



»» Features

- Smallest and slim type PCB Automotive relay.
- High rating 20A with maximum switching current up to 30A.
- High Temperature withstand up to 125°C.
- Single or twin relays are both available.
- Complies with RoHS-Directive 2011/65/EU, 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) | 103-1AH-C | 103-1AH-V | 103-1AH-S |
| | 1A (SPNO) ×2 | 103T-1AH-C | 103T-1AH-V | 103T-1AH-S |
| | 1C (SPDT) | 103-1CH-C | 103-1CH-V | 103-1CH-S |
| | 1C (SPDT) ×2 | 103T-1CH-C | 103T-1CH-V | 103T-1CH-S |

»» Ordering Information

103 - 1A H - C
 1 2 3 4 5 6

- | | |
|--|---|
| <p>1. 103 -- Basic series designation</p> <p>2. Blank -- Single relay T -- Twin relay</p> <p>3. 1A -- Single pole normally open 1C -- Single pole double throw</p> | <p>4. H -- Contact material AgSnO</p> <p>5. C -- Flux tight V -- Sealed type S -- Sealed type washable</p> <p>6. <input type="checkbox"/> -- Coil voltage (please refer to the coil rating data for the availability)</p> |
|--|---|

»» 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 (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 | 107 | 56 | 125 % of rated voltage | 60 % of rated voltage | 5 % of rated voltage | approx. 0.64W |
| 9 | 70.8 | 127 | | | | |
| 12 | 53.3 | 225 | | | | |
| 24 | 26.7 | 900 | | | | |

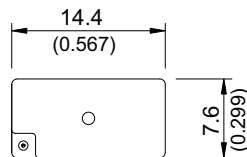
»» Specification

| | | |
|--------------------------------------|--------------------------|---|
| Contact material | AgSnO alloy | |
| Contact voltage drop ⁽¹⁾ | Typ. 50mV at 10A | |
| Operate time ⁽¹⁾ | 10 ms Max. | |
| Release time ⁽¹⁾ | 5 ms Max. | |
| Insulation resistance ⁽¹⁾ | 100 MΩ Min. (DC 500V) | |
| Dielectric strength ⁽¹⁾ | 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 , 4.4G |
| | Damage limits | 10~500Hz , 4.4G |
| 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 360 operations/hr) |
| Operating ambient temperature | -40~+125°C (no freezing) | |
| Weight | Approx. 4 g | |

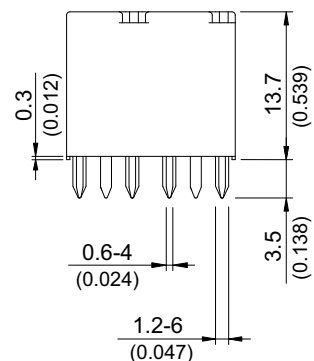
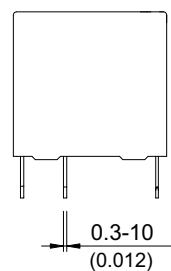
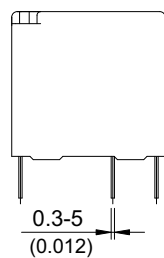
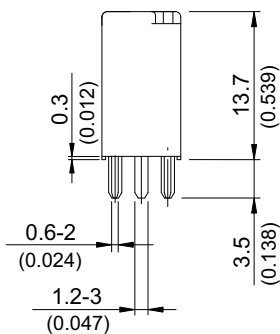
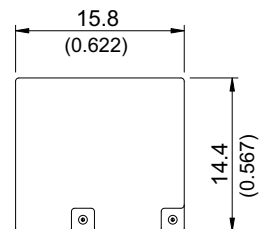
Note : (1) Initial value. Operate and release time excluding contact bounce.

»» Outline Dimensions

◆103



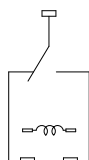
◆103T



»» Wiring Diagram

BOTTOM VIEW

◆103



◆103T

