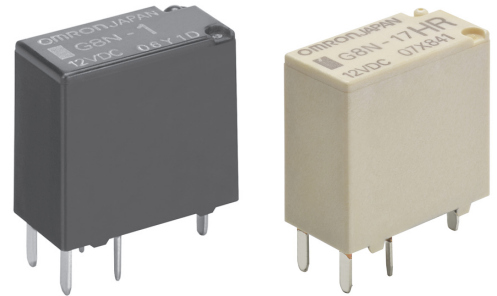


Small power single PCB relay for Automotive and DC12V applications

G8N

Standard low load relay for Motor/Heater control applications

- Super-slim width (7.2mm). Good for parts layout.
- Even at a small size, high-wattage switching is possible due to the contacts and heat-release design. 100,000 times at 14VDC/25A (motor lock).



■ Purpose

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

■ Type standard

G8N-□□□□
1 2 3 4

1. Number of Contact Poles

1 : 1-pole

2. Protective structure

Blank : Plastic sealed

7 : Flux tight (Open vent hole)

3. Function

Blank : Standard

L : High heat resistance

H : High heat resistance and Low operating voltage

U : Ultralow operating voltage

4. Special function

Blank : Standard

R : Pin in Paste reflow compliant

English character: Special function

■ Ratings/Performance

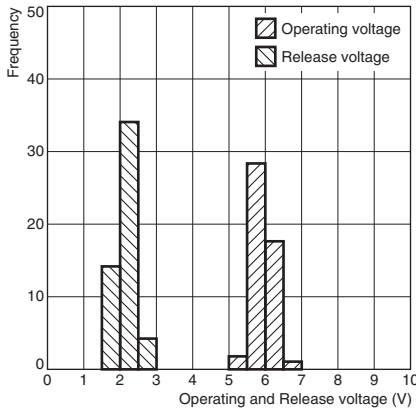
Item		Model	G8N-1 DC12	G8N-1L DC12 G8N-17LR DC12	G8N-1H DC12 G8N-17HR DC12	G8N-1U DC12 G8N-17UR DC12	
		Standard	High heat resistance	High heat resistance and Low operating voltage	Super low operating voltage		
Coil	Rated coil voltage	12 VDC					
	Coil resistance (at 20°C)	225 Ω		180 Ω		130 Ω	
	Service voltage range	10 to 16 VDC					
	Operating voltage (at 20°C)	7.2 V or less			6.5 V or less		5.5 V or less
	Release voltage (at 20°C)	1.0 V or more				0.8 V or more	
	Max value of rated coil voltage (5A)	14 VDC (continuous) 16 VDC at 15 min	16 VDC (continuous)	14 VDC (continuous) 16 VDC at 15 min		16 VDC at 3 min	
Contact	Contact configuration	1c (SPDT)					
	Contact material	AgSn type (non-cadmium)					
	Rated load	14 VDC 25 A Motor load					
	Max switching current	30 A					
Endurance (Lifetime)	Mechanical	1,000,000 times					
	Electrical (Rated load)	100,000 times					

Model		G8N-1 DC12	G8N-1L DC12 G8N-17LR DC12	G8N-1H DC12 G8N-17HR DC12	G8N-1U DC12 G8N-17UR DC12
Item		Standard	High heat resistance	High heat resistance and Low operating voltage	Super low operating voltage
Mechanical	Impact resistance	Malfunction	100 m/s ²		
		Destruction	1,000 m/s ²		
	Vibration resistance	Malfunction	10~55 Hz, Peak to peak: 1.5 mm		
		Destruction	10~55 Hz, Peak to peak: 1.5 mm		
Ambient temperature range		-40~+85°C	-40~+105°C	-40~+85°C	
Weight		About 4.0 g			
Minimum packing unit (Tube packing)		2,400 pcs. / box (80 pcs. × 30 tubes)			

Reference data

Operating voltage/Release voltage

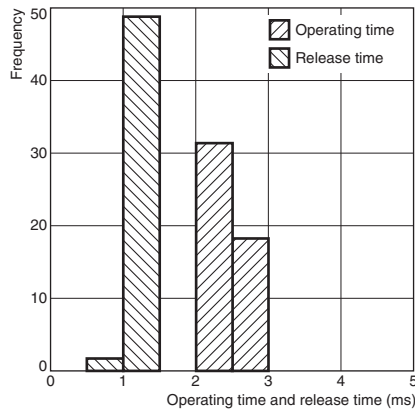
Sample: G8N-1 12 VDC 225 Ω 50 pcs



Operating time/Release time

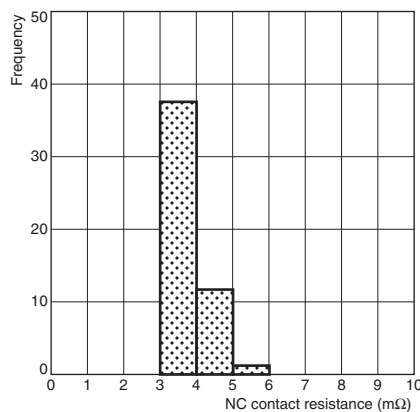
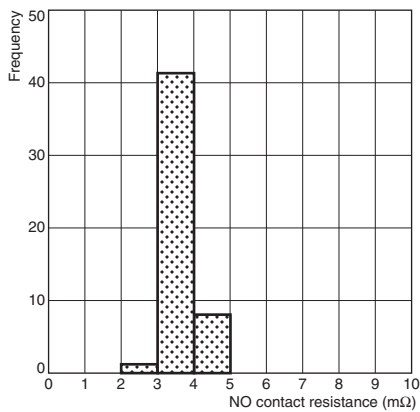
Sample: G8N-1 12 VDC 225 Ω 50 pcs

Diode to absorb coil surge,
without resistor



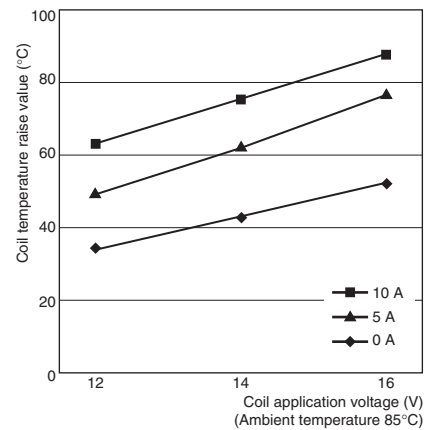
Contact resistance

Sample: G8N-1 12 VDC 225 Ω 50 pcs



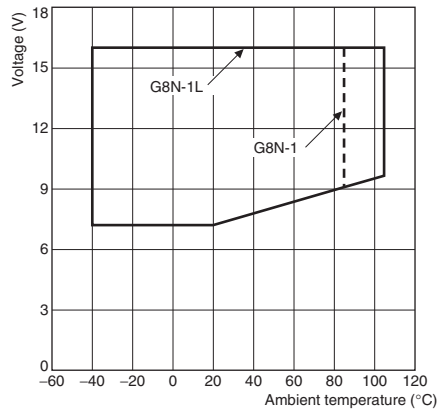
Coil temperature rise

Sample: G8N-1H 12 VDC 180 Ω 5 pcs

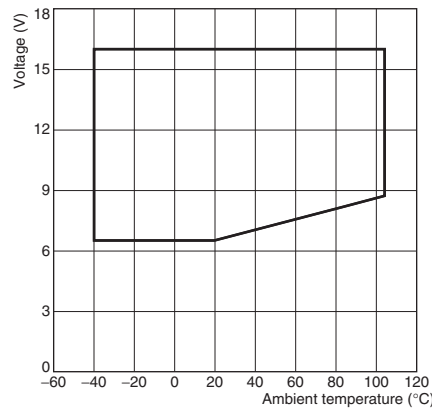


●Ambient temperature and service voltage range (Cold start)

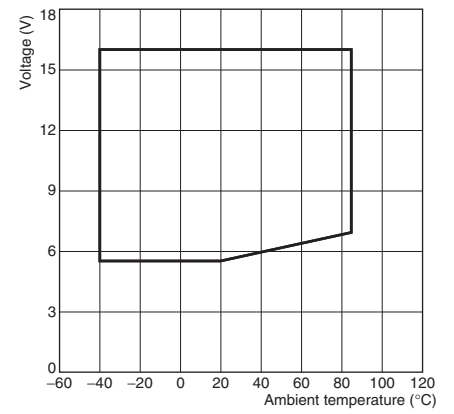
G8N-1, G8N-1L



G8N-1H



G8N-1U



■Reference data

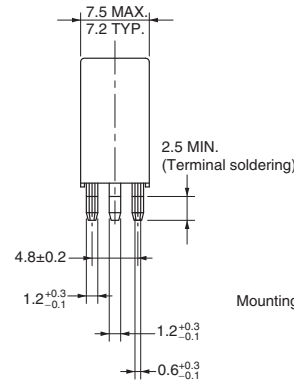
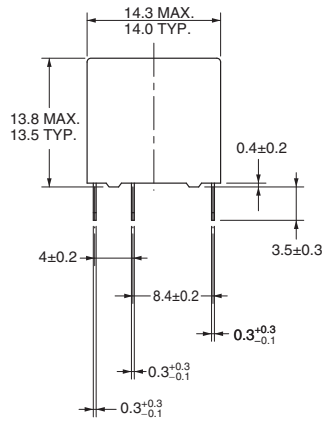
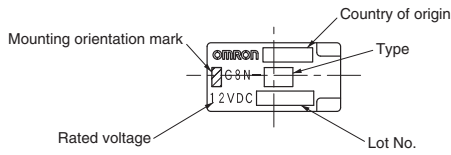
●Electrical endurance (Lifetime)

Spec	Application/Load	Load current	Switching frequency	Switching time
G8N-1	Power window motor	Motor free current (Input 22.6 A/Steady 8 A/Brake current 13 A)	On1.5 s/Off6.0 s	200,000
G8N-1H	Wiper motor	Motor free current (Input 22.2 A/Steady6.4 A/Brake current 16 A)	On0.2 s/Off0.8 s	300,000

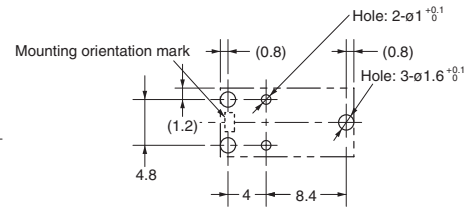
■Dimensions

(Unit: mm)

G8N
Plastic sealed

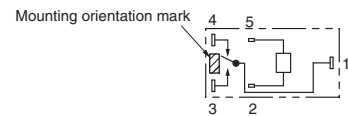


PWB processing dimension (BOTTOM VIEW)



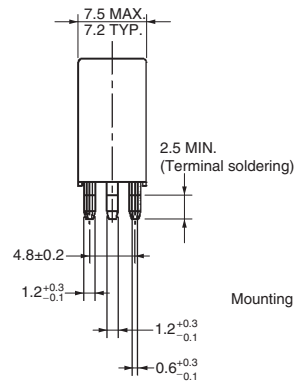
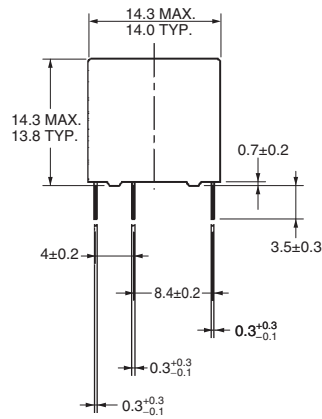
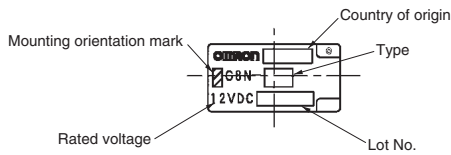
*Please study & choose other appropriate hole diameters if confirmed the diameter values recommended above don't work with the soldering process.

Internal connection (BOTTOM VIEW)

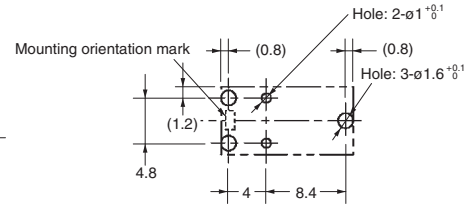


TOLERANCE UNLESS OTHERWISE SPECIFIED
 Less than 1 mm :±0.1 mm
 1 to 3 mm :±0.2 mm
 More than 3 mm :±0.3 mm
 () is reference dimension

G8N
Pin in Paste reflow compliant

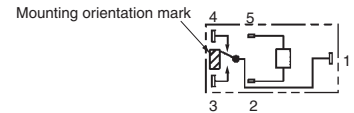


PWB processing dimension (BOTTOM VIEW)



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

Internal connection (BOTTOM VIEW)



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

■Precautions

- 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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