



### »» Features

- Low cost automotive relay with ISO 280 footprint.
- 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.

### »» 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 <sup>(1)</sup>	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 <sup>(1)</sup>	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

Note : (1) 6VDC COIL: 180 Ω Resistor in parallel  
 12VDC COIL: 680 Ω Resistor in parallel  
 24VDC COIL: 2700 Ω Resistor in parallel

### »» Ordering Information

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

1. 301 -- Basic series designation
2. 1A -- Single pole normally open  
 1C -- Single pole double throw
3. D -- Dust cover  
 C -- Flux tight  
 S -- Sealed type washable
4. Blank-- Standard type  
 R1 -- Coil parallel with resistor 6VDC-180 Ω、12VDC-680Ω、24VDC-2700Ω  
 D1 -- Coil parallel with diode

### »» Contact Rating

Resistive load	1A	1C
	35A 14VDC	NO : 35A 14VDC NC : 20A 14VDC

### »» 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



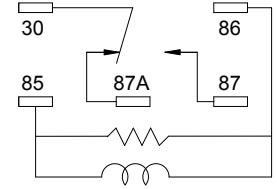
1C



1A (R1)



1C (R1)



## »» Engineering Data

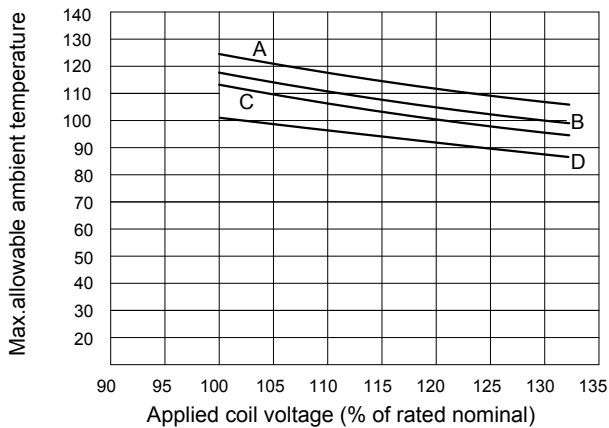
Safe breaking, arc extinguished  
(normally open contact) for resistive loads.



Life expectancy



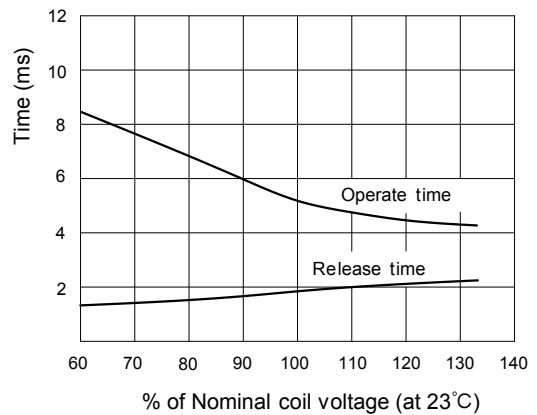
Ambient temperature vs coil voltage for continuous duty



A:15A B:20 C:25 D:35A Contact load(resistive)

Maximum mean coil temperature=155°C

Operate time/Release time



# Mouser Electronics

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## Song Chuan:

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