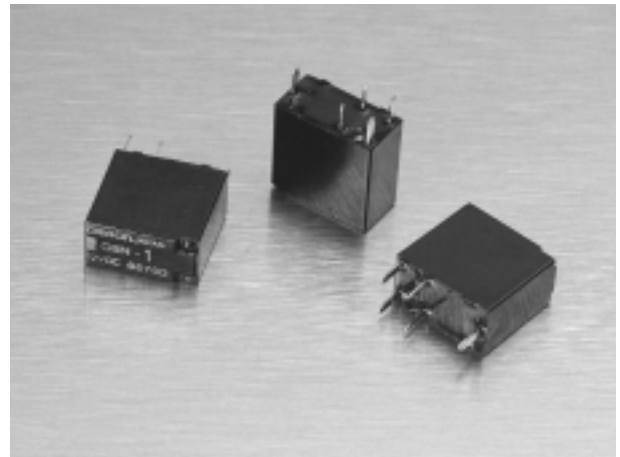


### Ultra-Miniature Automotive PCB Relay

- Compact size
- High performance PCB relay
- 25A motor lock load
- Fully sealed construction
- Fully automated assembly
- SPDT contracts
- Pre-solder as for all terminal
- PWB pattern design is easy
- ISO9001/QS9000 series approval



### Available Types

	Type
G8N-1 12VDC	Standard
G8N-1S 12VDC	High Sensitivity
G8N-1L 12VDC	High Temperature (105°C)
G8N-1H 12VDC	High Temperature/High Sensitivity

### Contact Data

Max Switching Current	30A
Rated Current	25A Motor load
Max Switching Voltage	16V
Contact Material	Silver tin alloy (Cadmium Free)

### Coil Ratings

Type	Coil Resistance	Pull in Voltage
G8N-1 12VDC	225Ω	<7.2
G8N-1S 12VDC	180Ω	<6.5
G8N-1L 12VDC	225Ω	<7.2
G8N-1H 12VDC	180Ω	<6.5

### Specifications

Temperature Range	-40 to +85°C (-1L, -1H: -40 to +105°C)
Mechanical Life	1,000,000 Operations
Electrical Life	100,000 Operations
Weight	4.1g

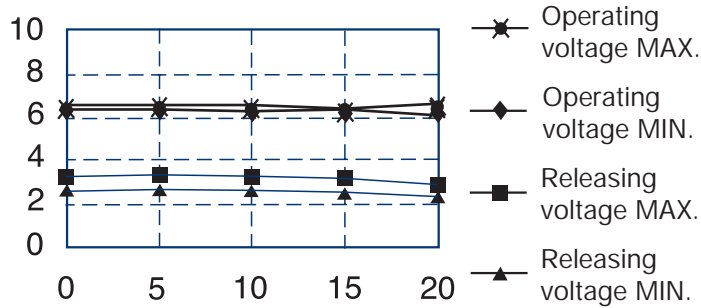
# Application Examples

- Power windows
- Power door lock
- Seat adjustment
- Sunroof
- Wiper controls

## LIFE TEST I (Power window motor: G8N-1 12VDC)

- Test item  
14VDC-26A  
Motor Lock 200,000  
Operations minimum

■ Shift of pick-up drop-out voltage

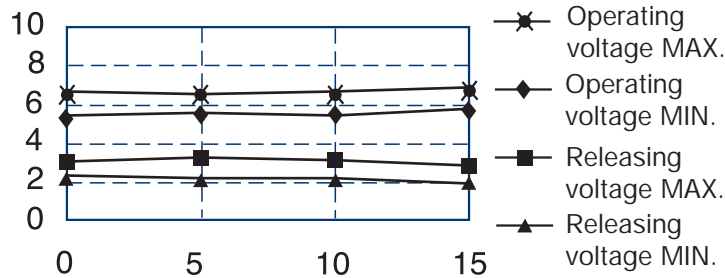


Characteristics		Specification		Before the test	After the test
Contact Resistance	N.O. Contact	100(mΩ) or lower	MAX	4.1	7.2
			MIN	2.8	3.5
			AVE	3.36	5.00
	N.C. Contact	100(mΩ) or lower	MAX	5.6	11.8
			MIN	3.9	5.0
			AVE	4.44	8.00
Insulation Resistance		100(mΩ) or higher		1000 or higher	1000 or higher
Structure		No abnormal condition		Good	Good

## LIFE TEST II (Door lock motor: G8N-1 12VDC)

- Test item  
16VDC-22A  
200,000  
Operations minimum

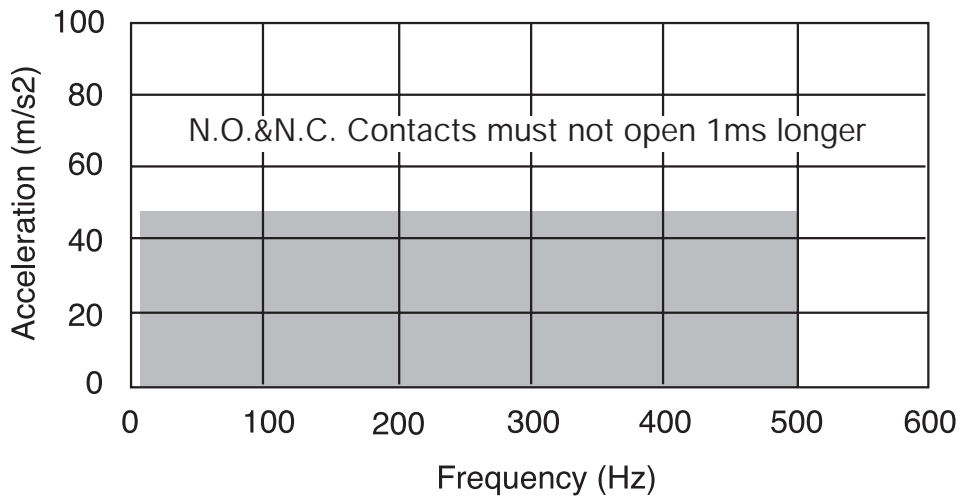
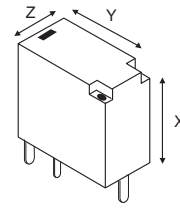
■ Shift of pick-up drop-out voltage



Characteristics		Specification		Before the test	After the test
Contact Resistance	N.O. Contact	100(mΩ) or lower	MAX	4.7	6.8
			MIN	3.2	3.5
			AVE	3.89	4.50
	N.C. Contact	100(mΩ) or lower	MAX	5.3	7.2
			MIN	3.7	4.0
			AVE	4.46	6.20
Insulation Resistance		100(mΩ) or higher		1000 or higher	1000 or higher
Structure		No abnormal condition		Good	Good

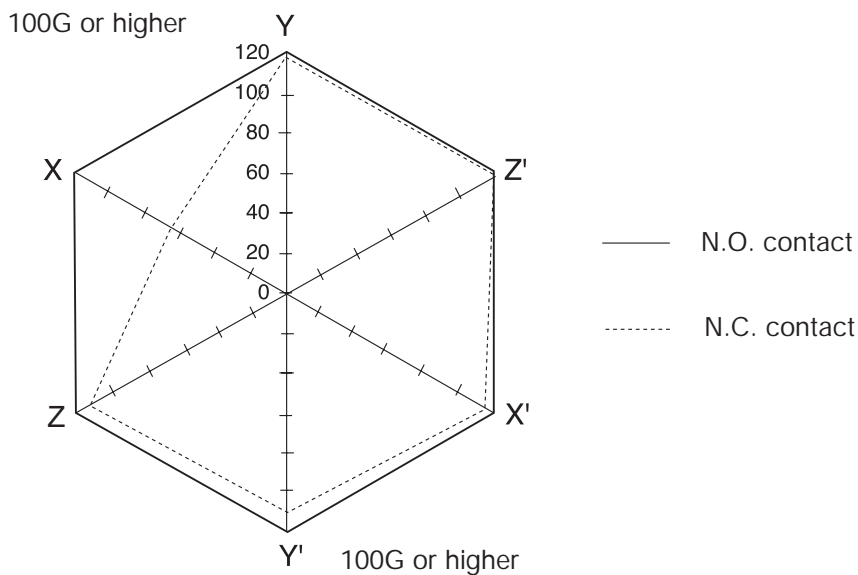
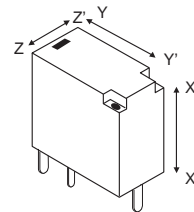
### VIBRATION RESISTANCE CHARACTERISTICS

- Test condition
  - Frequency: 10Hz-500Hz-10Hz
  - Acceleration: 43.1m/s<sup>2</sup>
  - Direction of vibration: see right diagram
  - Detection level: Contacts must not open 1ms or longer



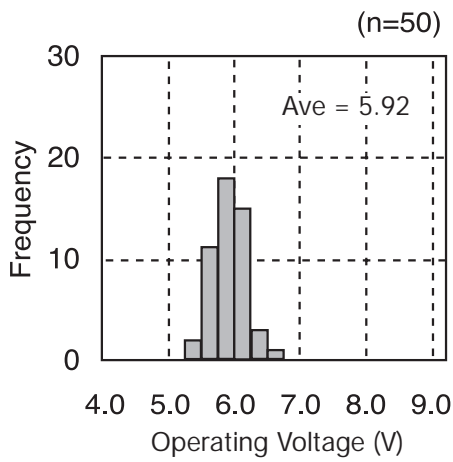
### SHOCK RESISTANCE CHARACTERISTICS

- Test condition
  - Shock application time: 11ms, half-sine wave
  - Shock direction: see right diagram
  - Detection level: Contacts must not open 1ms or longer

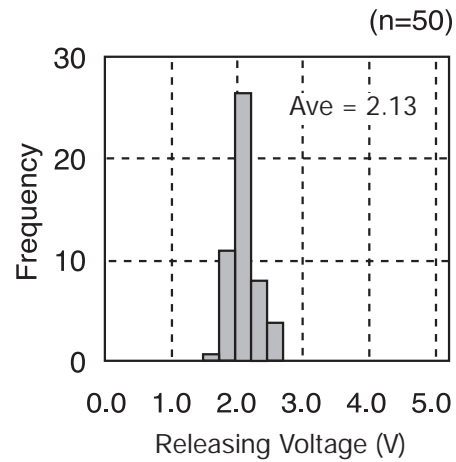


REFERENCE DATA (G8N-1 12VDC)

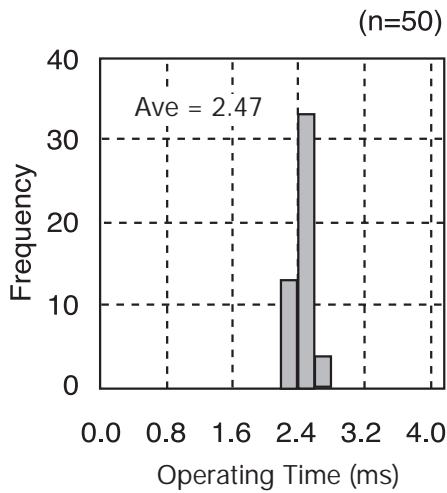
Distribution of operating voltage



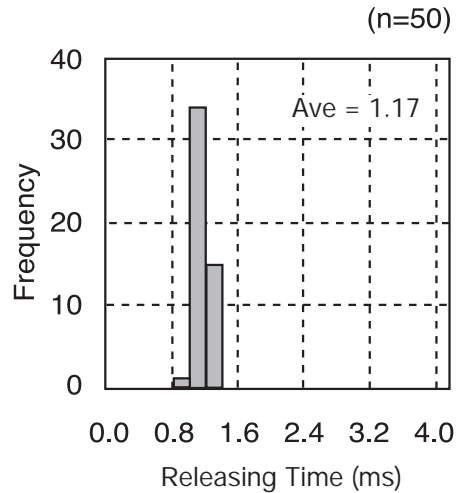
Distribution of releasing voltage



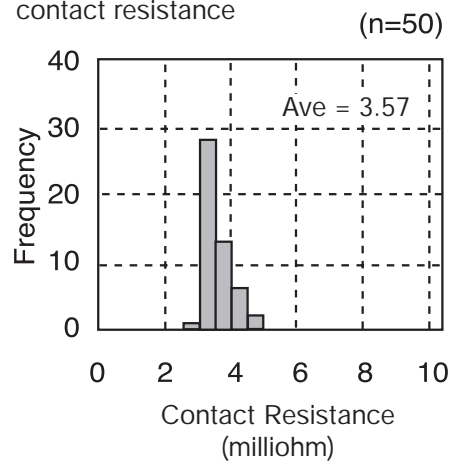
Distribution of operating time



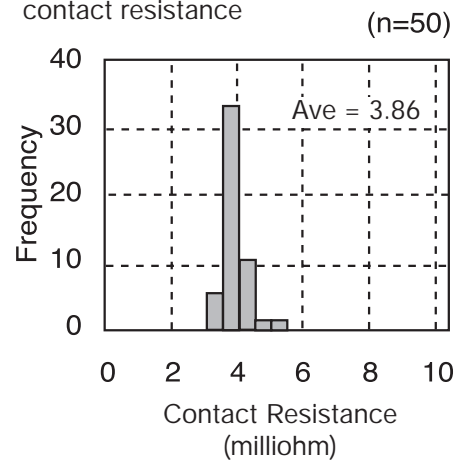
Distribution of releasing time



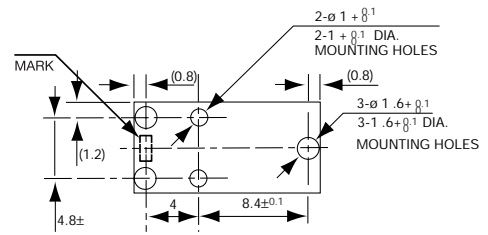
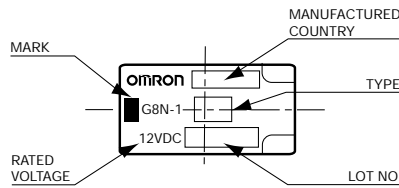
N.O. contact - Distribution of contact resistance



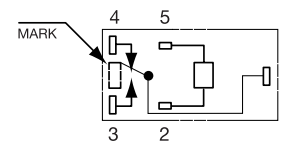
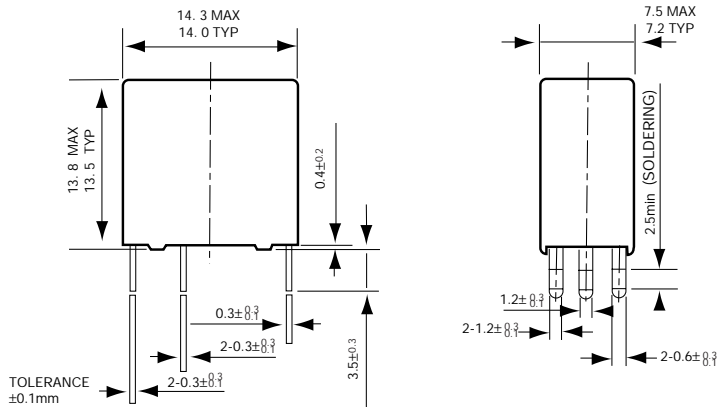
N.O. contact - Distribution of contact resistance



## Dimensions



MOUNTING HOLES  
(BOTTOM VIEW)

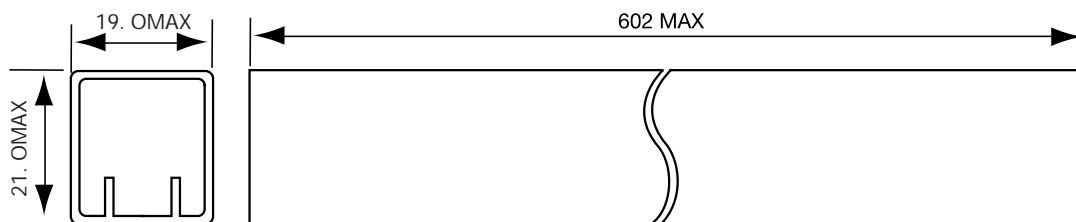


TERMINAL ARRANGEMENT/  
INTERNAL CONNECTIONS  
(BOTTOM VIEW)

- Omron PCB relays may be mounted in any convenient location that is dry and not exposed to excessive dust,  $SO_2$ ,  $H_2S$  or organic gases.

- Omron PCB relays may be oriented in any desired direction. Whenever possible, however, care should be taken that they are not subjected to vibration along the direction of contact movement.

### Tube carrier



### Remarks

For use on any of the products, please contact your sales representative and confirm with spec sheet and actual usage condition.

We constantly endeavor to enhance the quality of our products and update our product offering; therefore, specifications and product availability are subject to change without notice.

Cat. No. C-G8N1-001 In the interest of product improvement, specifications are subject to change without notice.

**OMRON**

LEADERS IN ELECTRONIC COMPONENTS

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