

# G8HL

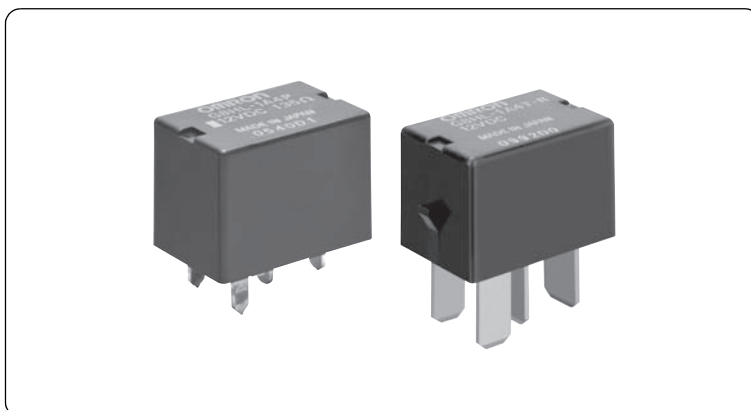
Automotive Micro ISO relay (Plug-in/PCB)

## Low profile relay

**PCB: Maximum of height is 18.2mm**

**P-in: Maximum of height is 16.7mm**

- The height is approximately half of a typical Micro ISO relay.
- Smaller, less heating and capable to carry high current.



## ■ Purpose

- Head lamp, Blower fan, Defogger, etc.

## ■ Type standard

G8HL-□□□□-□  
 ① ② ③ ④ ⑤

	Classification	Symbol	Meaning of the symbol
①	Number of contact poles	1	Number of contact poles
②	Contact structure	A	1a contact
③	Protective structure	4	Simple plastic seal
④	Terminal form	P	For PCB
		T	For Plug-in
⑤	Surge suppressor function	Blank	No
		R	Built-in resistor

\*Surge suppressor function available only to Plug-in type.

\*Built-in Diode available.

## ■ Classification

Classification	Terminal form	Contact structure	Protective structure	Rated coil		Type
				Voltage (V)	Resistance (Ω)	
Micro ISO	For PCB	SPST (1a)	Simple plastic seal	DC12	135	<b>G8HL-1A4P</b>
	For Plug-in ISO				150	<b>G8HL-1A4T-R</b>

Please confirm Omron Safety Precautions for all automotive relays first.  
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## ■ Ratings

### ● Operation coil

Rated voltage (V)	Terminal form (Ω)		Rated current (mA)	Operating voltage (V)	Release voltage (V)	Max. of applied voltage (20A conduct, 100°C) (V)	Service voltage range (V)	Rated power consumption (mW)
		(Surge suppression)						
DC 12	135	---	90	7.0 or less	0.7 or more	DC16, continuous	DC10 to 16	1067
	150	(1.1k,1/4W)	80	8.0 or less	0.7 or more			960

### ● Switching area

Item	Performance
Contact material	Silver alloy
Rated voltage	DC12V
Rated load	Resistance load, 20A
Inrush current	100A
Continuous carry current <sup>1</sup>	20A <sup>1</sup>
Allowable carrying current	30A at DC14V (30 min.) <sup>2</sup>
Min. Carry / Switching Current	DC12V 1A

(Reference)

## ■ Performance

Item	Standard value	
	G8HL-1A4P	G8HL-1A4T-R
Voltage drop between terminals	200mV or less, 20A	
Operating time <sup>3</sup>	10ms or less	10ms or less
Release time <sup>3</sup>	10ms or less	15ms or less
Insulation resistance <sup>4</sup>	Between coil and terminal	10MΩ or more
	Between homopolar contacts	10MΩ or more
Withstand voltage <sup>5</sup>	Between coil and terminal	AC500V for 1min.
	Between homopolar contacts	AC500V for 1min.
Vibration tolerance	Durability	33Hz 43.1m/s <sup>2</sup>
	Malfunction (Detecting time:1ms)	20 to 500Hz 43.1m/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 100°C	
Ambient humidity	35 to 85%RH	
Weight	13g	14g

## ■ Packing

Type	G8HL-P	G8HL-T
Packing form	Tray	Tray
MOQ <sup>6</sup>	500pcs (100pcs x5 trays)	For Japan 500pcs (50pcs x10 trays) For Other countries 1200pcs (150pcs x8 trays) or 800pcs (100pcs x8 trays) <sup>7</sup>

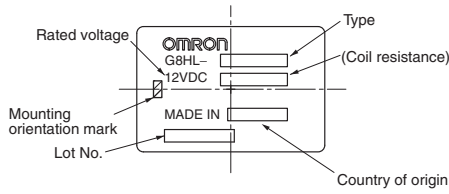
Note: All values above are measured in early time under an ambient temperature of +20°C and humidity of 65% unless stated.

- \*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. 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. Each factory has each Minimum Order Quantity. Please feel free to contact our sales representatives.

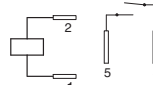
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### ■ Dimensions (Unit: mm)

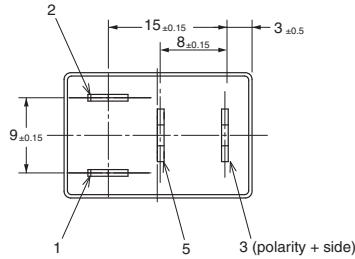
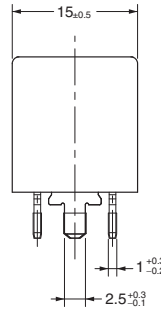
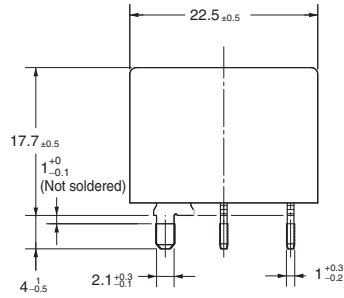
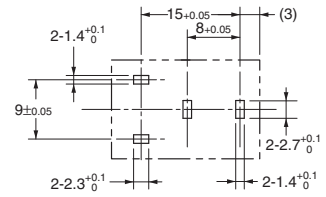
#### G8HL-P Relay with PCB Terminals



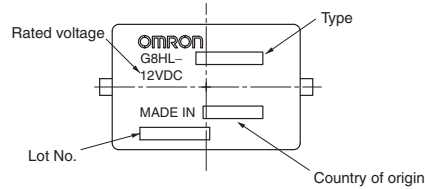
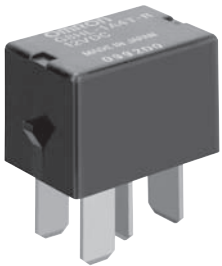
#### Terminal arrangement / Internal connections (BOTTOM VIEW)



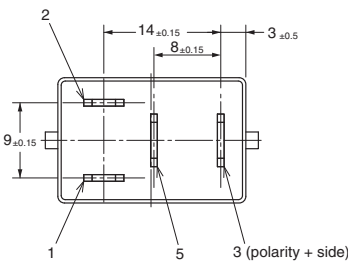
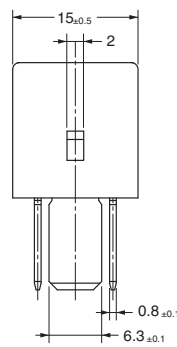
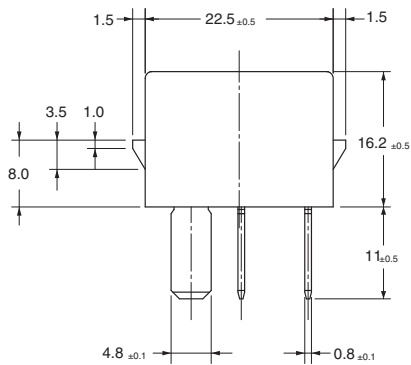
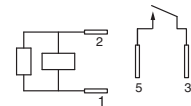
#### PWB processing dimension (BOTTOM VIEW)



#### G8HL-T Relay with Plug-in Terminals



#### Terminal arrangement / Internal connections (BOTTOM 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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