



### »» Features

- Micro 280 automotive relay.
- SPNO & SPDT contact configurations.
- NO contacts switch 35A resistive load, NC contacts switch 20A resistive load, 100,000 ops., 23°C.
- Operating ambient temperature -40°C to 125°C.
- Optional resistor or diode for coil transient suppression.
- Complies with RoHS-Directive 2011/65/EU 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 -    
 1            2            3            4            5

- |  |  |
|--|--|
| 1. 301 -- Basic series designation<br>2. 1A -- Single pole normally open<br>1C -- Single pole double throw<br>3. D -- Dust cover<br>C -- Flux tight<br>S -- Sealed type washable | 4. Blank -- Standard type<br>R1 -- Coil parallel with 1/2W resistor for<br>6V 180Ω, 12V 680Ω, 24V 2700Ω<br>D1 -- Coil parallel with diode 1N4007<br>the diode anode on # 85 terminal<br>5. <input type="checkbox"/> -- Coil voltage (please refer to the<br>coil rating data for the availability) |
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### »» 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	Rated current ±10 % at 23°C		Coil resistance ±10 % at 23°C		Max. continuous voltage at 85°C <sup>(1)</sup>	Pick up voltage (Max.) at 23°C	Drop out voltage (Min.) at 23°C	Power consumption at rated voltage	
	without resistor	with resistor	without resistor	with resistor				without resistor	with resistor
6V	188 mA	222 mA	32 Ω	27 Ω	133 % of rated voltage	60 % of rated voltage	10 % of rated voltage	approx. 1.2W	approx. 1.4W
12V	98 mA	115 mA	123 Ω	104 Ω					
24V	50 mA	59 mA	483 Ω	410 Ω					

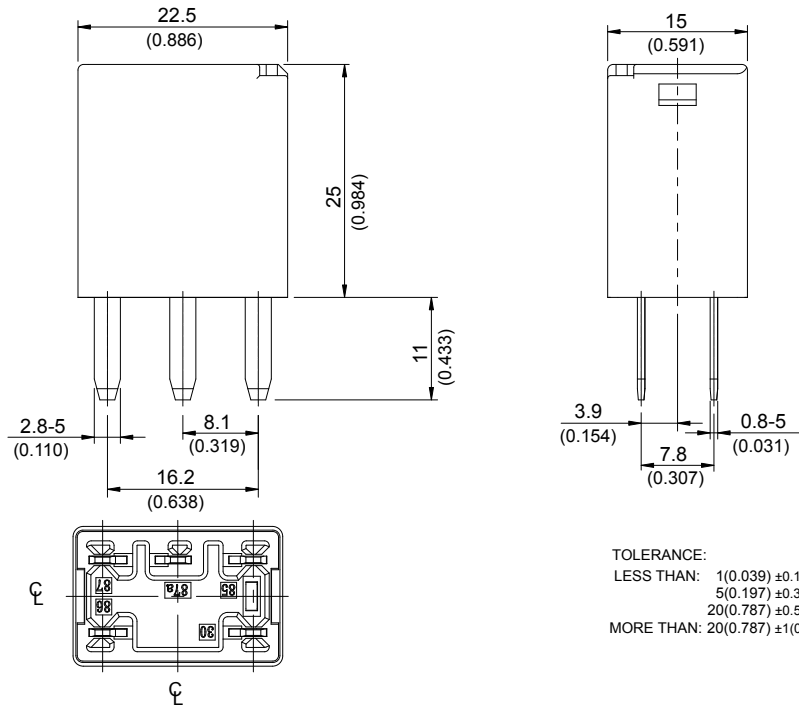
Note : (1) With continuous contact current 15A.

## »» 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 ops. (frequency 18,000 ops./hr.)
	Electrical	100,000 ops. (frequency 1,800 ops./hr.)
Operating ambient temperature	-40~+125°C (no freezing)	
Weight	Approx. 20 g	

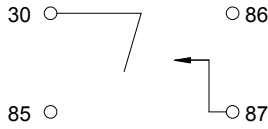
Note : (1) Initial value. Operate and release time excluding contact bounce.

## »» Outline Dimensions

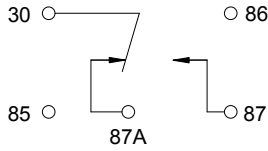


## »» Wiring Diagram BOTTOM VIEW

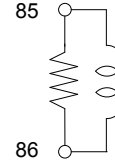
1A



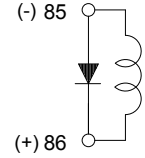
1C



R1



D1



## »» Engineering Data

