection  | <b>G5RL-1A-LN</b>    | 5VDC, 12VDC, 24VDC                                  | 100 pcs/tray         |
| High-capacity  |                |              |                  | <b>G5RL-1A-E-HR</b>  | 5VDC, 12VDC, 24VDC, 48VDC                           |                      |
|                |                |              |                  | <b>G5RL-1A-E-LN</b>  | 5VDC, 12VDC, 24VDC                                  |                      |
|                |                |              |                  | <b>G5RL-1A-E-TV8</b> | 5VDC, 12VDC, 24VDC, 48VDC                           |                      |
|                |                |              |                  | <b>G5RL-1-E</b>      | 24VAC, 100VAC, 115VAC/120VAC, 200VAC, 230VAC/240VAC |                      |
|                |                |              |                  | <b>G5RL-1-E-HR</b>   | 5VDC, 12VDC, 24VDC, 48VDC                           |                      |

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

Example: G5RL-1A-LN DC5

Rated coil voltage

However, the notation of the coil voltage on the product case as well as on the packing will be marked as □□ VDC.

### Ratings

#### Coil

#### Low Noise Models: G5RL-1A(-E)-LN

| Rated Voltage (VDC) | Rated current (mA) | Coil resistance (Ω) | Must operate voltage (V) | Must release voltage (V) | Max voltage (V) | Power consumption (mW) |
|---------------------|--------------------|---------------------|--------------------------|--------------------------|-----------------|------------------------|
|                     |                    |                     | % of rated voltage       |                          |                 |                        |
| 5                   | 106                | 47.2                | 70% max.                 | 10% min.                 | 110%            | Approx. 530            |
| 12                  | 44.2               | 272                 |                          |                          |                 |                        |
| 24                  | 22.1               | 1,086               |                          |                          |                 |                        |

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

## High-Inrush Models: G5RL-1(A)-E-HR, G5RL-1A-E-TV8

| Rated Voltage (VDC) | Rated current (mA) | Coil resistance (Ω) | Must operate voltage (V) | Must release voltage (V) | Max. voltage (V) | Power consumption (mW) |
|---------------------|--------------------|---------------------|--------------------------|--------------------------|------------------|------------------------|
|                     |                    |                     | % of rated voltage       |                          |                  |                        |
| 5                   | 80                 | 62.5                | 70% max.                 | 10% min.                 | 130%             | Approx. 400            |
| 12                  | 33.3               | 360                 |                          |                          |                  |                        |
| 24                  | 16.7               | 1,440               |                          |                          |                  |                        |
| 48                  | 8.96               | 5,358               |                          |                          |                  |                        |

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

## Models with AC Coil: G5RL-1-E

| Rated Voltage (VAC) | Rated current at 50Hz (mA) | Rated current at 60Hz (mA) | Coil resistance (Ω) | Must operate voltage (V) | Must release voltage (V) | Max. voltage (V) | Power consumption (mW) |
|---------------------|----------------------------|----------------------------|---------------------|--------------------------|--------------------------|------------------|------------------------|
|                     |                            |                            |                     | % of rated voltage       |                          |                  |                        |
| 24                  | 31.3                       | 28.3                       | 443                 | 75% max.                 | 15% min.                 | 110%             | Approx. 750            |
| 100                 | 7.5                        | 6.88                       | 8,220               |                          |                          |                  |                        |
| 115/120             | 5.85/6.25                  | 5.35/5.70                  | 11,600              |                          |                          |                  |                        |
| 200                 | 3.75                       | 3.45                       | 33,000              |                          |                          |                  |                        |
| 230/240             | 3.00/3.13                  | 2.76/2.88                  | 47,600              |                          |                          |                  |                        |

Note 1. The rated current tolerance is +15%/-20%. All above data is based on coil temperature of 23°C.

2. Coil resistances are provided as reference values.

## ● Contacts

### Low Noise Models: G5RL-1A(-E)-LN

| Load                   | Resistive load                    |                                   |
|------------------------|-----------------------------------|-----------------------------------|
|                        | Standard                          | High-capacity                     |
| Contact form           | SPST-NO (1a)                      |                                   |
| Contact Type           | Single                            |                                   |
| Contact material       | Ag Alloy                          |                                   |
| Rated load             | 12 A at 250 VAC<br>12 A at 24 VDC | 16 A at 250 VAC<br>16 A at 24 VDC |
| Rated carry current    | 12 A                              |                                   |
| Max. switching voltage | 250 VAC, 24 VDC                   |                                   |
| Max. switching current | 12 A                              | 16 A                              |

### High-Inrush Models: G5RL-1(A)-E-HR, G5RL-1A-E-TV8

| Load                   | Resistive load                    |  |
|------------------------|-----------------------------------|--|
|                        | High-capacity                     |  |
| Contact form           | SPST-NO (1a)                      | SPDT (1c)  |
| Contact Type           | Single                            |  |
| Contact material       | Ag Alloy                          |  |
| Rated load             | 16 A at 250 VAC<br>16 A at 24 VDC | 16 A at 250 VAC, 24VDC (NO)<br>5 A at 250 VAC, 24 VDC (NC) |
| Rated carry current    | 16 A                              | 16 A (NO), 5 A (NC)  |
| Max. switching voltage | 250 VAC, 24 VDC                   |  |
| Max. switching current | 16 A                              | 16 A (NO), 5 A (NC)  |

### Models with AC Coil: G5RL-1-E

| Load                   | Resistive load  |  |
|------------------------|---|--|
|                        | High-capacity   |  |
| Contact form           | SPDT (1c)   |  |
| Contact Type           | Single  |  |
| Contact material       | Ag Alloy  |  |
| Rated load             | 16 A at 250 VAC, 24 VDC (NO)<br>5 A at 250 VAC, 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)   |  |