



### »» Features

- ISO 280 footprint automotive relay.
- High rating up to 35A at 125 degree C.
- Optional to be equipped with diode or resistor.
- General purpose applications for automotive in power control box.
- Comply with RoHS-Directive 2002/95/EC, and ELV-Directive 2000/53/EC.

### »» Type List

Terminal style	Contact form	Designation (provided with)	Enclosure style		
			Dust cover	Flux tight	Sealed type washable
Socket terminal	1A (SPNO)	-----	301-1A-D	301-1A-C	301-1A-S
		Resistor	301-1A-D-R1	301-1A-C-R1	301-1A-S-R1
		Diode	301-1A-D-D1	301-1A-C-D1	301-1A-S-D1
	1C (SPDT)	-----	301-1C-D	301-1C-C	301-1C-S
		Resistor	301-1C-D-R1	301-1C-C-R1	301-1C-S-R1
		Diode	301-1C-D-D1	301-1C-C-D1	301-1C-S-D1

### »» Ordering Information

301 - 1A - D - R1  
 1        2        3        4

- |  |   |
|--|---|
| 1. 301 -- Basic series designation<br><br>2. 1A -- Single pole normally open<br>1C -- Single pole double throw<br><br>3. D -- Dust cover | C -- Flux tight<br>S -- Sealed type washable<br><br>4. Blank-- Standard type<br>R1 -- Coil parallel with 1/2W resistor for 6V 180Ω, 12V 680Ω, 24V 2700Ω<br>D1 -- Coil parallel with diode IN4007 the positive pole "+" on # 85 terminal |
|--|---|

### »» Contact Rating

Resistive load	1A	1C
	35A 14VDC 15A 28VDC	NO: 35A 14VDC, 15A 28VDC NC: 20A 14VDC, 10A 28VDC

### »» Coil Rating (DC)

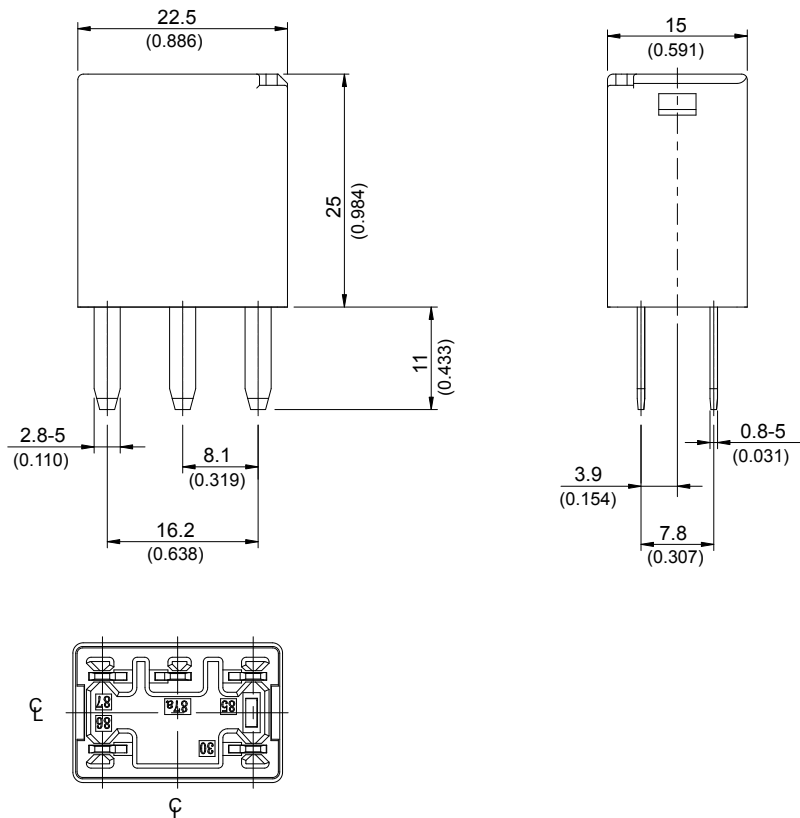
Rated voltage (V)	Rated current ±10 % at 23°C (mA)	Coil resistance ±10 % at 23°C (Ω)	Max. continuous voltage at 85°C	Pick up voltage(Max) at 23°C	Drop out voltage(Min) at 23°C	Power consumption at rated voltage
6	187.5	32	133 % of rated voltage	60 % of rated voltage	10 % of rated voltage	approx. 1.2W
12	97.5	123				
24	49.6	483				

## »» Specification

Contact material	AgSnO alloy	
Contact voltage drop <sup>(1)</sup>	Typ. 40mV at 10A	
Operate time <sup>(1)</sup>	10ms Max.	
Release time <sup>(1)</sup>	10ms Max.	
Insulation resistance <sup>(1)</sup>	20MΩ Min. (DC 500V)	
Dielectric strength <sup>(1)</sup>	Between open contact	: AC 500V , 50/60Hz 1 min.
	Between contact and coil	: AC 500V , 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	10,000,000 operations (frequency 18,000 operations/hr)
	Electrical	100,000 operations (frequency 1,800 operations/hr)
Temperature range	Storage	-40~+155°C (no freezing)
	Operating	-40~+125°C (no freezing)
Weight	Approx. 20 g	

Note:(1)Initial value

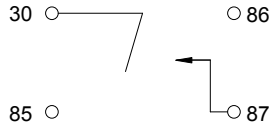
## »» Outline Dimensions



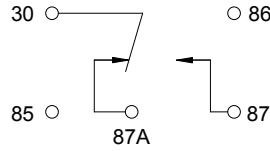
## »» Wiring Diagram

BOTTOM VIEW

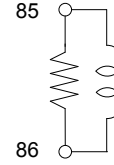
1A



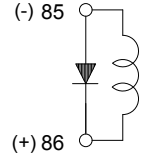
1C



R1

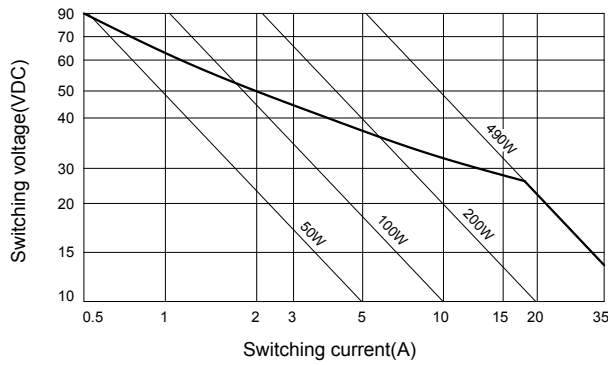


D1

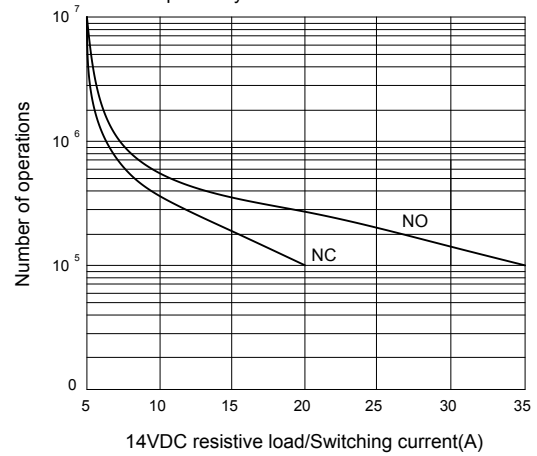


## »» Engineering Data

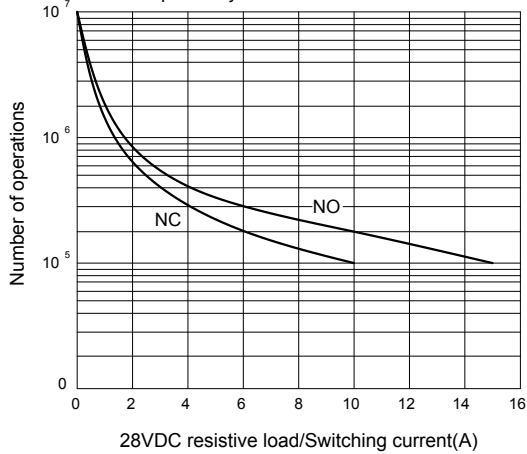
Safe breaking, arc extinguished  
(normally open contact) for resistive loads.



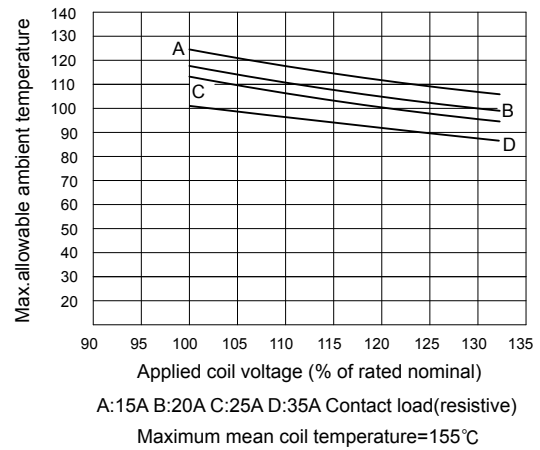
Life expectancy



Life expectancy



Ambient temperature vs coil voltage for continuous duty



Operate time/Release time

