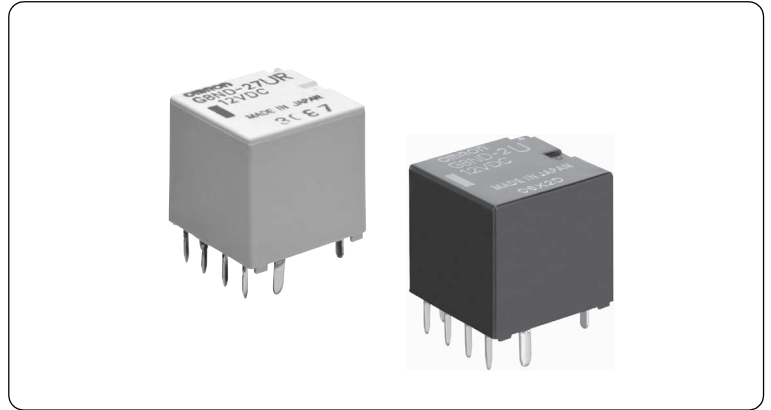


G8ND

Automotive PCB relay (Dual H-Bridge)

For normal/reverse rotation motor control

- 8-terminal dual relay. Separate coil and contact terminals.
- Compact size but its power contacts and heat-release design achieved a high current switching.



■ Purpose

- To control the normal/reverse of the DC motor for automotive (Door lock motor, Power window motor, Sunroof motor, etc.)

■ Type standard

G8ND-□□□□
① ② ③ ④

| | Classification | Symbol | Meaning of the symbol |
|---|-----------------------------------|--------|----------------------------------|
| ① | Number of contact poles/Structure | 2 | 1c×2 contacts (SPDT×2, H-Bridge) |
| ② | Protective structure | Blank | Simple plastic seal |
| | | 7 | Flux protection (Open vent hole) |
| ③ | Characteristics | Blank | Standard |
| | | S | Low operating voltage |
| | | U | Super low operating voltage |
| ④ | Special specification | Blank | Standard |
| | | R | High heat resistance |

■ Classification

| Classification | Terminal form | Contact structure | Protective structure | Rated coil | | Type | Characteristics |
|----------------|---------------|----------------------------|----------------------------------|-------------|----------------|-----------|-----------------------------|
| | | | | Voltage (V) | Resistance (Ω) | | |
| Dual | PCB terminal | SPDT X 2 (1c×2) (H-Bridge) | Simple plastic seal | DC12 | 225 | G8ND-2 | Standard |
| | | | | | 180 | G8ND-2S | Low operating voltage |
| | | | | | 130 | G8ND-2U | Super low operating voltage |
| | | | Flux protection (Open vent hole) | | 225 | G8ND-27R | Standard |
| | | | | | 180 | G8ND-27SR | Low operating voltage |
| | | | | | 130 | G8ND-27UR | Super low operating voltage |

Please confirm Omron Safety Precautions for all automotive relays first.
Omron can not guarantee automotive relays before finish making a contract with product specifications.

■ Ratings

● Operation coil

| Rated voltage (V) | Coil resistance (Ω) | Rated current (mA) | Operating voltage (V) | Release voltage (V) | Max. of applied voltage (5A conduct, 85°C) (V) | Service voltage range (V) | Rated power consumption (mW) |
|-------------------|---------------------|--------------------|-----------------------|---------------------|--|---------------------------|------------------------------|
| DC 12 | 225 | 53.3 | 7.2 or less | 1.0 or more | DC16, 15 min. | DC10 to 16 | 640 |
| | 180 | 66.7 | 6.5 or less | | DC16, 5 min. | | 800 |
| | 130 | 92.3 | 5.5 or less | 0.8 or more | DC16, 3 min. | | 1108 |

● Switching area

| Item | Performance | |
|--------------------------------|-----------------------------------|-------------|
| Contact material | Silver alloy | |
| Rated voltage | DC12V | |
| Rated load | Motor load, 25A | |
| Inrush current | 30A | |
| Allowable carrying current | 25A at DC14V (10min) ¹ | (Reference) |
| Min. Carry / Switching Current | DC12V 1A | (Reference) |

■ Performance

| Item | Standard value | |
|---|----------------------------------|--|
| Contact resistance ² | 50mΩ or less | |
| Operating time ³ | 10ms or less | |
| Release time ³ | 5ms or less | |
| Insulation resistance ⁴ | Between coil and terminal | 100MΩ or more |
| | Between homopolar contacts | 100MΩ or more |
| Withstand voltage ⁵ | Between coil and terminal | AC500V for 1min. |
| | Between homopolar contacts | AC500V for 1 min. |
| Vibration resistance | Durability | 33Hz 45m/s ² |
| | Malfunction (Detecting time:1ms) | 10 to 55Hz 45m/s ² |
| Shock resistance | Durability | 1000m/s ² (Operating time:6ms) |
| | Malfunction (Detecting time:1ms) | 100m/s ² (Operating time:11ms) |
| Mechanical endurance (Switching frequency:18,000 times/h) | 1,000,000 times | |
| Electrical endurance (Rated load) | 100,000 times | |
| Ambient temperature | -40 to 85°C | |
| Ambient humidity | 35 to 85%RH | |
| Weight | 7.5g | |

■ Packing

| Packing form | Stick |
|------------------|---------------------------|
| MOQ ⁶ | 1,200pcs (40pcs×30sticks) |

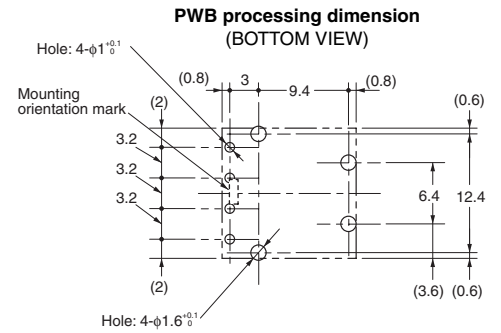
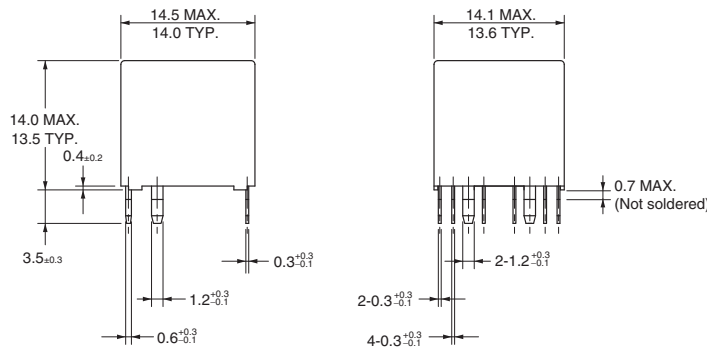
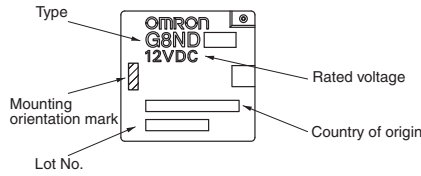
Note: All values above are measured in early time under an ambient temperature of +20°C and humidity of 65% unless stated.

- *1. This is an acceptable current-carrying value in abnormal, and this is not a value which guarantee a repeat current-carrying. Please check under actual use condition before use.
- *2. Measured with a voltage drop method at DC6V 1A.
- *3. It changes depend on how the rated voltage is operated, but bounce-time is not included.
- *4. Measured at DC500V.
- *5. Measured under 1mA of leak current, 50/60Hz for 1minute.
- *6. Minimum Order Quantity is subject to change, please feel free to contact our sales representatives.

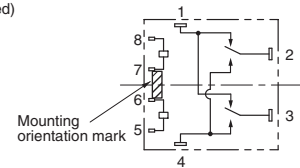
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■ Dimensions (Unit: mm)

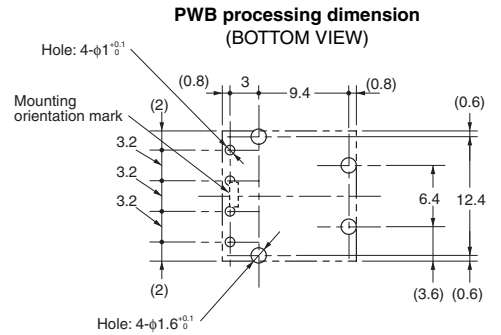
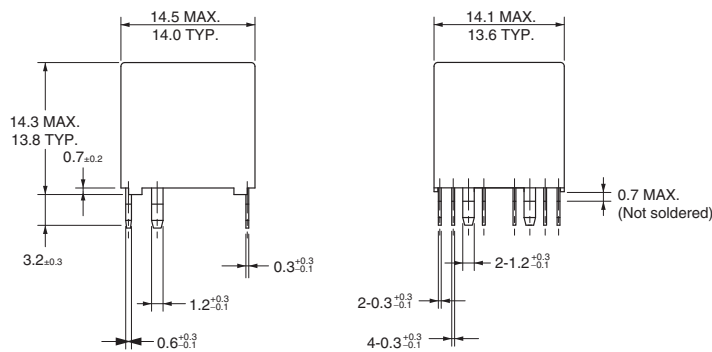
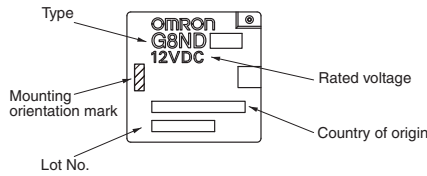
G8ND Relay with Simple Simple Plastic Seal



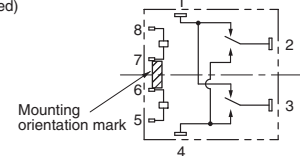
Terminal arrangement / Internal connections (BOTTOM VIEW)



G8ND Flux-resistive (Non-sealed) Relay



Terminal arrangement / Internal connections (BOTTOM VIEW)



* Tolerance unless otherwise specified
 Less than 1 mm: ±0.1 mm
 Less than 1 to 3 mm: ±0.2 mm
 3 mm or more: ±0.3 mm

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