



### »» Features

- High rating Micro ISO automotive relays up to 35A/14VDC.
- SPNO & SPDT of contact configuration.
- Skirted cover and plain cover are both available.
- Optional to be equipped with diode or resistor.
- 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      | Dust cover /Fixed Base | Flux tight  | Sealed type washable |
| Socket terminal | 1A (SPNO)    | -----                       | 871-1A-D        | 871-1A-DF              | 871-1A-C    | 871-1A-S             |
|                 |              | Resistor                    | 871-1A-D-R1     | 871-1A-DF-R1           | 871-1A-C-R1 | 871-1A-S-R1          |
|                 |              | Diode                       | 871-1A-D-D1     | 871-1A-DF-D1           | 871-1A-C-D1 | 871-1A-S-D1          |
|                 | 1C (SPDT)    | -----                       | 871-1C-D        | 871-1C-DF              | 871-1C-C    | 871-1C-S             |
|                 |              | Resistor                    | 871-1C-D-R1     | 871-1C-DF-R1           | 871-1C-C-R1 | 871-1C-S-R1          |
|                 |              | Diode                       | 871-1C-D-D1     | 871-1C-DF-D1           | 871-1C-C-D1 | 871-1C-S-D1          |

### »» Ordering Information

871 - 1A - C - R1  
 1        2        3        4

1. 871 -- Basic series designation
2. 1A -- Single pole normally open  
 1C -- Single pole double throw
3. D -- Dust cover  
 DF -- Dust cover / base holder type available  
 C -- Flux tight  
 S -- Sealed type washable
4. Blank -- Standard type  
 R1 -- Coil parallel with 1/2W resistor for 6V 180Ω, 12V 680Ω, 24V 2700Ω  
 D1 -- Coil parallel with diode IN4007 the positive pole on # 85 terminal

### »» Contact Rating

| Resistive load | 1A                     | 1C   |
|----------------|------------------------|--|
|                | 35A 14VDC<br>15A 28VDC | NO: 35A 14VDC , 15A 28VDC<br>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<br>(frequency 18,000 operations/hr) |
|                                      | Electrical               | 100,000 operations<br>(frequency 1,800 operations/hr)     |
| Temperature range                    | Operating                | -40~+125°C (no freezing)                                  |
| Weight                               | Approx. 20 g             |   |

Note:(1)Initial value

## »» Outline Dimensions

## ◆871 (C,D)



# 871

## ◆ 871 (DF)



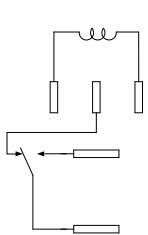
## ◆ 871 (S,V)



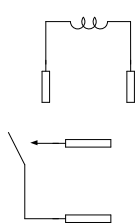
## »» Wiring Diagram

BOTTOM VIEW

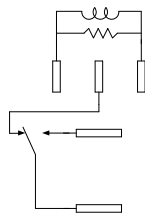
1C



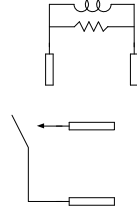
1A



1C



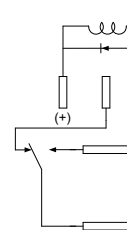
1A



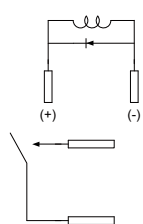
PROVIDED WITH RESISTOR

PROVIDED WITH RESISTOR

1C



1A



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## »» Engineering Data



# Mouser Electronics

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