

# G8FD

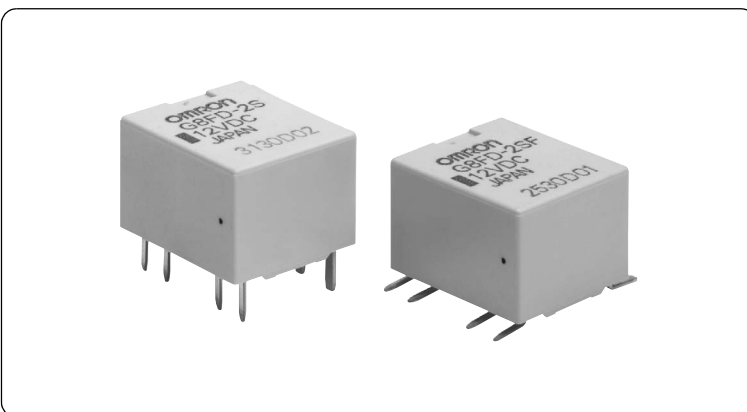
Automotive PCB relay (Dual H-Bridge)

Compact, general-purpose relay that to control the normal and reverse of the motor.

65% downsized from standard G8ND.

(Surface mount type is available)

- 8-terminal dual relay. Separate coil and contact terminals.



## ■ Purpose

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

## ■ Type standard

G8FD-□□□

① ② ③

	Classification	Symbol	Meaning of the symbol
①	Number of contact poles/ Structure	2S	1c×2 contacts (SPDT×2, H-Bridge)
②	Terminal form	Blank	For PCB
		F	For surface mount

## ■ Classification

Classification	Terminal form	Contact structure	Protective structure	Rated coil		Type
				Voltage (V)	Resistance (Ω)	
Dual	For PCB	SPDT X 2 (1c×2)(H-Bridge)	Simple plastic seal	DC12	130	G8FD-2S
	For surface mount					G8FD-2SF

## ■ 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)
12	130	92.3	6.5 or less	1.0 or more	DC16, 1min.	DC10 to 16	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 (1min)*1	(Reference)
Min. Carry / Switching Current	DC12V 1A	(Reference)

Please confirm Omron Safety Precautions for all automotive relays first.

Omron can not guarantee automotive relays before finish making a contract with product specifications.

## ■ Performance

Item		Standard value
Contact resistance <sup>*2</sup>		50mΩ or less
Operating time <sup>*3</sup>		10ms or less
Release time <sup>*3</sup>		5ms or less
Insulation resistance <sup>*4</sup>	Between coil and terminal	100MΩ or more
	Between homopolar contacts	100MΩ or more
Withstand voltage <sup>*5</sup>	Between coil and terminal	AC500V for 1min.
	Between homopolar contacts	AC500V for 1min.
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		5g

## ■ Packing

Type	PCB terminal type	Surface mount type
Packing form	Stick	Stick + Vacuum aluminum pack <sup>*7</sup>
MOQ <sup>*6</sup>	1,200pcs (40pcs×30sticks)	1,200pcs (40pcs to 30sticks)

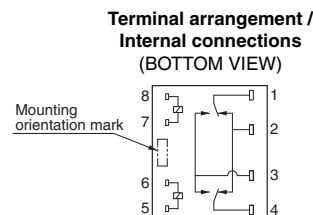
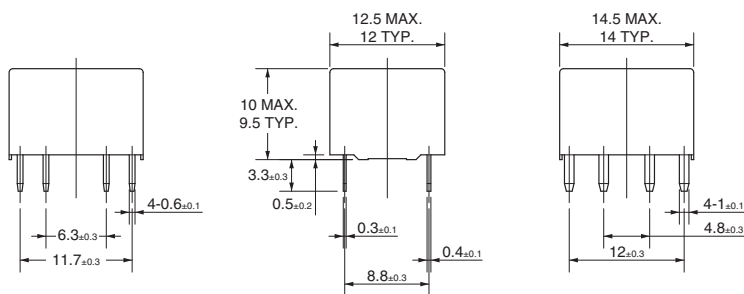
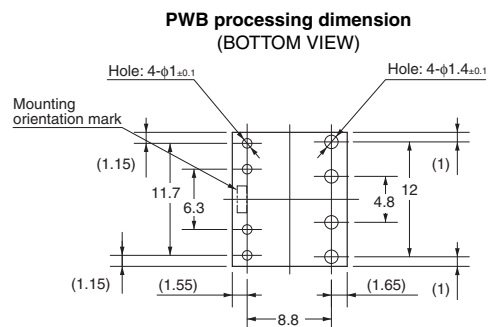
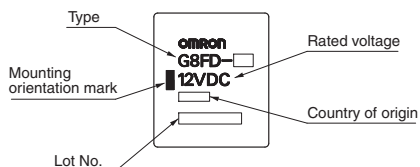
Note: All values above are measured in early time under an ambient temperature of +20°C and humidity of 65% unless stated.

- \*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.
- \*7. When it is used for reflow soldering, please use (mount) it within 24hours after opening a vacuum aluminum pack.  
Indoor condition : Indoor temperature shall be a maximum of 30 °C, and indoor humidity shall be less than 60%.  
Store it in a desiccator under the following conditions after opening a vacuum aluminum pack.  
Storage place : Indoor (in a desiccator)  
Storage temperature : 15 to 35 °C  
Storage humidity : less than 20% RH  
Storage period : Within 6 months

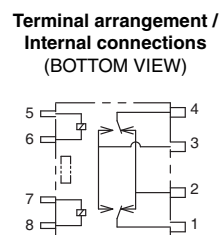
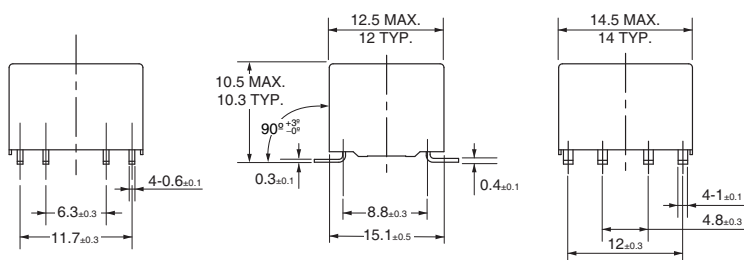
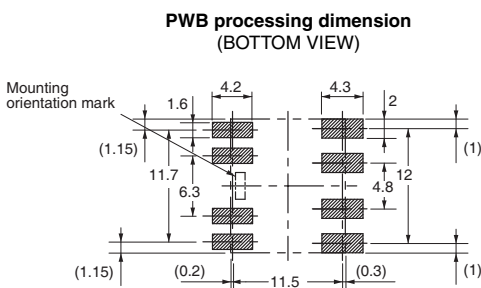
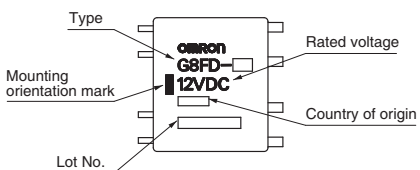
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### ■ Dimensions (Unit: mm)

#### G8FD-2S



#### G8FD-2FS



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