



### »» Features

- ☐ Compact size miniature PCB relays.
- ☐ Special design of high performance for motor control of wiper and sunroof, and window lift control.
- ☐ High rating 20A with maximum switching current up to 30A.
- ☐ High temperature endurance up to 125°C.
- ☐ IR-Reflow process compatible (special version).
- ☐ Comply with RoHS-Directive 2002/95/EC, and ELV-Directive 2000/53/EC.

### »» Type List

| Terminal style | Contact form | Designation (provided with) |             |                      |
|----------------|--------------|-----------------------------|-------------|----------------------|
|                |              | Flux tight                  | Sealed type | Sealed type washable |
| PCB terminal   | 1A (SPNO)    | 102-1AH-C                   | 102-1AH-V   | 102-1AH-S            |
|                | 1C (SPDT)    | 102-1CH-C                   | 102-1CH-V   | 102-1CH-S            |

### »» Ordering Information

102 - 1A H - C  
1 2 3 4

- |                                    |                                |
|------------------------------------|--------------------------------|
| 1. 102 -- Basic series designation | 3. H -- Contact material AgSnO |
| 2. 1A -- Single pole normally open | 4. C -- Flux tight             |
| 1C -- Single pole double throw     | V -- Sealed type               |
|                                    | S -- Sealed type washable      |

### »» Contact Rating

|                |                                              |
|----------------|----------------------------------------------|
| Resistive load | NO/NC 20A/10A 14VDC                          |
| Motor load     | Inrush 30A Steady state 10A 14VDC, 750K ops. |
|                | Motor Lock : 20A 14VDC 200K ops.             |

### »» Coil Rating (DC)

| Rated voltage<br>(V) | Rated current<br>±10 % at 23° C<br>(mA) | Coil resistance<br>±10 % at 23° C<br>(Ω) | Max. continuous<br>voltage<br>at 85° C <sup>(1)</sup> | Pick up<br>voltage(Max)<br>at 23° C | Drop out<br>voltage(Min)<br>at 23° C | Power consumption<br>at rated<br>voltage |
|----------------------|-----------------------------------------|------------------------------------------|-------------------------------------------------------|-------------------------------------|--------------------------------------|------------------------------------------|
| 6                    | 107                                     | 56                                       | 125 % of<br>rated<br>voltage                          | 60 % of<br>rated<br>voltage         | 5 % of<br>rated<br>voltage           | approx. 0.64W                            |
| 9                    | 70.8                                    | 127                                      |                                                       |                                     |                                      |                                          |
| 12                   | 53.3                                    | 225                                      |                                                       |                                     |                                      |                                          |
| 24                   | 26.7                                    | 900                                      |                                                       |                                     |                                      |                                          |

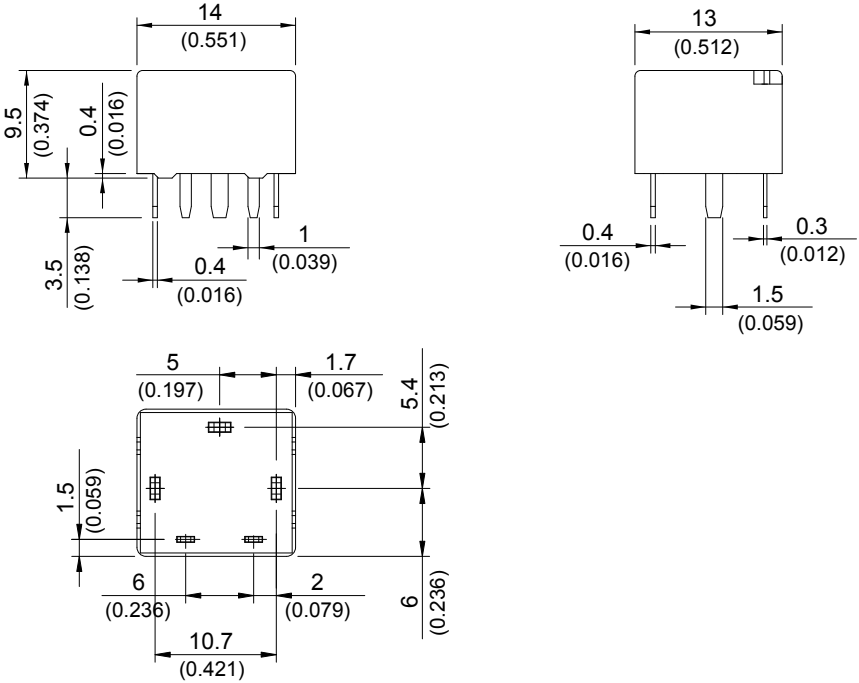
Note:(1)Continuous contact current at 10A.

»» Specification

|                                      |                              |                                                           |
|--------------------------------------|------------------------------|-----------------------------------------------------------|
| Contact material                     | AgSnO alloy                  |                                                           |
| Contact voltage drop <sup>(1)</sup>  | Typ. 50mV at 10A             |                                                           |
| Operate time <sup>(1)</sup>          | 10 ms Max.                   |                                                           |
| Release time <sup>(1)</sup>          | 5 ms Max.                    |                                                           |
| Insulation resistance <sup>(1)</sup> | 100M $\Omega$ 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           | 10~50Hz , amplitude 1.0 mm                                |
|                                      | Damage limits                | 10~50Hz , amplitude 1.0 mm                                |
| 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 360 operations/hr)       |
| Operating ambient temperature        | -40~+125°C (no freezing)     |                                                           |
| Weight                               | Approx. 4 g                  |                                                           |

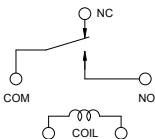
Note:(1)Initial value.

»» Outline Dimensions

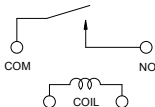


»» Wiring Diagram  
BOTTOM VIEW

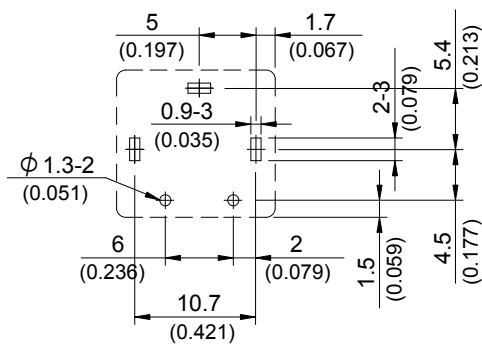
1C



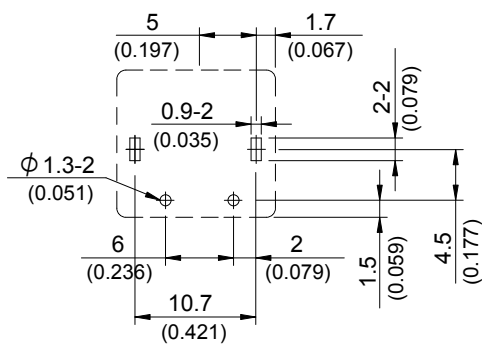
1A



1C



1A



» Engineering Data

