



**Open Type**  
13.2×14×18

**Dust Covered**  
18×16.4×20

4 1 1 7

Features
<ul style="list-style-type: none"> <li>■ Superminiature, heavy power.</li> <li>■ Low coil power consumption.</li> <li>■ Switching current up to 2×10A.</li> <li>■ PC board mounting.</li> <li>■ Suitable for household appliance, electrical equipment, automation system, and automobile industry application.</li> </ul>

Ordering Information
<p><b>4117 C S 10 12VDC 1.0</b></p> <p>1 Part number: 4117            2 Contact arrangement: A:1A; B:1B; C:1C; U:1U; 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</p>

Contact Data
<p>Contact Arrangement: 1A (SPSTNO), 1C (SPDT(B-M)), 1U (SPSTNODM), 1W (SPDTNC-NO)</p> <p>Contact Material: Ag-SnO<sub>2</sub></p> <p>Contact Rating (resistive): 1A, 1C: 10A/120VAC,28VDC 20A/14VDC ;            1U: 2×10A/120VAC,28VDC 2×20A/14VDC ;            1W: 2×10A/120VAC,28VDC 2×20A/14VDC</p> <p>Max. Switching Power: 1C: 280W 1200VA 1W: 2×280W 2×1200VA</p> <p>Max. Switching Voltage: 75VDC 380VAC Max. Switching Current:20A</p> <p>Contact Resistance or Voltage drop: ≤50mΩ Item 3.12 of IEC255-7</p> <p>Operation life: Electrical 10<sup>5</sup> Item 3.30 of IEC255-7            Mechanical 10<sup>7</sup> Item 3.31 of IEC255-7</p>

**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	1.2	≤10	≤5
012-1200	12	15.6	120	9.00	1.2			

**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	100M $\Omega$ min (at 500VDC)	Item 7 of IEC255-5
Dielectric Strength		
Between contacts	50Hz 750V	Item 6 of IEC255-5
Between contact and coil	50Hz 1500V	Item 6 of IEC255-5
Shock resistance	100m/s <sup>2</sup> 11ms	IEC68-2-27 Test Ea
Vibration resistance	10~40Hz double amplitude 1.27mm	IEC68-2-6 Test Fc
Terminals strength	10N	IEC68-2-21 Test Ua1
Solderability	235 $^{\circ}$ C $\pm$ 2 $^{\circ}$ C 3 $\pm$ 0.5s	IEC68-2-20 Test Ta method 1
Ambient Temperature	-40~85 $^{\circ}$ C	
Relative Humidity	85% (at 40 $^{\circ}$ C)	IEC68-2-3Test Ca
Mass	9g(Open type) 12g	

**Qualification inspection:**

Perform the qualification test as specified in the table IV of IEC255-19-1 and minimum sample size 24.

Dimensions (Unit: mm)		mm	inch
<p>Dimensions</p> <p>Wiring diagram (Bottom views)</p>	Open type	0.3	0.012
		0.4	0.016
		0.5	0.020
		0.6	0.024
		0.8	0.031
		1.0	0.039
		1.3	0.051
		2.1	0.083
		3.3	0.130
		3.4	0.134
		3.81	0.150
		4.6	0.181
		5.08	0.200
		8.89	0.350
		10.16	0.400
		13.2	0.520
	14	0.511	
	16.4	0.646	
	18	0.709	
	20	0.787	

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

