

Subminiature Intermediate Power Relay

Features

- 10A switching capability
- 1 Form A and 1 Form C configurations
- Dielectric strength 4kV (between coil and contacts)
- Product in accordance to IEC 60335-1 available
- TV-5 products are available
- UL insulation system: Class F
- Plastic sealed type
- Subminiature, Standard PCB layout

1. COIL DATA (at 23°C)

1) Standard type

Nominal	Pick-up	Drop-out	Max Allowable	Coil Current	Coil Resistance	Coil Power
Voltage (VDC)	Voltage (VDC)	Voltage (VDC)	Voltage (VDC)	(mA)(±10%)	(Ω)	(mW)
3	2.25	0.15	3.90	150	20 x (1±10%)	
5	3.75	0.25	6.50	90.0	55 x (1±10%)	
6	4.50	0.30	7.80	75.0	80 x (1±10%)	
9	6.75	0.45	11.7	50.0	180 x (1±10%)	450
12	9.00	0.60	15.6	37.5	320 x (1±10%)	450
18	13.5	0.90	23.4	25.0	720 x (1±10%)	
24	18.0	1.20	31.2	18.8	1280 x (1±10%)	
48	36.0	2.40	62.4	9.40	5120 x (1±10%)	

2) Sensitive type (Only for 1 Form A)

Nominal	Pick-up	Drop-out	Max Allowable	Coil Current	Coil Resistance	Coil Power
Voltage (VDC)	Voltage (VDC)	Voltage (VDC)	Voltage (VDC)	(mA)(±10%)	(Ω)	(mW)
3	2.25	0.15	4.50	66.7	45 x (1±10%)	
5	3.75	0.25	7.50	40.0	125 x (1±10%)	
6	4.50	0.30	9.00	33.3	180 x (1±10%)	
9	6.75	0.45	13.5	22.2	400 x (1±10%)	200
12	9.00	0.60	18.0	16.7	720 x (1±10%)	200
18	13.5	0.90	27.0	11.1	1600 x (1±10%)	
24	18.0	1.20	36.0	8.33	2800 x (1±10%)	
48	36.0	2.40	72.0	4.17	11520 x (1±10%)	

Notes: 1) The data shown above are initial values.

2) The maximum allowable voltage refers to the maximum voltage which relay coil could endure in a short period of time.

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2. CONTACT DATA

Contact Arrangement			1 Form C				
Coil Power (mW)		Standard (450mW)		Sensitive (200mW)		Standard (450mW)	
Type (Refer to ordering info.)		SH	SGH	Н	Q	SH	
Contact Resistance		100mΩ max. (at 1A 6VDC)					
Contact Material		AgSnO ₂					
Contact Rating (Resistive Load)		5A 250VAC 5A 30VDC	10A 250VAC	3A 250VAC 3A 30VDC	10A 250VAC	3A 250VAC 3A 30VDC	
Max. Switching Voltage		277VAC / 30VDC	277VAC	277VAC / 30VDC	277VAC	250VAC / 30VDC	
Max. Switching Current		5A	10A	3A	10A	3A	
Max. Switching Power		1385VA / 150W	2770VA	831VA / 90W	2770VA	750VA / 90W	
Life Expectancy	Electrical	100,000 operations					
	Mechanical						

Notes: 1) The data shown above are initial values.

3. CHARACTERISTICS

Insulation Resistance			1000MΩ (at 500VDC)		
Dielectric Strength	Open Contacts		1000VAC 1min		
	Cail and Cantasta	1 Form A	4000VAC 1min		
	Coll and Contacts	1 Form C	2500VAC 1min		
Surge withstand voltage (only for 1 Form A)		m A)	6kV(1.2 / 50µs)		
Operate Time (at nominal voltage)			8ms max		
Release Time (at nominal voltage)			5ms max		
Tomporature Dongo	1 Form A		-40 ℃ ~ 105 ℃		
Temperature Range	1 Form C		-40 ℃ ~ 85 ℃		
	Functional -	1 Form A	294m/s ²		
Shock Resistance		1 Form C	98m/s ²		
	Destructive		980m/s ²		
Vibration Resistance			10 ~ 55Hz, 1.5mm DA		
Humidity			5 ~ 85% RH		
Termination			PCB		
Weight			Approx. 6g		
Outline Dimension (L x W x H)			18.4 x 10.2 x 15.5mm		



Notes: 1) The data shown above are initial values.

2) For working environment temperature >85 $^\circ\!\!\mathrm{C}$ on 1 Form A contact, please contact to TEXCELL

4. ORDERING INFORMATION

CS 11 - 12 SH ① ② ③ ④				
① Relay Model	CS			
② Contact Arrangement	11: 1 Form A (SPST-NO)			
③ Coil Voltage	3=3VDC, 5=5VDC, 6=6VDC, 9=9VDC, 12=12VDC, 18=18VDC,			
	24=24VDC, 48=48VDC			
	SH: 5A 250VAC/30VDC, Coil Power 450mW (only for 1 Form A)			
	3A 250VAC/30VDC, Coil Power 450mW (only for 1 Form C)			
④ Contact Capacity & Coil Power	SGH: 10A 250VAC / 30VDC, Coil Power 450mW (only for 1 Form A)			
	H: 3A 250VAC/30VDC, Coil Power 200mW (only for 1 Form A)			
	Q: 10A 250VAC, Coil Power 200mW (only for 1 Form A)			

5. DIMENSIONS (Unit: mm)



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Remark: 1) In case of no tolerance shown in outline dimension: outline dimension <1mm, tolerance should be ±0.2mm; outline dimension >1mm

and \leq 5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.

- 2) The tolerance without indicating for PCB layout is always ± 0.1 mm.
- 3) The width of the gridding is $\ensuremath{\text{2.54mm}}.$

6. CHARACTERISTIC CURVES

1) CS11- \Box SH, CS11- \Box H

Maximum Switching Power





Endurance Curve

Remark:

1. Curve A: standard

2. Curve B: sensitive



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2) CS11- \Box SGH, CS11- \Box Q



Contact Voltage (V)





1. Curve A: standard

2. Curve B: sensitive



Percentage Of Nominal Coil Voltage



3) CS1-□□SH





Remark: Curve B: 1 Form C



Percentage Of Nominal Coil Voltage