

# 4117



Open Type  
13.2×15.3×18

Dust Covered  
17.5×15×20

## Features

- Superminiature, heavy power.
- Low coil power consumption.
- Switching current up to 20A.
- PC board mounting.
- Suitable for household appliances, electrical equipment, automation system, and automobile industry application.

## Ordering Information

**4117 C S 10 12VDC 1.0**  
 1 2 3 4 5 6

|  |  |
|--|--|
| 1 Part number: 4117  | 4 Contact Current: 10:10A; 20:20A            |
| 2 Contact arrangement: A:1A;B:1B;C:1C;U:IU;V:1V;W:1W       | 5 Coil rated Voltage(V): DC:3,5,6,9,12,18,24 |
| 3 Enclosure: S: Sealed type; Z: Dust cover<br>O: Open type | 6 Coil power consumption: 1.0:1.0W; 1.2:1.2W |

## Contact Data

|                                    |  |                            |                          |
|------------------------------------|--|----------------------------|--------------------------|
| Contact Arrangement                | 1A(SPSTNO) 1B(SPSTNC) 1C (SPDT(B-M))<br>1U(SPSTNODM) 1V(SPSTNCDB) 1W(SPDTNC-NO)      |                            |                          |
| Contact Material                   | AgNi AgSnO <sub>2</sub>  |                            |                          |
| Contact Rating (resistive)         | 1A,1B,1C: 10A/120VAC,28VDC 20A/14VDC ;<br>1U,1V,1W: 2×10A/120VAC,28VDC 2×20A/14VDC ; |                            |                          |
| Max. Switching Power               | 1C: 280W 1200VA 1W: 2×280W 2×1200VA  |                            |                          |
| Max. Switching Voltage             | 75VDC 380VAC   | Max. Switching Current:20A |                          |
| Contact Resistance or Voltage drop | <50mΩ  | Item 4.12 of IEC 61810-7   |                          |
| Operation life                     | Electrical   | 10 <sup>5</sup>            | Item 4.30 of IEC 61810-7 |
|                                    | Mechanical   | 10 <sup>7</sup>            | Item 4.31 of IEC 61810-7 |

**CAUTION:** 1.For the intermediate current, it only applies to the room temperature.  
 2.For the open type relays, the min. switching current and min. switching voltage is 100mA/6VDC.

## Coil Parameter

| Dash numbers | Coil voltage VDC |      | Coil resistance Ω ± 10% | Pickup voltage VDC(max) (75%of rated voltage ) | Release voltage VDC(min) (10% of rated voltage) | Coil power consumption W | Operate Time ms | Release Time ms |
|--------------|------------------|------|-------------------------|--|---|--------------------------|-----------------|-----------------|
|              | Rated            | Max. |                         |  |   |                          |                 |                 |
| 003-1000     | 3                | 3.9  | 9                       | 2.25   | 0.3   | 1.0                      | ≤10             | ≤5              |
| 005-1000     | 5                | 6.5  | 25                      | 3.75   | 0.5   |                          |                 |                 |
| 006-1000     | 6                | 7.8  | 36                      | 4.50   | 0.6   |                          |                 |                 |
| 009-1000     | 9                | 11.7 | 85                      | 6.75   | 0.9   |                          |                 |                 |
| 012-1000     | 12               | 15.6 | 145                     | 9.00   | 1.2   |                          |                 |                 |
| 018-1000     | 18               | 23.4 | 324                     | 13.5   | 1.8   |                          |                 |                 |
| 024-1000     | 24               | 31.2 | 576                     | 18.0   | 2.4   |                          |                 |                 |
| 012-1200     | 12               | 15.6 | 120                     | 9.00   | 1.2   | 1.2                      | <10             | <5              |

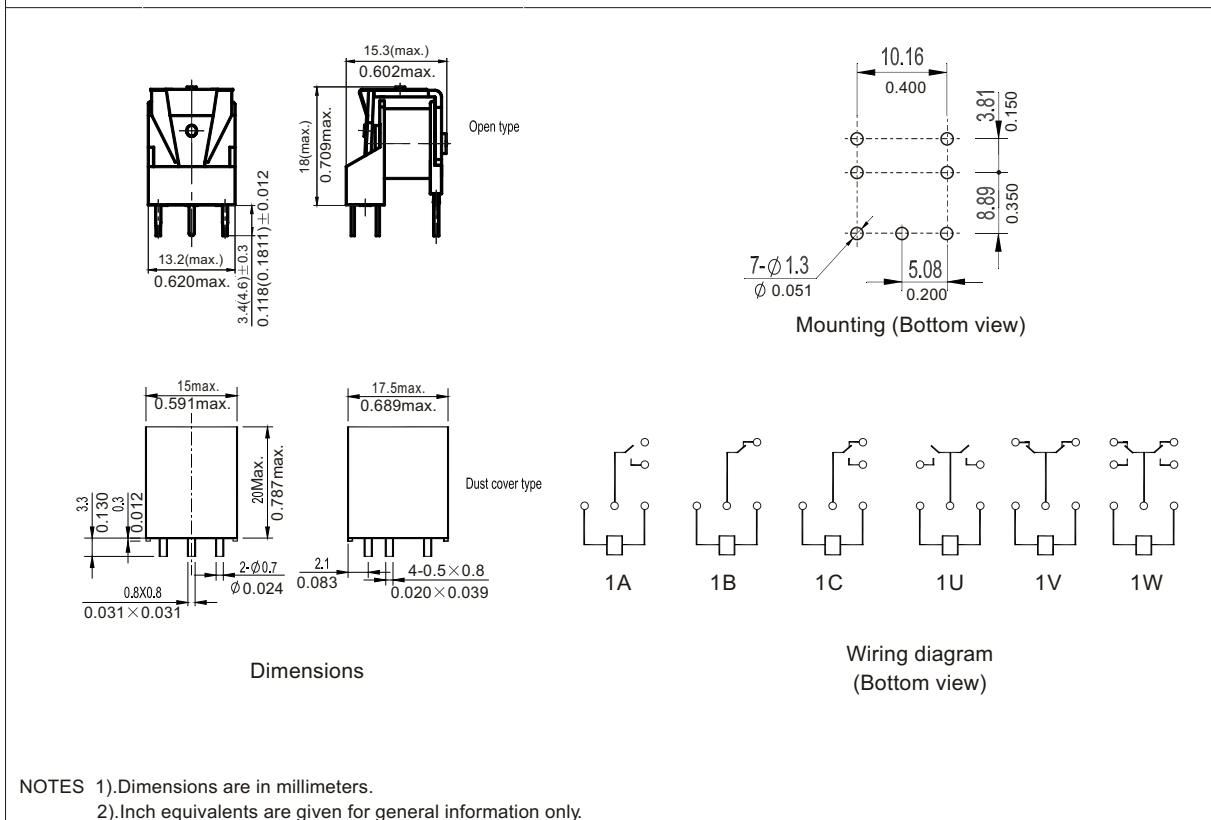
**CAUTION:** 1.The use of any coil voltage less than the rated coil voltage will compromise the operation of the relay.  
 2.Pickup and release voltage are for test purposes only and are not to be used as design criteria.

## Operation condition

|   |                                   |  |
|---|-----------------------------------|--|
| Insulation Resistance   | 100MΩ min (at 500VDC)             | Item 7 of IEC 60255-5                          |
| Dielectric Strength<br>Between contacts<br>Between contact and coil | 50Hz 750V<br>50Hz 1500V           | Item 6 of IEC 60255-5<br>Item 6 of IEC 60255-5 |
| Shock resistance  | 100m/s <sup>2</sup> 11ms          | IEC 68-2-27 Test Ea                            |
| Vibration resistance  | 10Hz~40Hz double amplitude 1.27mm | IEC 68-2-6 Test Fc                             |
| Terminals strength  | 10N                               | IEC 68-2-21 Test Ua1                           |
| Solderability   | 235℃ ± 2℃ 3s ± 0.5s               | IEC 68-2-20 Test Ta method 1                   |
| Ambient Temperature   | -40℃~105℃                         |  |
| Relative Humidity   | 85% (at 40℃)                      | IEC 68-2-3 Test Ca                             |
| Mass  | 9g (Open type) 12g                |  |

## Dimensions

mm /inch



## Reference Data

