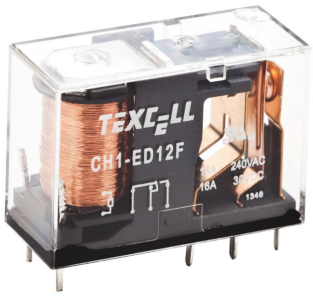
Miniature High Power Relay	CH

Features

- Various configurations (1A, 1C, 2A, 2C)
- 5A, 8A, 10A, 16A switching capability
- Transparent sealed cover
- 5kV dielectric between coil and contacts
- Creepage distance: 8mm Min. for 2 poles
- Class B and F available
- Au-clad contact available for HG and MG type
- Socket available



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1. COIL DATA (at 20°C)

1) Standard Type

Nominal Voltage (VDC)	Pick-up Voltage (VDC)	Drop-out Voltage (VDC)	Max Allowable Voltage (VDC)	Coil Current (mA)	Coil Resistance (Ω)	Coil Power (mW)
3	2.40	0.15	3.90	180	17 x (1±10%)	540
5	4.00	0.25	6.50	108	46 x (1±10%)	
6	4.80	0.30	7.80	90.0	67 x (1±10%)	
9	7.20	0.45	11.7	60.0	150 x (1±10%)	
12	9.60	0.60	15.6	45.0	270 x (1±10%)	
24	19.2	1.20	31.2	22.5	1050 x (1±10%)	
48	38.4	2.40	62.4	11.3	4250 x (1±10%)	

2) Sensitive Type (Only for “E” and “M” type)

Nominal Voltage (VDC)	Pick-up Voltage (VDC)	Drop-out Voltage (VDC)	Max Allowable Voltage (VDC)	Coil Current (mA)	Coil Resistance (Ω)	Coil Power (mW)
3	2.40	0.15	3.90	80.0	38 x (1±10%)	240
5	4.00	0.25	6.50	48.0	104 x (1±10%)	
6	4.80	0.30	7.80	40.0	150 x (1±10%)	
9	7.20	0.45	11.7	26.7	338 x (1±10%)	
12	9.60	0.60	15.6	20.0	600 x (1±10%)	
24	19.2	1.20	31.2	10.0	2400 x (1±10%)	
48	38.4	2.40	62.4	5.00	9600 x (1±10%)	

2. CONTACT DATA

Contact Arrangement		1A, 1C (H)	1A, 1C (HG)	1A, 1C (E)	2A, 2C (M)	2A, 2C (MG)
Contact Resistance (Initial)		100mΩ max. (at 1A 6VDC)				
Contact Material[1)]		$AgSnO_2$				
Load		Resistive load (COSΦ=1)				
Contact Ratings		3.5mm pinning		5mm pinning	5mm pinning	
		10A 240VAC 10A 30VDC	16A 250VAC 16A 30VDC	16A 240VAC 16A 30VDC	5A 240VAC 5A 30VDC	8A 250VAC 5A 30VDC
Max. Switching Voltage		250VAC / 30VDC				
Max. Switching Current		12A	16A	20A	8A	8A
Max. Switching Power		2500VA/300W	4000VA/480W	4800VA/480W	1250VA/240W	2000VA/240W
Minimum Load		100mA 5VDC				
Life Expectancy	Electrical	100,000 operations (at 30 operations/minute)				
	Mechanical	10,000,000 operations (at 300 operations/minute)				

Note: Au clad on contact is available for M and MG type

3. CHARACTERISTICS

Insulation Resistance		Min. 100MΩ (at 500VDC)
Dielectric Strength	Open Contacts	1000VAC 1min
	Coil and Contacts	5000VAC 1min
Operate Time (at nominal voltage)		20ms max
Release Time (at nominal voltage)		10ms max
Temperature Range		-40℃ ~ 85℃
Shock Resistance	Operating Extremes	10G
	Damage Limits	100G
Vibration Resistance		10 ~ 55Hz, 1.5mm DA
Max. switching frequency	Mechanical	18,000 operations/hr
	Electrical	1,800 operations/hr
Humidity		40 ~ 85%
Termination		PCB
Weight		Approx. 14g
Outline Dimension (L x W x H)		29.0 x 12.7 x 20.0mm

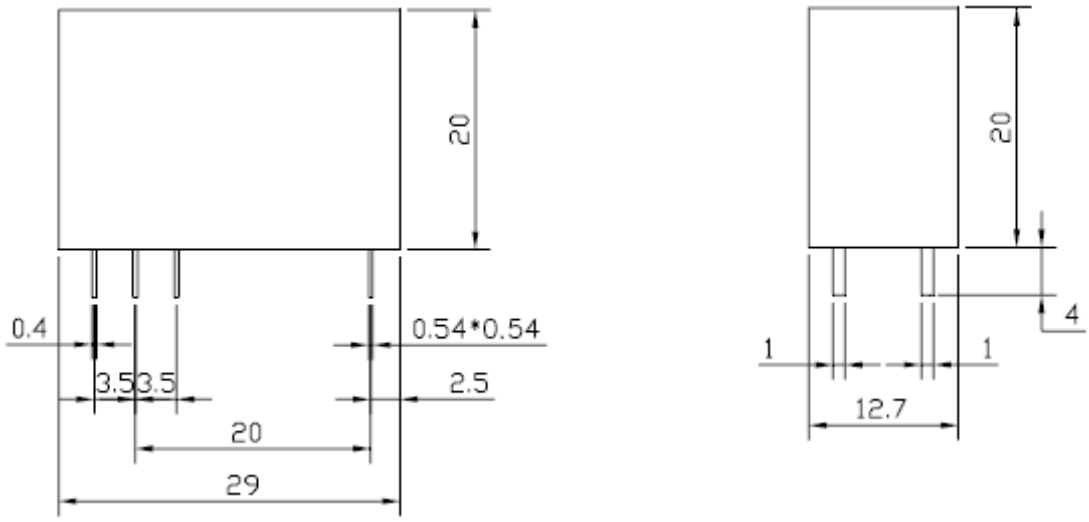
4. ORDERING INFORMATION

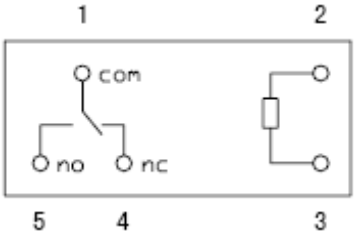
CH ①	11 ②	-	E ③	D12 ④	F ⑤	(B) ⑥

① Relay Model	CH
② Contact Arrangement	11: 1 Form A (SPST-NO) 1: 1 Form C (SPDT) 22: 2 Form A (DPST-NO) 2: 2 Form C (DPDT)
③ Contact Current	H: 10A (3.5mm pinning, 1 pole,) HG: 16A (3.5mm pinning, 1 pole) E: 16A (5.0mm pinning, 1 pole) M: 5A (5.0mm pinning, 2 pole) MG: 8A (5.0mm pinning, 2 pole)
④ Coil Voltage	D3=3VDC, D5=5VDC, D6=6VDC, D9=9VDC, D12=12VDC, D24=24VDC, D48=48VDC, D100=100VDC
⑤ Coil Power	F: 540mW S: 240mW (Only for “E” and “M” type on contact current)
⑥ Cover Type	Nil: Transparent cover (B): Black cover

5. DIMENSIONS (Unit: mm)

1) 3.5mm pinning (1pole, 10/16A)





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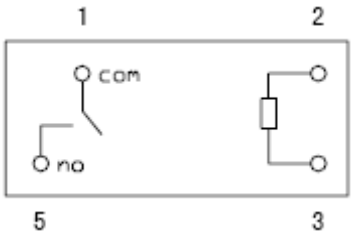

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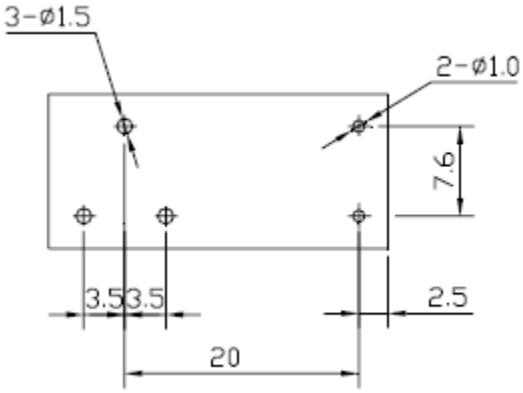
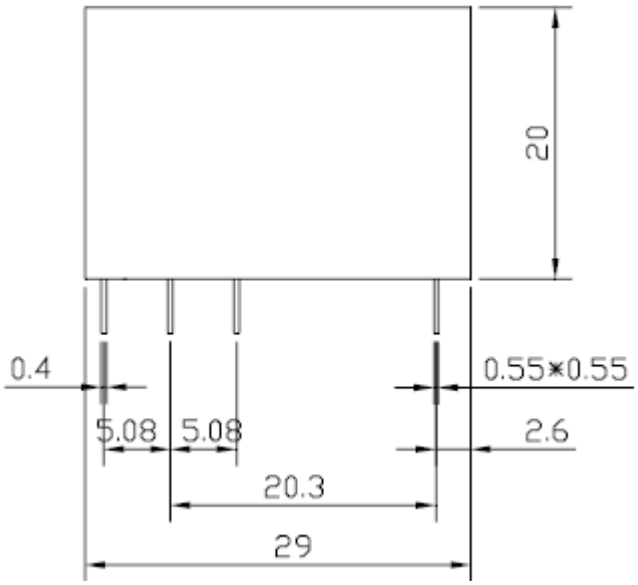
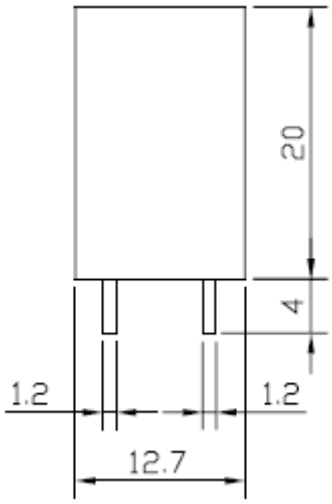
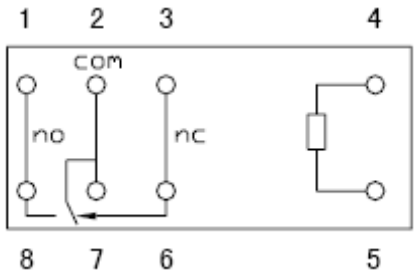


2) 5mm pinning (1pole, 16A)







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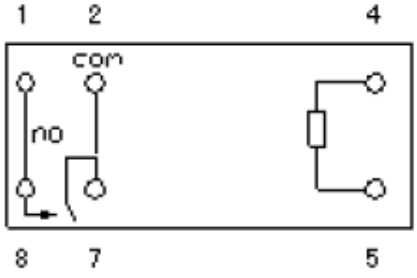

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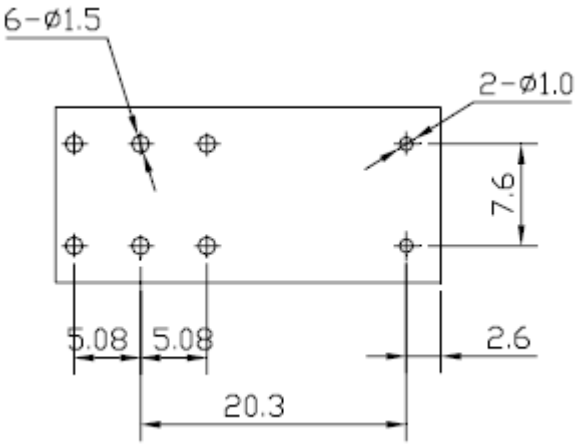
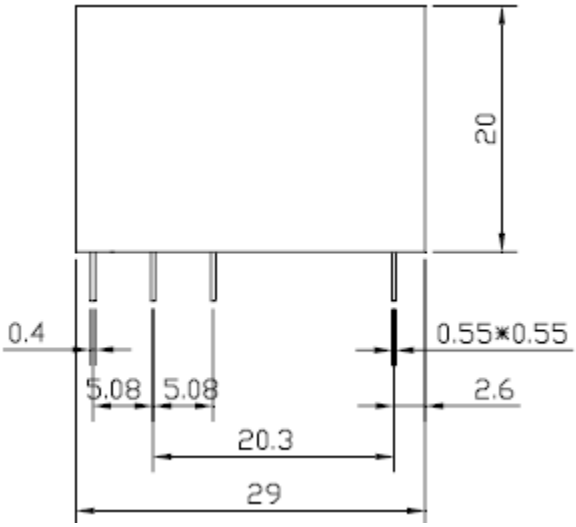
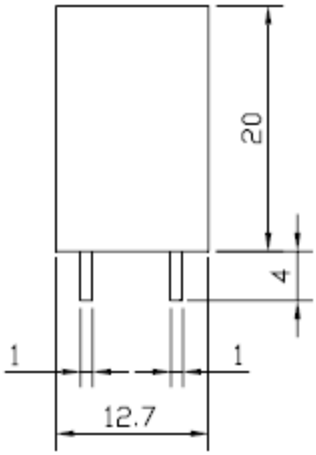
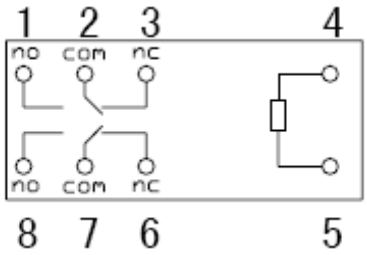


3) 5mm pinning (2pole, 5A/8A)







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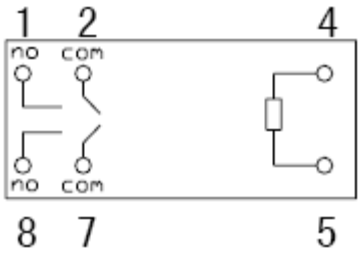

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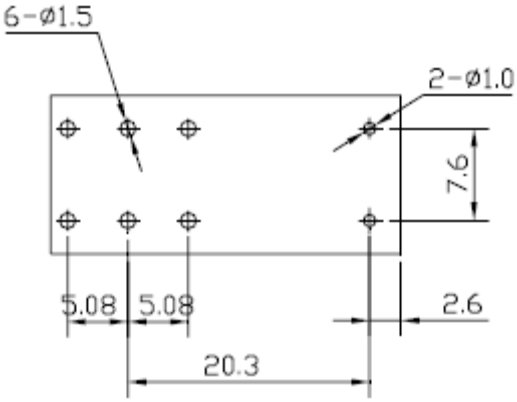
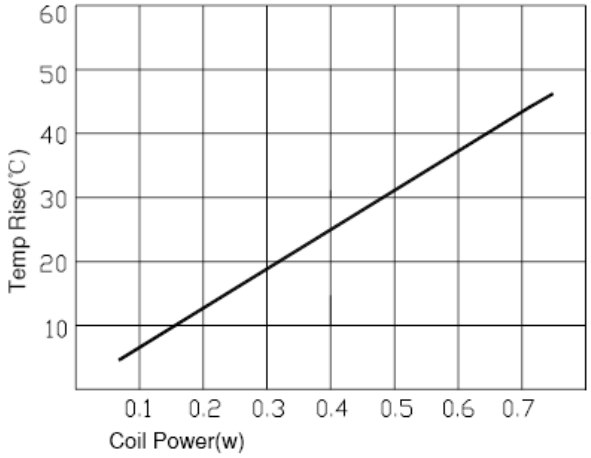


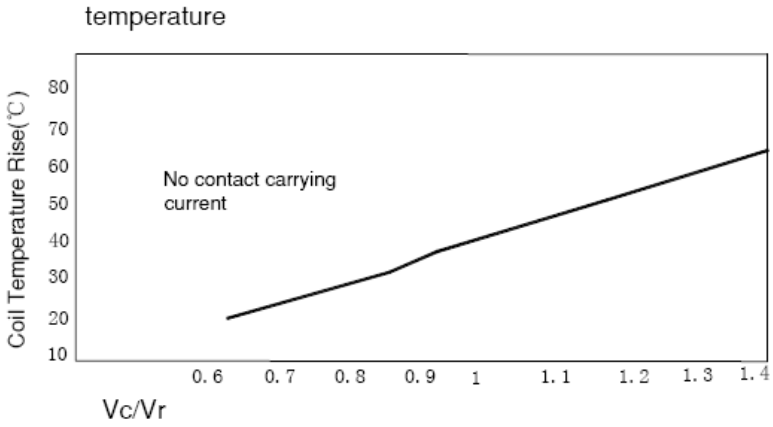
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.

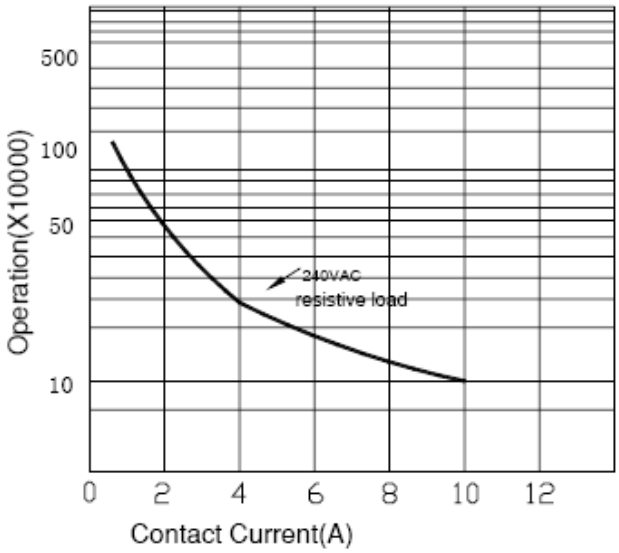
2) The tolerance without indicating for PCB layout is always ±0.1mm

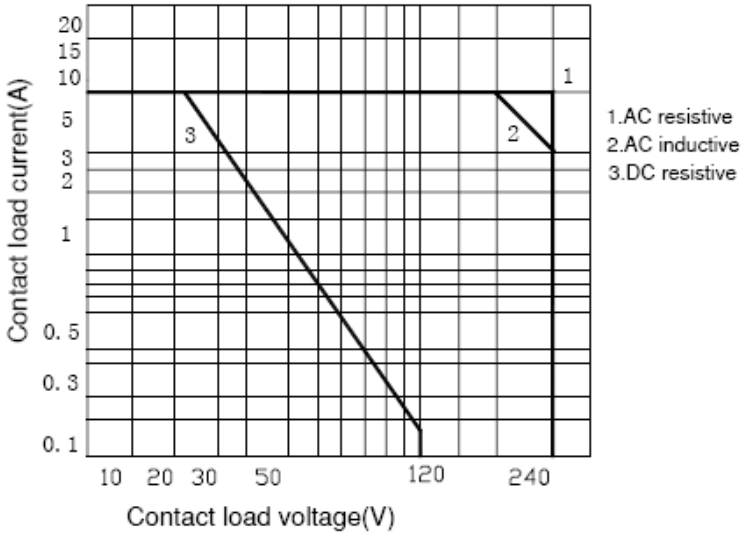
6. CHARACTERISTIC CURVES

1) 3.5mm pinning (1pole, 10A)

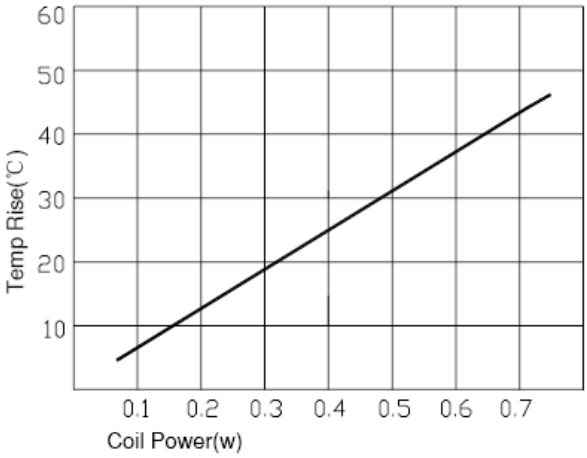


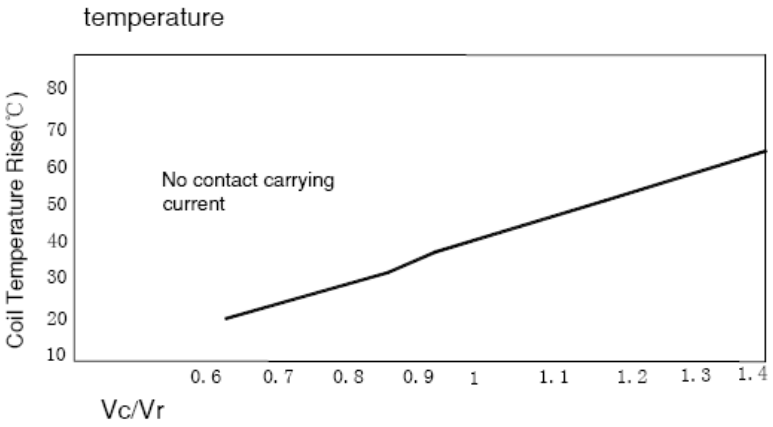


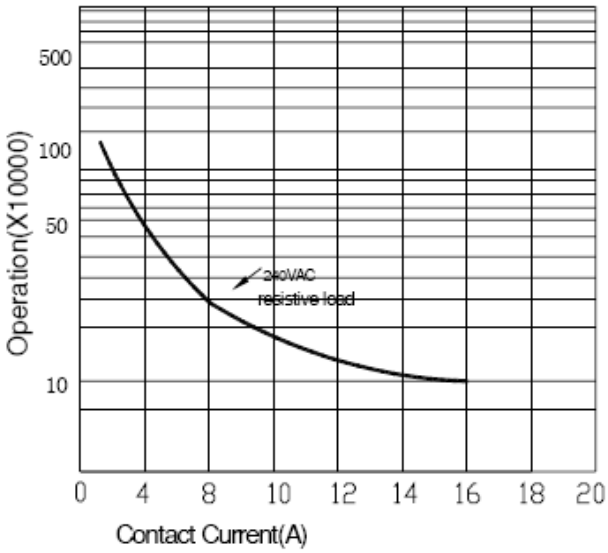


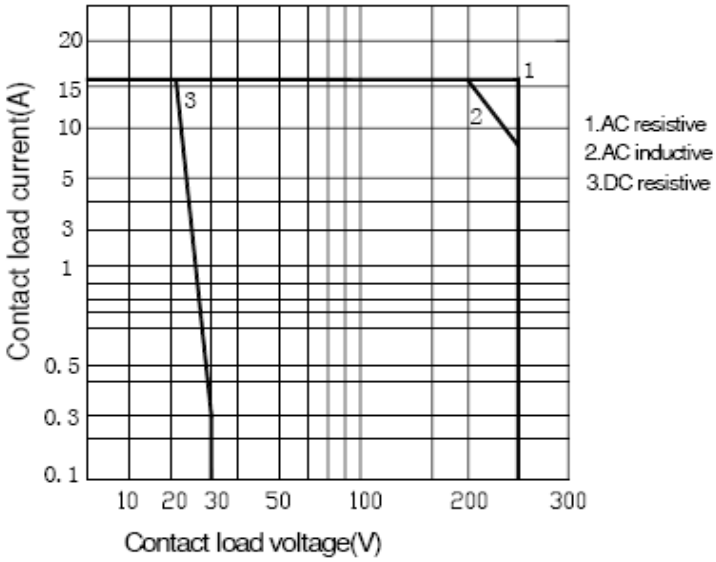


2) 3.5mm pinning (1pole, 16A)

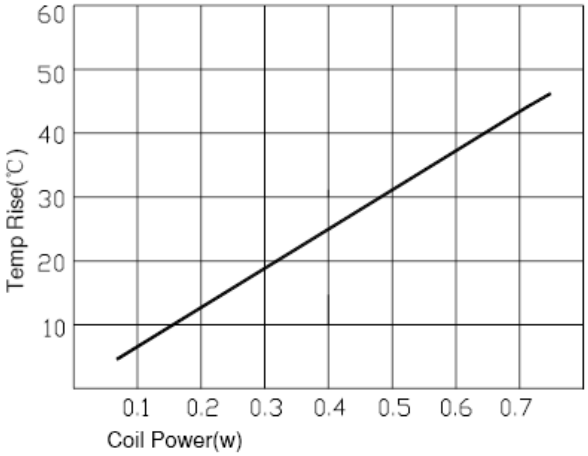


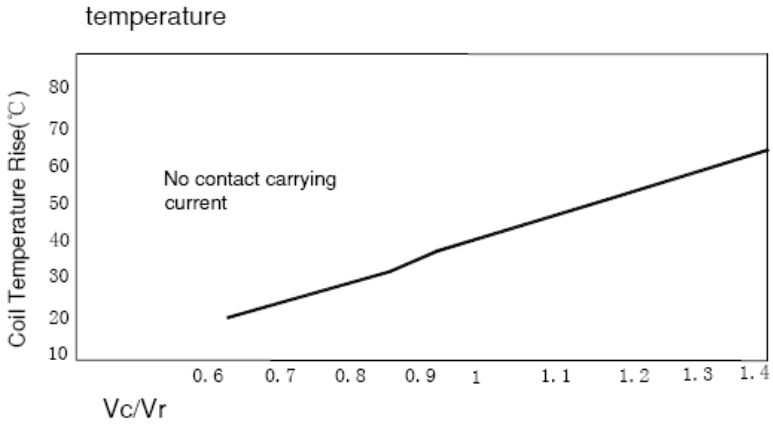


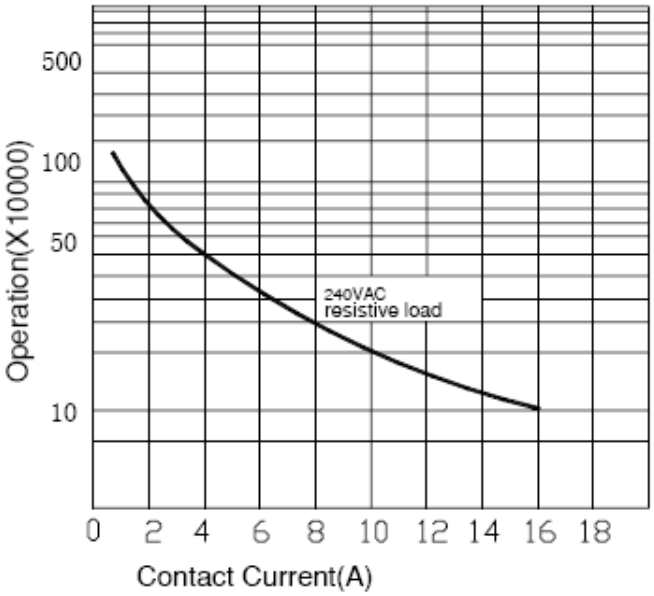


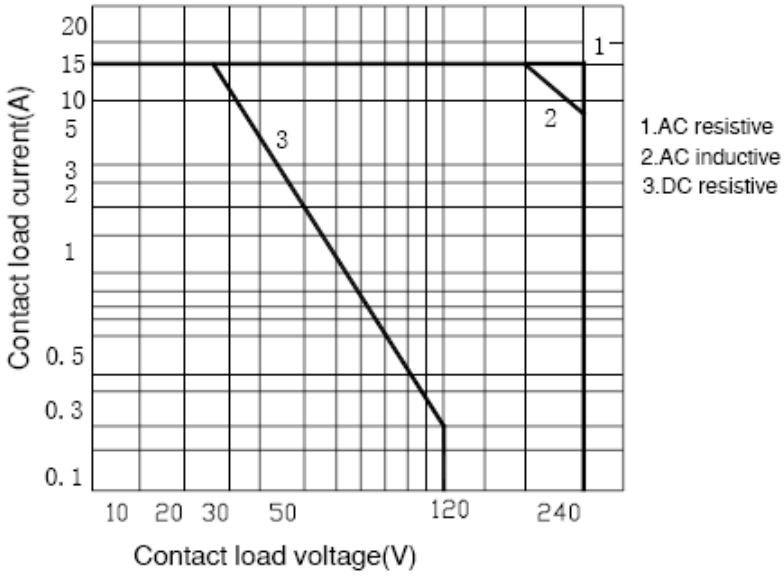


3) 5mm pinning (1pole, 16A)

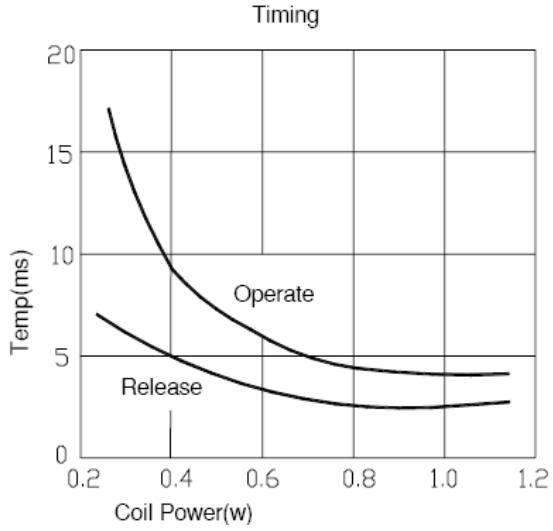


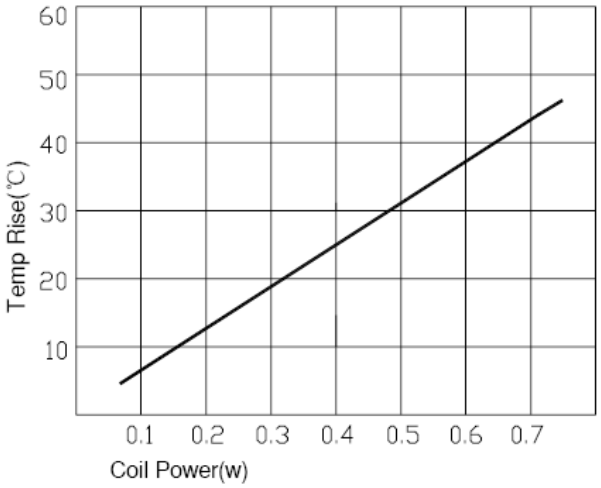


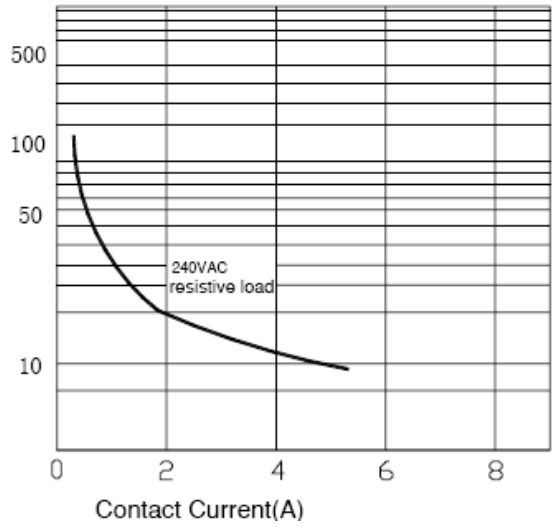


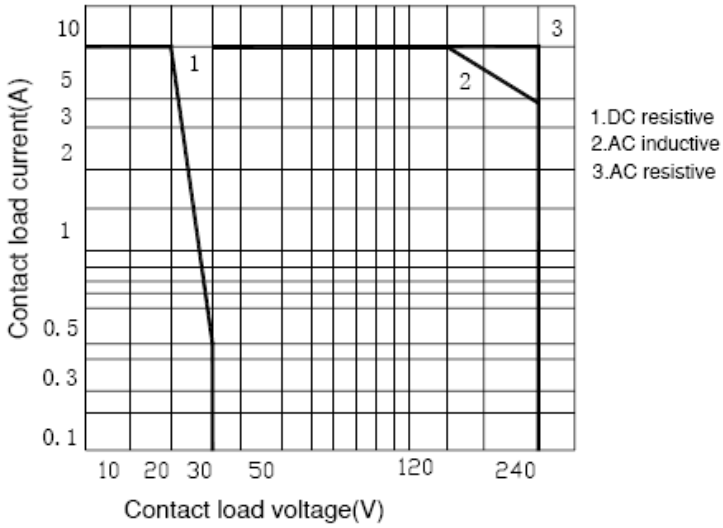


4) 5mm pinning (2pole, 5A)









5) 5mm pinning (2pole, 8A)