

Subminiature High Power Relay	NKB
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Features

- 15A switching capability
- 1 Form A and 1 Form C configurations
- Subminiature, standard PCB layout
- Sealed type



(File No.: E134581)

(File No.: R 50265861)

1. COIL DATA(at 23 °C)

Nominal Voltage (VDC)	Pick-up Voltage (VDC)	Drop-out Voltage (VDC)	Max Allowable Voltage (VDC)	Coil Current (mA)(±10%)	Coil Resistance (Ω)	Coil Power (mW)
5	3.80	0.5	6.50	72	70 x (1±10%)	360
6	4.50	0.6	7.80	60	100 x (1±10%)	
9	6.80	0.9	11.7	40	225 x (1±10%)	
12	9.00	1.2	15.6	30	400 x (1±10%)	
18	13.5	1.8	23.4	20	900 x (1±10%)	
24	18.0	2.4	31.2	15	1600 x (1±10%)	
48	36.0	4.8	62.4	7.5	6400 x (1±10%)	

2. CONTACT DATA

Contact Arrangement	1 Form A	1 Form C
Contact Resistance	100mΩ (at 1A 6VDC)	
Contact Material	AgCdO	AgSnO ₂
Contact Ratings	10A 277VAC / 28VDC	
Max. Switching Voltage	277VAC / 30VDC	
Max. Switching Current	15A	10A
Max. Switching Power	2,770VA / 210W	
Life Expectancy	Electrical	100,000 operations
	Mechanical	10,000,000 operations

3. CHARACTERISTICS

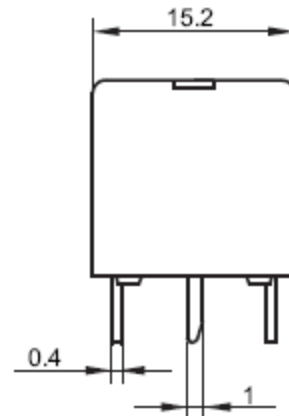
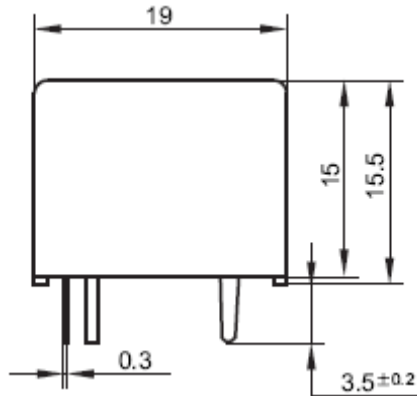
Insulation Resistance		100MΩ (at 500VDC)
Dielectric Strength	Open Contacts	750VAC 1min
	Contacts and Coil	1500VAC 1min
Operate Time (at nominal voltage)		10ms max.
Release Time (at nominal voltage)		5ms max.
Temperature Range		-40 °C ~ 85 °C
Shock Resistance	Functional	100 m/s ² (10g)
	Destructive	1000 m/s ² (100g)
Vibration Resistance		10 ~ 55Hz, 1.5mm DA
Humidity		35 ~ 85% RH
Termination		PCB
Weight		Approx. 10g
Outline Dimension (L x W x H)		19.0 x 15.2 x 15.5 mm

4. ORDERING INFORMATION

NKB <u>1</u> - <u>12</u> <u>S</u> <u>F</u> <u>I</u> ① ② ③ ④ ⑤ ⑥	
① Relay Model	NKB
② Contact Arrangement	11: 1 Form A (SPST-NO) 1: 1 Form C (SPDT)
③ Coil Voltage	5=5VDC, 6=6VDC, 9=9VDC, 12=12VDC, 18=18VDC, 24=24VDC, 48=48VDC
④ Construction	S: Sealed Type
⑤ Insulation Standard	Nil: Class B F: Class F
⑥ Contact Material	Nil: AgCdO (For 1 Form A) T: AgSnO ₂ (For 1 Form C)

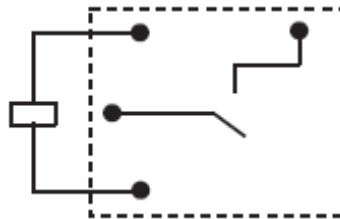
5. DIMENSIONS (Unit: mm)

Outline Dimensions

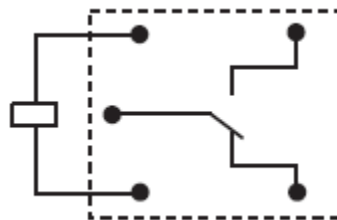


Wiring Diagram (Bottom View)

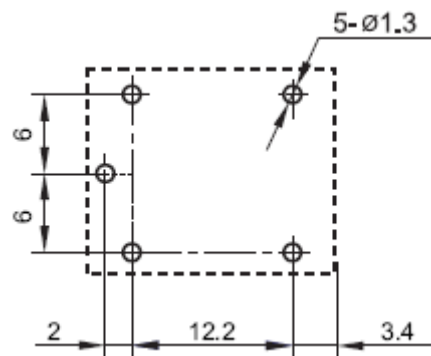
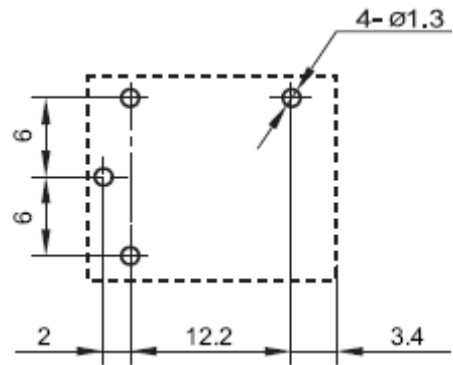
1 From A



1 From C



PCB Layout (Bottom View)

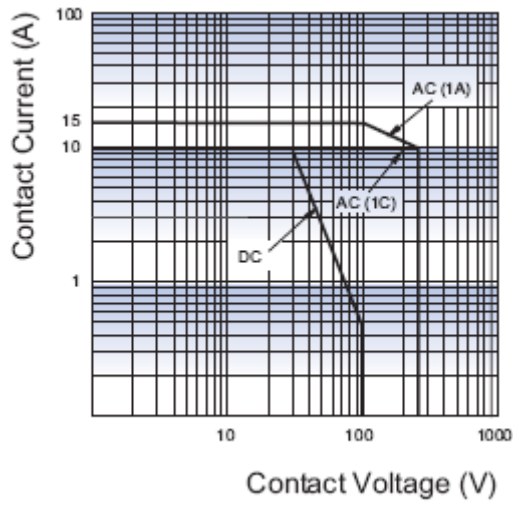


Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤ 1 mm, tolerance should be ± 0.2 mm; outline dimension > 1 mm and ≤ 5 mm, tolerance should be ± 0.3 mm; outline dimension > 5 mm, tolerance should be ± 0.4 mm.

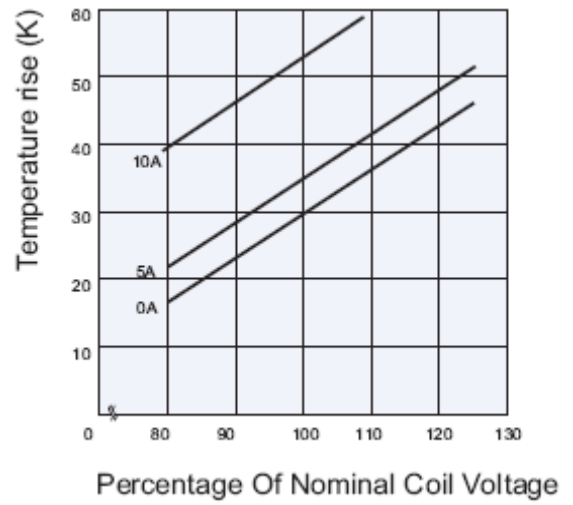
2) The tolerance without indicating for PCB layout is always ± 0.1 mm

6. CHARACTERISTIC CURVES

Maximum Switching Power



Coil Temperature Rise



Endurance Curve

