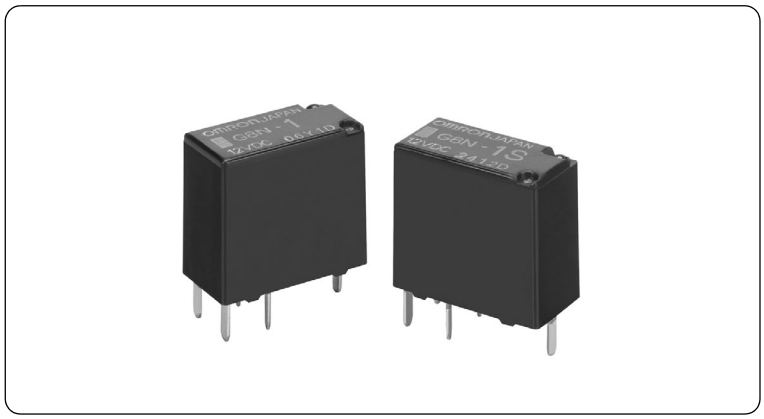
G8N

Micro-mini PCB relay for automobile use

High-density design (smallest class in the industry) Half-size in comparison with the existing type

(Omron G8QN)

- 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 motor control for automobile parts (Door lock motor, power window motor, wiper motor, washer motor, sunroof motor, etc.)
- Flasher lamp (indicator or hazard)

■Type standard

G8N-□□
①　②③

	Classification	Symbol	Meaning of the symbol
①	Basic type	G8N	Micro-mini relay for automobile use
②	Number of contact poles and configuration	1	Standard contact configuration 1c
③	Spec/Appropriate symbol	Blank	Standard Spec
		English character	Appropriate Spec (set individually)

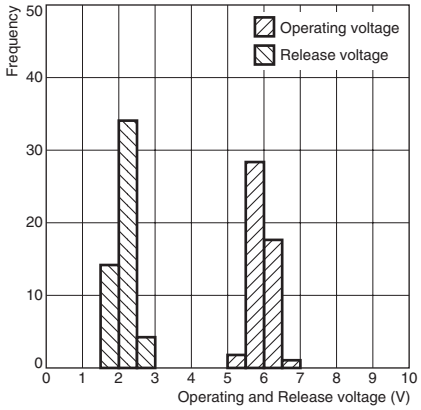
■Ratings/Performance

Item			Type	G8N-1	G8N-1S	G8N-1L	G8N-1H	G8N-1U	G8N-1F
				Standard	Low operating voltage	High heat resistance	High heat resistance and Low operating voltage	Super low operating voltage	For flasher lamp
Coil	Rated coil voltage			12 VDC					
	Coil resistance (at 20°C)			225 Ω	180 Ω	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	7.2 V or less	6.5 V or less	5.5 V or less	7.2 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	12 VDC (continuous) 16 VDC at 15 min	16 VDC (continuous)	14 VDC (continuous) 16 VDC at 15 min	16 VDC at 3 min	16 VDC (a fleeting moment) 85 times/min
Contact	Contact configuration			1c (SPDT)					
	Contact material			AgSn type (non-cadmium)					PdRu alloy
	Rated load			14 VDC 25 A Motor load					54 W lamp 85 times/min Polarized (No. 3 terminal+)
	Max switching current			30 A					
Endurance (Lifetime)	Mechanical			1,000,000 times					10,000,000 times
	Electrical (Rated load)			100,000 times					2000 hrs
Mechanical	Impact resistance	Malfunction		100 m/s²					
		Destruction		1,000 m/s²					
	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					

■Reference data

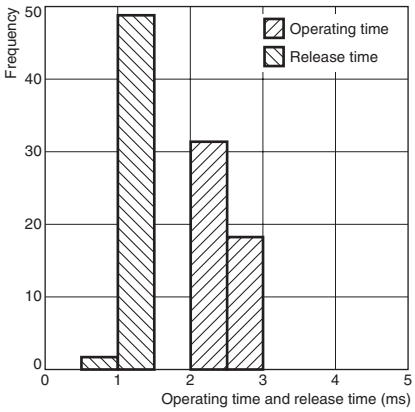
● Operating voltage/Release voltage

Sample: G8N-1 12 VDC 225 Ω 50 pcs



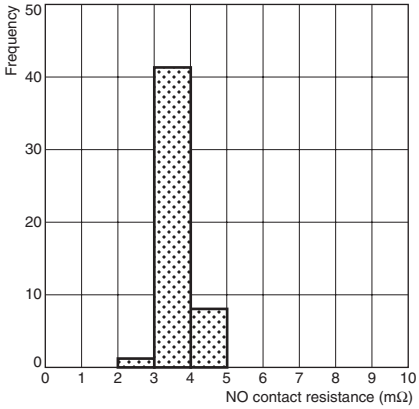
● Operating time/Release time

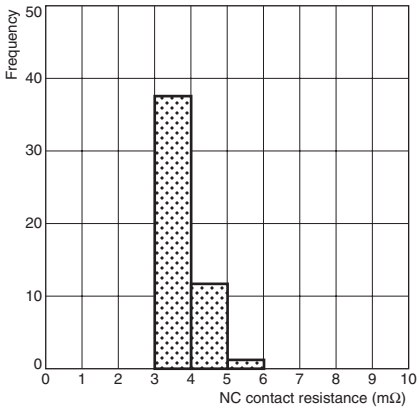
Sample: G8N-1 12 VDC 225 Ω 50 pcs
Diode to absorb coil surge, without resistor



● Contact resistance

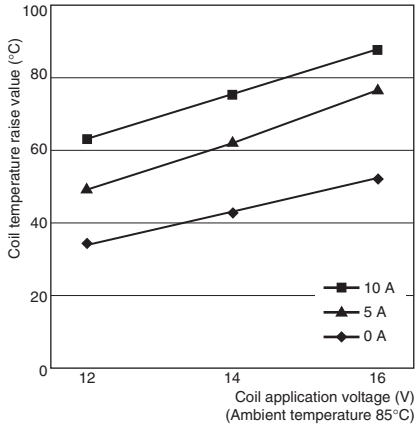
Sample: G8N-1 12 VDC 225 Ω 50 pcs





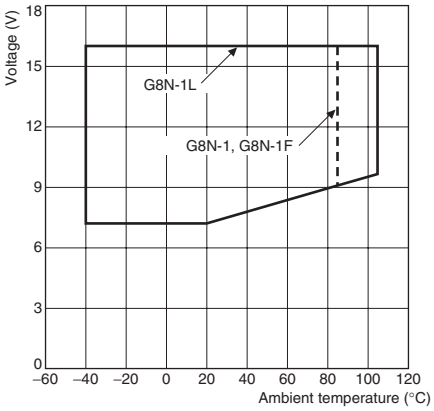
● Coil temperature rise

Sample: G8N-1 12 VDC 225 Ω 10 pcs

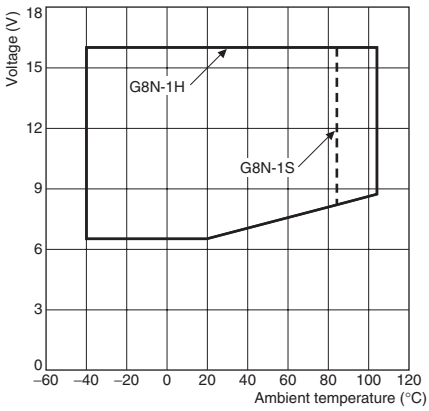


● Ambient temperature and service voltage range (Cold start)

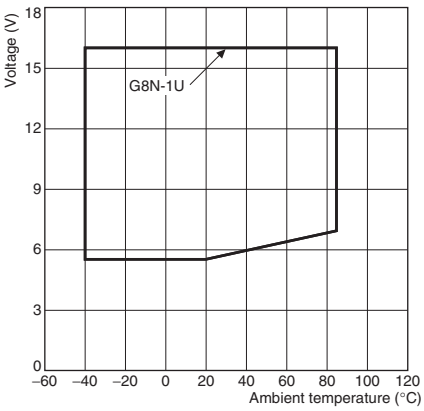
G8N-1, G8N-1L, G8N-1F



G8N-1S, G8N-1H



G8N-1U



■Reference data

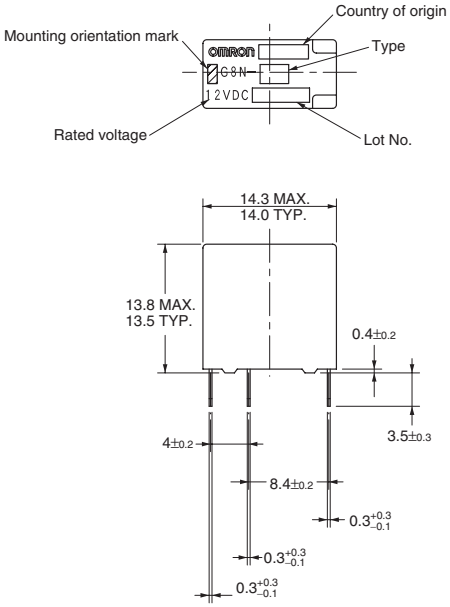
●Electrical endurance (Lifetime)

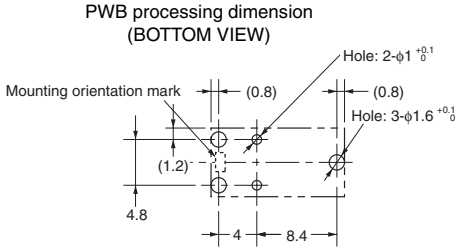
Spec	Application/Load	Load current	Switching frequency	Switching time
G8N-1S	Power window motor	Motor lock current (Input 25.4 A/Breaking 25 A)	On0.2 s/Off4.8 s	100,000
G8N-1	Power window motor	Motor free current (Input 22.6 A/Steady 8 A/Brake current 13 A)	On1.5 s/Off6.0 s	200,000
G8N-1S	Wiper motor	Motor lock current (Input 30 A/Breaking 30 A)	On1.0 s/Off10.0 s	170,000
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

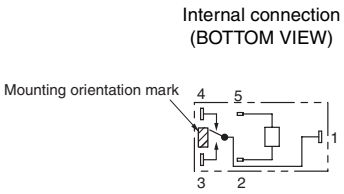
■Contour dimension (Unit: mm)

G8N









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