



### »» Features

- 200A high power automotive relay.
- SPNO contact configuration.
- Switches up to 200A resistive load, 50,000 ops., 23°C.
- Optional resistor or diode for coil transient suppression.
- Complies with RoHS-Directive 2011/65/EU and ELV-Directive 2000/53/EC.

### »» Type List

Contact form	Enclosure style
	Flanged cover (Sealed type)
1A (SPNO)	409-1AH-V1

### »» Ordering Information

409 - 1A H - V1 -     
 1 2 3 4 5 6 7

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|--|---|
| <p>1. 409 -- Basic series designation</p> <p>2. 1A -- Single pole normally open</p> <p>3. H -- Contact material Ag alloy</p> <p>4. V1 -- Flanged cover (sealed type)</p> <p>5. Blank -- Standard type<br/>R1 -- Coil parallel with 1/2W resistor</p> | <p>6. Blank -- Standard type<br/>001 -- Coil parallel with diode 1N4007<br/>the diode anode on # 2 terminal<br/>002 -- Coil parallel with diode 1N4007<br/>the diode cathode on # 2 terminal</p> <p>7. <input type="checkbox"/> -- Coil voltage (please refer to the coil rating data for the availability)</p> |
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### »» Contact Rating

Resistive load	200A 24VDC ; ON 1s / OFF 3s ; 50,000 ops.
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### »» Coil Rating (DC)

Rated voltage (V)	Rated current ±10 % at 23°C (mA)	Coil resistance ±10 % at 23°C (Ω)	Max. continuous voltage at 75°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
24	200	120	28V	16V	1V	approx. 4.8W

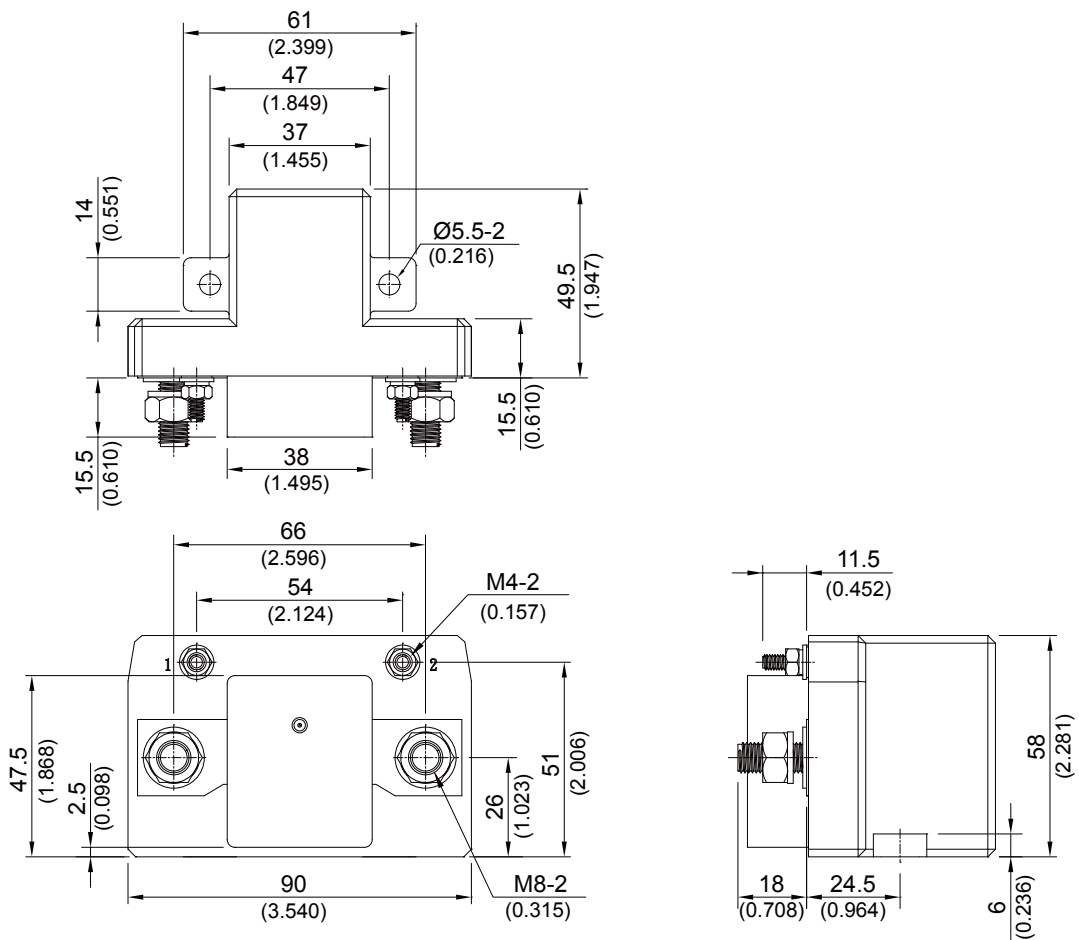
### »» Specification

Contact material	Ag alloy	
Contact voltage drop <sup>(1)</sup>	Typ. 200mV at 200A	
Operate time <sup>(1)</sup>	50 ms Max.	
Release time <sup>(1)</sup>	50 ms Max.	
Insulation resistance <sup>(1)</sup>	20 MΩ Min. (DC 500V)	
Dielectric strength <sup>(1)</sup>	Between open contact	: AC 1000V, 50/60Hz 1 min.
	Between contact and coil	: AC 1000V, 50/60Hz 1 min.
Vibration resistance	Operating extremes	10~500Hz , 5.0G
	Damage limits	10~500Hz , 5.0G

Shock resistance	Operating extremes	10G
	Damage limits	100G
Life expectancy	Mechanical	1,000,000 operations (frequency 18,000 operations/hr)
Recommended securing torque on load side terminal	9~12 N-m	
Operating ambient temperature	-40 ~ +75°C (no freezing)	
Weight	Approx. 330g	

Note : (1) Initial value. Operate and release time excluding contact bounce.

### »» Outline Dimensions



TOLERANCE:  
 LESS THAN: 1(0.039) ±0.1(0.004)  
 5(0.197) ±0.3(0.012)  
 20(0.787) ±0.5(0.020)  
 MORE THAN: 20(0.787) ±1(0.039)

### »» Wiring Diagram

BOTTOM VIEW

