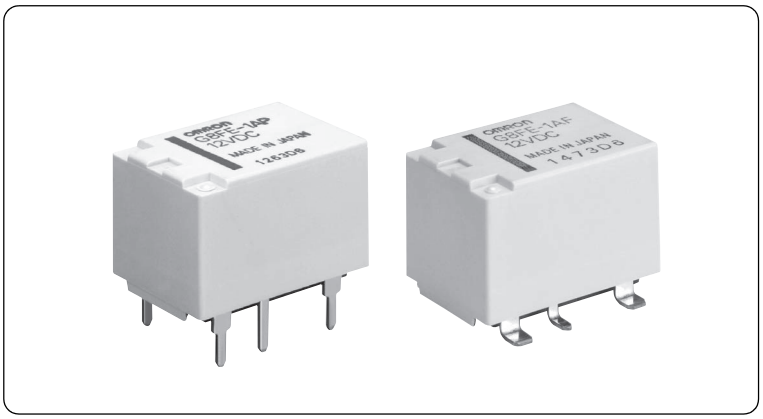
G8FE

Automotive PCB relay (Power)

Small but double terminal design achieved 15A current-carrying.(High heat resistance)

(Surface mount type is available)

- **Small size and high heat resistance enable its use in engine room.**
- **Can be used for module design (SJB) as a replacement for existing plug-in relay.**
- **Resistance between contact terminals is reduced by adopting the plug-in relay structure.**



■ Purpose

- **Head lamp, Tail lamp, etc.**

■ Type standard

G8FE-□□□-□

① ② ③ ④

	Classification	Symbol	Meaning of the symbol
①	Number of contact poles	1	Number of contact poles
②	Contact structure	A	1a contact
③	Terminal form	P	For PCB
		F	For surface mount
④	Special specification	Blank	Standard
		L	Low-heat generating

■ Classification

Classification	Terminal form	Contact structure	Protective structure	Rated coil		Type	Characteristics
				Voltage (V)	Resistance (Ω)		
Single	For PCB	SPST (1a)	Simple plastic seal	DC12	180	**G8FE-1AP**	Standard
	For surface mount					**G8FE-1AF**	
	For PCB				225	**G8FE-1AP-L**	Low-heat generating
	For surface mount					**G8FE-1AF-L**	

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■ Ratings

● Operation coil

Rated voltage (V)	Coil resistance (Ω)	Rated current (mA)	Operating voltage (V)	Release voltage (V)	Max. of applied voltage (15A conduct, 105°C) (V)	Service voltage range (V)	Rated power consumption (mW)
DC 12	180	66.7	6.0 or less	1.0 or more	DC16, continuous	DC10 to 16	800
	225	53.3	7.3 or less				640

● Switching area

Item	Performance	
Contact material	Silver alloy	
Rated voltage	DC12V	
Rated load	Resistance load 15A DC14V	
Inrush current	80A	
Continuous carry current*1	15A	
Allowable carrying current	20A at DC12V (30min)*2	(Reference)
Min. Carry / Switching Current	DC12V 1A	(Reference)

■ Performance

Item		Standard value
Contact resistance*3		100mΩ or less
Operating time*4		10ms or less
Release time*4		10ms or less
Insulation resistance*5	Between coil and terminal	10MΩ or more
	Between homopolar contacts	10MΩ or more
Withstand voltage*6	Between coil and terminal	AC500V for 1min.
	Between homopolar contacts	AC500V for 1 min.
Vibration tolerance	Durability	33Hz 45m/s^2
	Malfunction (Detecting time:1ms)	5 to 100Hz 44.1m/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 105°C
Ambient humidity		35 to 85%RH
Weight		8.7g

■ Packing

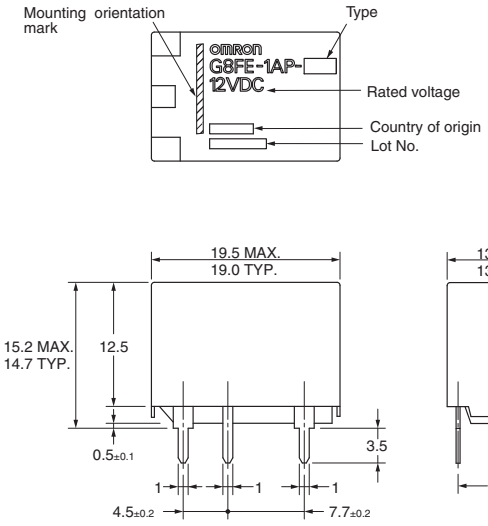
Type	PCB terminal type	Surface mount type
Packing form	Stick	Stick + Vacuum aluminum pack*8
MOQ*7	750pcs (30pcs to 25sticks)	750pcs (30pcs to 25sticks)

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

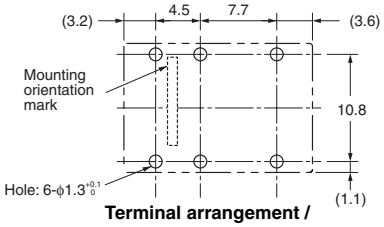
*1. The value stated is at maximum temperature in a guaranteed ambient temperature.
*2. This is an acceptable current-carrying value in abnormal, and this is not a value which guarantee a repeat current-carrying. Please check under actual use condition before use.
*3. Measured with a voltage drop method at DC6V 1A.
*4. It changes depend on how the rated voltage is operated, but bounce-time is not included.
*5. Measured at DC500V.
*6. Measured under 1mA of leak current, 50/60Hz for 1minute.
*7. Minimum Order Quantity is subject to change, please feel free to contact our sales representatives.
*8. When it is used for reflow soldering, please use (mount) it within 24hours after opening a vacuum aluminum pack.
Room environment: 30°C or less and 60% humidity or less.
Store it in a desiccator under the following conditions after opening a vacuum aluminum pack.
Storage place : Indoor (in a desiccator)
Storage temperature : 15~35 °C
Storage humidity : less than 20% RH
Storage period : Within 6 months

■ Dimensions (Unit: mm)

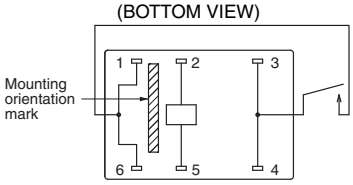
G8FE-1AP



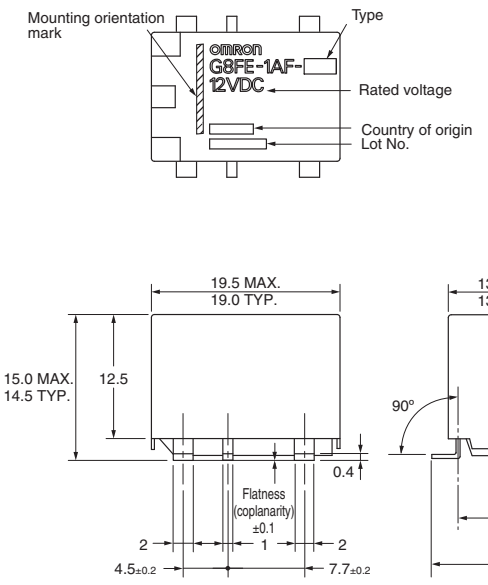
PWB processing dimension
(BOTTOM VIEW)



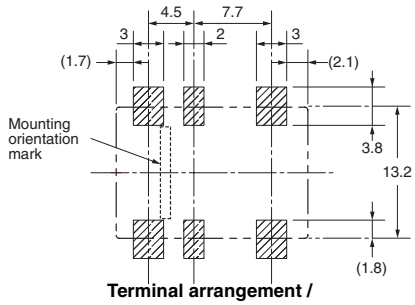
Terminal arrangement / Internal connections
(BOTTOM VIEW)



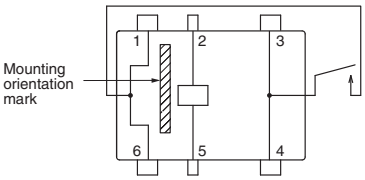
G8FE-1AF



PWB processing dimension
(TOP VIEW)



Terminal arrangement / Internal connections
(TOP 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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