

# 4117



Open Type      Dust Covered  
 13.2× 15.3× 18    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  
 2 Contact arrangement : A:1A;B:1B;C:1C;U:IU;V:1V;W:1W  
 3 Enclosure : S: Sealed type, Z: Dust cover  
 O: Open type

4 Contact Current ; 10:10A ; 20:20A  
 5 Coil rated Voltage(V) ; DC:3,5,6,9,12,18,24  
 6 Coil power consumption ; 1.0:1.0W ; 1.2:1.2W

## Contact Data

Contact Arrangement	1A(SPSTNO) 1B(SPSTNC) 1C (SPDT(B-M) ) 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 ; 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	≤50m Ω	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		
Between contacts	50Hz 750V	Item 6 of IEC 60255-5
Between contact and coil	50Hz 1500V	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

Open type

Mounting (Bottom view)

Dust cover type

1A 1B 1C 1U 1V 1W

Dimensions

Wiring diagram (Bottom view)

NOTES 1).Dimensions are in millimeters.  
2).Inch equivalents are given for general information only.

## Reference Data

