

# Micro ISO Automotive Relay

# G8H

- SPST/SPDT Contacts
- Fully Automated Assembly
- Plug-in or PCB Relay
- Environment-friendly light weight
- Made in USA



## Available Types

Type	Description
G8H-1A4T-R	SPST Standard type
G8H-1A4T-D	SPST Standard with Diode Protection
G8H-1A4T-GD	SPST Standard with Diode and Boot Over Terminals
G8H-1A7T-R	SPST Dustproof
G8H-1A7T-GR	SPST Dustproof with Boot Over Terminals
G8H-1A4P-ST	SPST PCB type
G8H-1C4T-R	SPDT Standard
G8H-1C4T-D	SPDT Standard with Diode Protection
G8H-1C4T-GD	SPDT Standard with Diode and Boot Over Terminals
G8H-1C7T-R	SPDT Dustproof
G8H-1C7T-RB	SPDT Dustproof with Boot Over Terminals
G8H-1C7T-D	SPDT Dustproof with Diode Protection

## Contact Data

Max Switching Current	Inrush 60A (NO), 30A (NC), Steady 20A (NO), 10A (NC)
Max Switching Voltage	16 V
Min. Carry / Switching Current	1 A
Contact Material	Silver Tin Oxide (Cadmium Free)

## Coil Ratings (at 20°C)

Type	Rated Voltage	Coil Resistance ±10%	Coil Resistance w/ 680Ω suppression ±10%	Nominal Power Consumption	Pull in Voltage	Dropout Voltage
G8H-1A4T-R	12VDC	100 Ω	80 Ω	1440 mW	< 8.0 V	> 0.7 V
G8H-1A4T-D/GD	12VDC	100 Ω	---	1440 mW	< 8.0 V	> 0.7 V
G8H-1A7T-R/GR	12VDC	100 Ω	80 Ω	1440 mW	< 7.0 V	> 0.7 V
G8H-1A4P-ST	12VDC	100 Ω	---	1440 mW	< 8.0 V	> 0.7 V
G8H-1C4T-R	12VDC	100 Ω	80 Ω	1440 mW	< 7.0 V	> 0.7 V
G8H-1C4T-D/GD	12VDC	100 Ω	---	1440 mW	< 7.0 V	> 0.7 V
G8H-1C7T-R/RB	12VDC	100 Ω	80 Ω	1440 mW	< 8.0 V	> 0.7 V
G8H-1C7T-D	12VDC	100 Ω	---	1440 mW	< 7.0 V	> 0.7 V

## Typical Applications

Blower Fan Motor	ABS
Head Lamps	Horn
Fuel Pump	Electric Sunroof

## Characteristics

Max. Initial Contact Voltage Drop		150 mV @ 20A (NO), 175 mV @ 10A (NC),
Operate Time		20 ms max. @ 12VDC
Release Time		10 ms max.*
Bounce time	Operate	5 ms max.
	Release	10 ms max.
Switching frequency	Mechanical	18,000 operations per hour
Insulation resistance		20 MΩ min (at 500 VDC)
Dielectric strength		1.0 mA max. leakage at 500 VAC, 50 – 60 Hz for 1 minute between coil and contacts and between contacts
Vibration	Mechanical durability	20–500 Hz, 43.1m/s <sup>2</sup>
	Malfunction durability	20–500 Hz, 43.1m/s <sup>2</sup>
Shock	Mechanical durability	1000 m/s <sup>2</sup>
	Malfunction durability	100 m/s <sup>2</sup>
Ambient Operating Temperature		-40°C to 125°C
Humidity		45% to 85% RH
Service life	Mechanical	10,000,000 operations min.
	Electrical	100,000 operations min. (load dependent)
Weight		20.0g (approx.)

\* Typical data includes coil suppression. Release times may decrease without coil suppression.

## Characteristic Reference Data

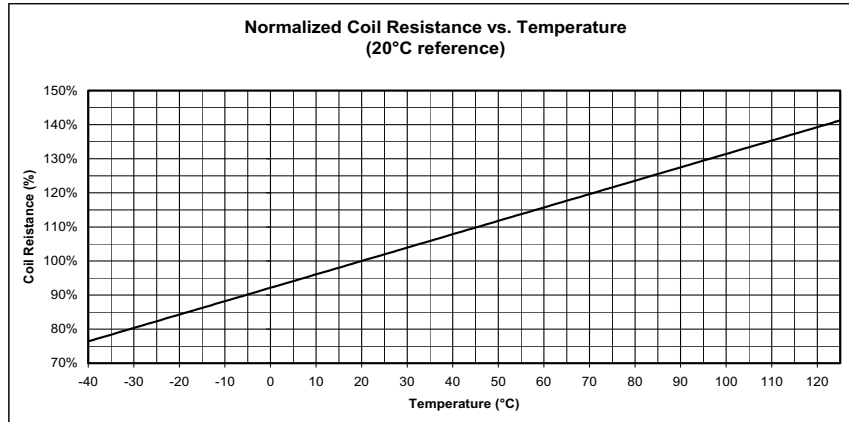
### Durability Data

Relay	Load Type	Current	Cycles Tested
G8H-1C7T-R	Resistive Load	20A N.O.	100,000
		10A N.C.	
G8H-1C7T-R	Starter Motor	45A stall	30,000
		15A continuous	

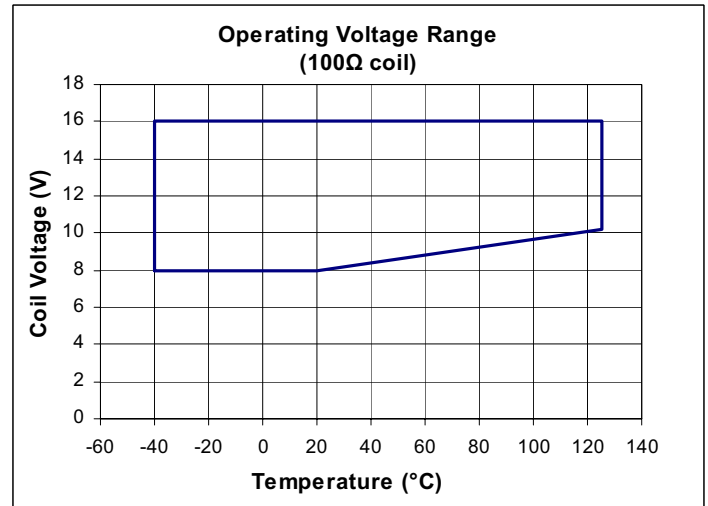
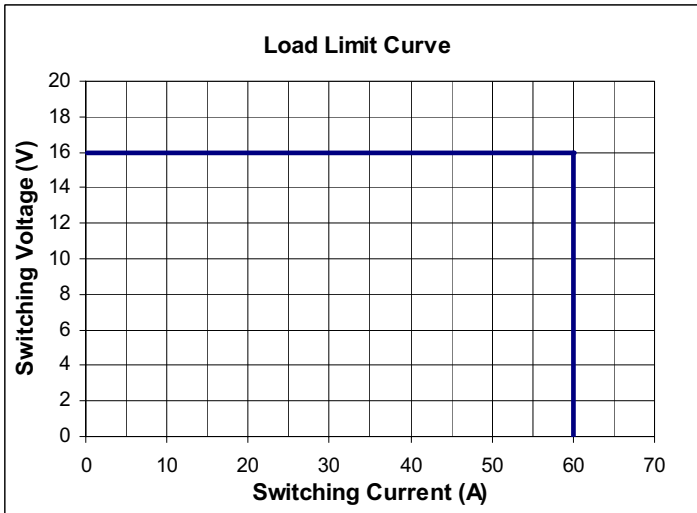
### Overcurrent Test Data

Relay	Current	Duration
G8H-1C7T-R	40A N.O.	3 cycles (1 cycles is 5 min ON, 10 min OFF)
	20A N.C.	
G8H-1A4T-D	80A	10 sec, 14V, 80C
	50A	30 sec, 14V, 80C

## Characteristic Reference Data (Continued)

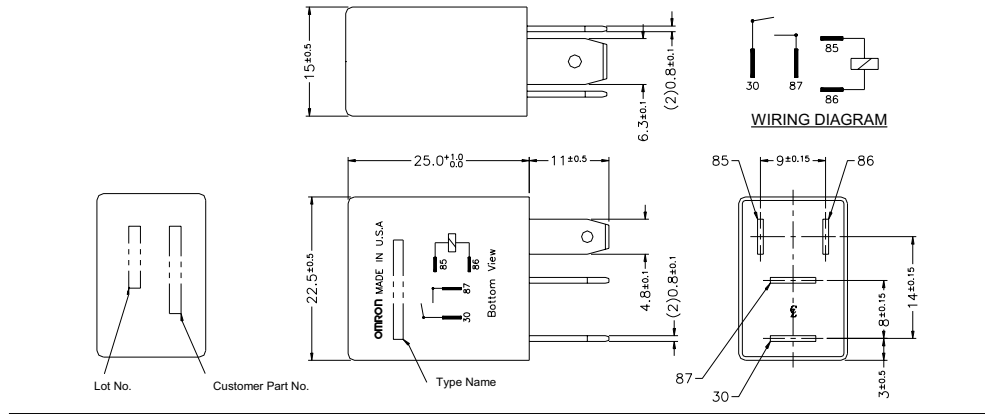


Example: Resistance of 100Ω coil  
 = 75% of 100Ω at -40°C, or 75Ω  
 = 100% of 100Ω at 20°C, or 100Ω  
 = 125% of 100Ω at 85°C, or 125Ω

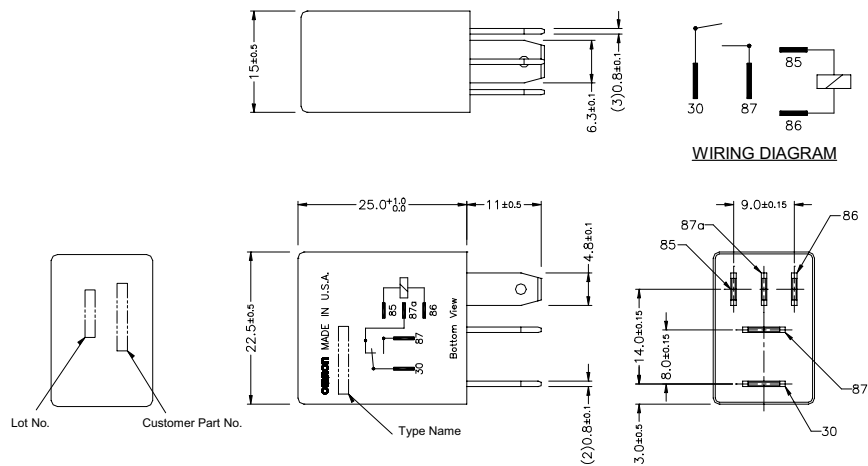


## Dimensions

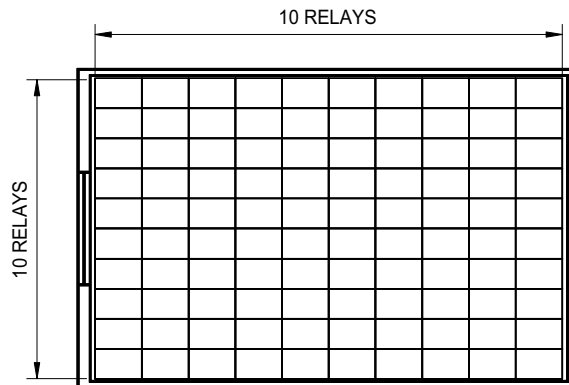
### G8H-1A4T-R (SPST)



### G8H-1C4T-R (SPDT)



## Packaging



100 relays per tray, 6 trays per box (60 relays per box)

#### Notes:

1. For additional information, please contact Omron.
2. Prior to receipt of order, specifications subject to change without notice.
3. This specification sheet is intended to be a guideline for application of this product. The information contained is believed to be correct. However, it is impossible for Omron to evaluate every possible use. It is the user's responsibility to determine product suitability in any application.
4. Omron can meet some special performance characteristics upon request.
5. All data at 20°C unless otherwise noted.