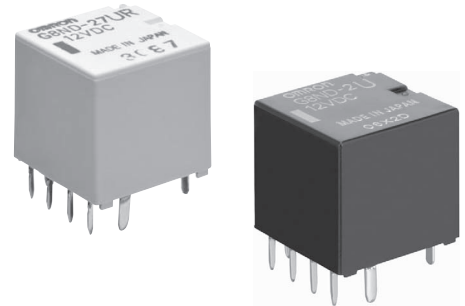


Small power H-bridge PCB relay for Automotive and DC12V applications

# G8ND

## For normal/reverse rotation motor control

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



## ■Purpose

- DC 12V motor/resistive application control
- Automotive DC applications (Door lock, Power window, Sunroof, etc.)

## ■Type standard

G8ND-          
           1  2  3  4

### 1. Number of Contact Poles

2 : SPDT×2 (1 Form C×2) H-bridge

### 2. Protective structure

Blank: Plastic sealed

7 : Flux tight (Open vent hole)

### 3. Function

Blank: Standard

S : Low operating voltage

U : Ultralow operating voltage

### 4. Special function

Blank: Standard

R : Pin in Paste reflow compliant

English character: Special function

## ■Classification

Classification	Terminal form	Contact structure	Protective structure	Rated coil		Model	Characteristics
				Voltage (V)	Resistance (Ω)		
Dual	PCB terminal	SPDT × 2 (1c×2) (H-Bridge)	Plastic sealed	DC12	225	<b>G8ND-2 DC12</b>	Standard
					180	<b>G8ND-2S DC12</b>	Low operating voltage
					130	<b>G8ND-2U DC12</b>	Super low operating voltage
			Flux tight (Open vent hole)		225	<b>G8ND-27R DC12</b>	Standard
					180	<b>G8ND-27SR DC12</b>	Low operating voltage
					130	<b>G8ND-27UR DC12</b>	Super low operating voltage

## ■ 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)
DC12	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 <sup>2</sup>
	Malfunction (Detecting time:1ms)	10 to 55Hz 45m/s <sup>2</sup>
Shock resistance	Durability	1000m/s <sup>2</sup> (Operating time:6ms)
	Malfunction (Detecting time:1ms)	100m/s <sup>2</sup> (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.

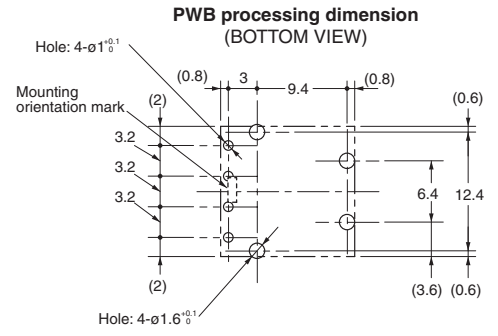
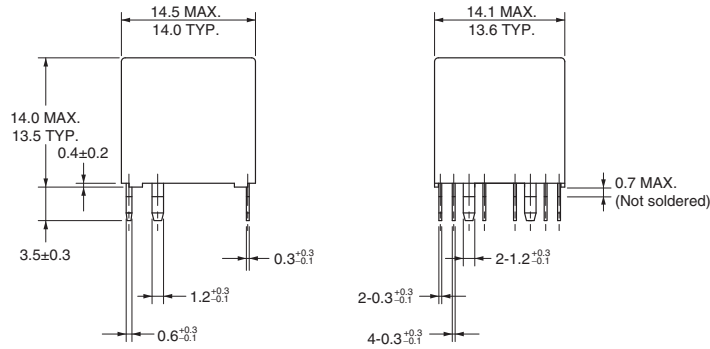
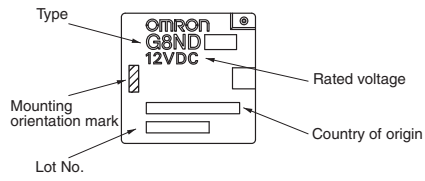
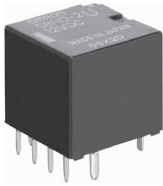
\*5. Measured under 1mA of leak current, 50/60Hz for 1minute.

\*6. Minimum Order Quantity is subject to change, please feel free to contact our sales representatives.

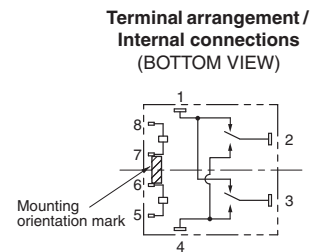
■ Dimensions

(Unit: mm)

G8ND  
Plastic sealed

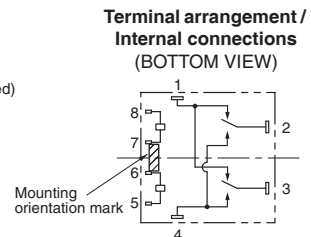
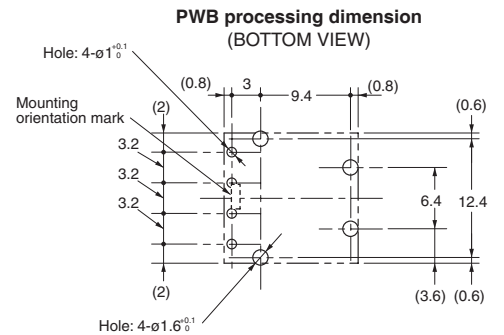
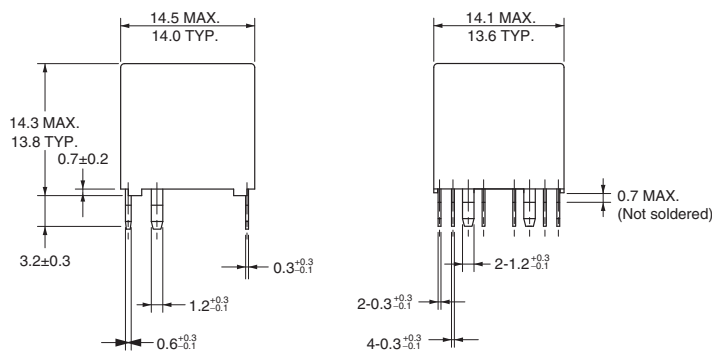
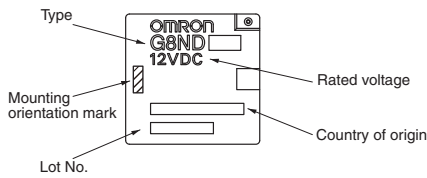


\* Please study & choose other appropriate hole diameters if confirmed the diameter values recommended above don't work with the soldering process.



TOLERANCE UNLESS OTHERWISE SPECIFIED  
 Less than 1 mm :±0.1 mm  
 1 to 3 mm :±0.2 mm  
 More than 3 mm :±0.3 mm  
 ( ) is reference dimension

G8ND  
Pin in Paste reflow compliant



TOLERANCE UNLESS OTHERWISE SPECIFIED  
 Less than 1 mm :±0.1 mm  
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 ( ) is reference dimension

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## ■Precautions

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- Please refer to “Safety Precautions for All Automotive Relays” for correct use.

Please check each region's Terms & Conditions by region website.

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Device & Module Solutions Company

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