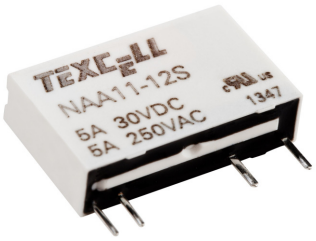
Miniature Power Relay	NA

Features

- 5A switching capability
- 3kV dielectric strength (between coil and contacts)
- Slim size (width: 5mm, height: 12.5mm)
- High sensitive: Min. 120mW
- Meets IEC61131-2 reinforce insulation
- Creepage/clearance distance: Min. 3.5mm
- Socket available



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1. COIL DATA (at 23°C)

Nominal Voltage (VDC)	Pick-up Voltage (VDC) Max.[2]	Drop-out Voltage (VDC) Min.[2]	Max. Allowable Voltage (VDC)[3]	Coil Current (mA)(±10%)	Coil Resistance (Ω)	Coil Power (mW)
5	3.50	0.25	6.0	24.0	208 x (1±10%)	Approx. 120
6	4.20	0.30	7.2	20.0	300 x (1±10%)	
9	6.30	0.45	10.8	13.3	675 x (1±10%)	
12	8.40	0.60	14.4	10.0	1200 x (1±10%)	
18	12.6	0.90	21.6	6.67	2700 x (1±15%)	
24[4]	16.8	1.20	28.8	7.50	3200 x (1±15%)	Approx. 180

Note:

1) All above data are tested when the relays terminals are downward position. Other positions of the terminals, the pick-up and drop-out voltages will have ±5% tolerance. For example, when the relay terminals are transverse position, the max. pick-up voltage change is 75% of nominal voltage.

2) The data shown above are initial values.

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

4) 24VDC 120mW type (Sensitive type) is also available. Please see ordering information for more details.

2. CONTACT DATA

Contact Arrangement		1 Form A (SPST)
Contact Resistance (at 1A 6VDC)[1)]		No gold plated: 100mΩ max. Gold plated: 50mΩ max.
Contact Material		AgNi, $AgSnO_2$
Contact Ratings (Resistive load)		5A 250VAC / 30VDC
Max. Switching Voltage		250VAC / 125VDC (at 0.3A)
Max. Switching Current		5A
Max. Switching Power		1,250VA / 150W
Min. Contact Load[2)]		No gold plated: 5VDC 10mA Gold plated: 5VDC 1mA
Life Expectancy	Electrical	100,000 operations (3A 250VAC / 30VDC) 50,000 operations (5A 250VAC / 30VDC)
	Mechanical[3)]	20,000,000 operations

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

2) Min. contact load is just a reference value in normal temperature, normal humidity and normal pressure environment, which will vary depending on the power-on and off frequency, environmental conditions and expected lifespan. Thus, please have confirmation tests with actual load before use. And it is recommended to avoid using the relay when the temperature is below 0℃

3) No loading test, no mechanical damage after the test.

3. CHARACTERISTICS

Insulation Resistance		1000MΩ (at 500VDC)
Dielectric Strength	Open Contacts	1000VAC 1min
	Coil and Contacts	3000VAC 1min
Surge voltage (between coil and contacts)[4)]		6kV(1.2 / 50μs)
Operate Time (at nominal voltage)		10ms max.
Release Time (at nominal voltage)		5ms max.
Temperature Range		-40℃ ~ 85℃
Shock Resistance	Functional	$98m/s^2$
	Destructive	$980m/s^2$
Vibration Resistance		10 ~ 55Hz, 1.5mm DA
Humidity		5 ~ 85% RH
Termination		PCB
Weight		Approx. 3g
Outline Dimension (L x W x H)		20.0 x 5.0 x 12.5mm

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

2) Please find coil temperature curve in the characteristic curves below.

3) UL insulation system: Class F, Class B, Class A.

3) Contact refers to the mov.-contact.

4. SAFETY APPROVAL RATINGS

Safety Standard	Relay	Contact Material	Contact Rating
UL/cUL	NAA	AgNi, $AgSnO_2$	3A 250VAC cosØ=1 at 85℃ 3A 30VDC L/R=0ms at 85℃ 5A 250VAC cosØ=1 5A 30VDC L/R=0ms
	NAB	AgNi	3A 250VAC cosØ=1 at 85℃ 3A 30VDC L/R=0ms at 85℃ 5A 250VAC cosØ=1 5A 30VDC L/R=0ms

Notes:

1) All values unspecified are at room temperature

2) Only typical loads are listed above. Other load specifications can be available upon request.

5. ORDERING INFORMATION

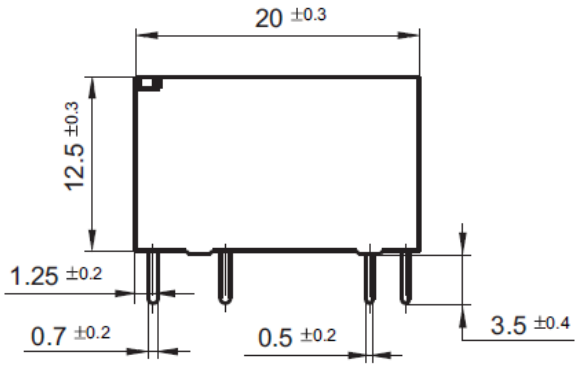
NAA ①	11 ②	-	12 ③	S ④	G ⑤	T ⑥	F ⑦	L ⑧

① Relay Model	NAA: Terminal distance 5.08mm NAB: Terminal distance 7.62mm
② Contact Arrangement	11: 1 Form A (SPST)
③ Coil Voltage	5=5VDC, 6=6VDC, 9=9VDC, 12=12VDC, 18=18VDC, 24=24VDC
④ Contact Version	S: Single Contact B: Bifurcated Contact (Only for gold plated)
⑤ Contact Plating	Nil: No gold plated (Only for single contact) G: Gold plated
⑥ Contact Material	Nil: AgNi T: $AgSnO_2$ (Only for single contact)
⑦ Insulation Standard	Nil: Class A B: Class B F: Class F
⑧ Coil Power	Nil: Standard L: Sensitive (24voltage with 120mW)

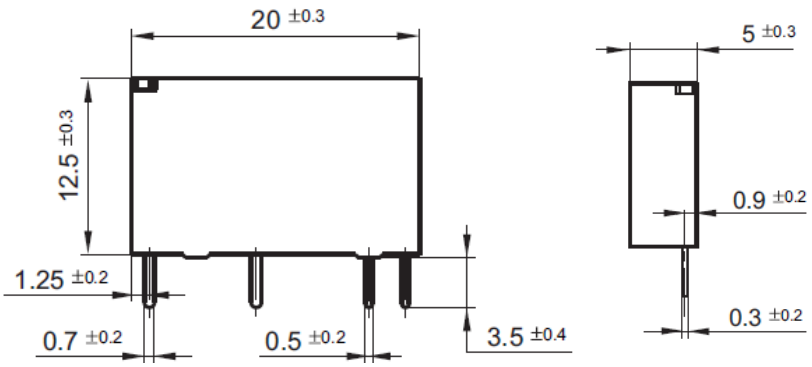
6. DIMENSIONS (Unit: mm)

Outline Dimensions

NAA

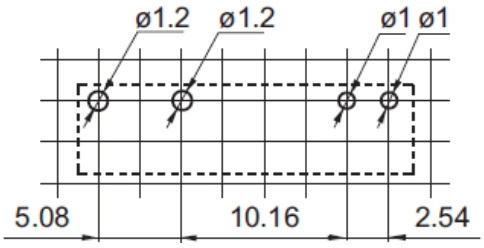


NAB

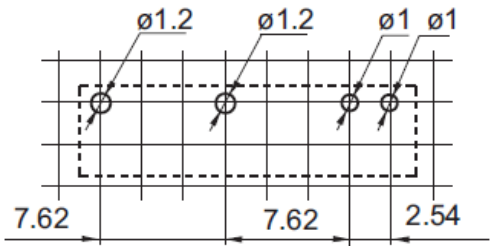


PCB Layout (Bottom view)

NAA



NAB



Wiring Diagram (Bottom View)

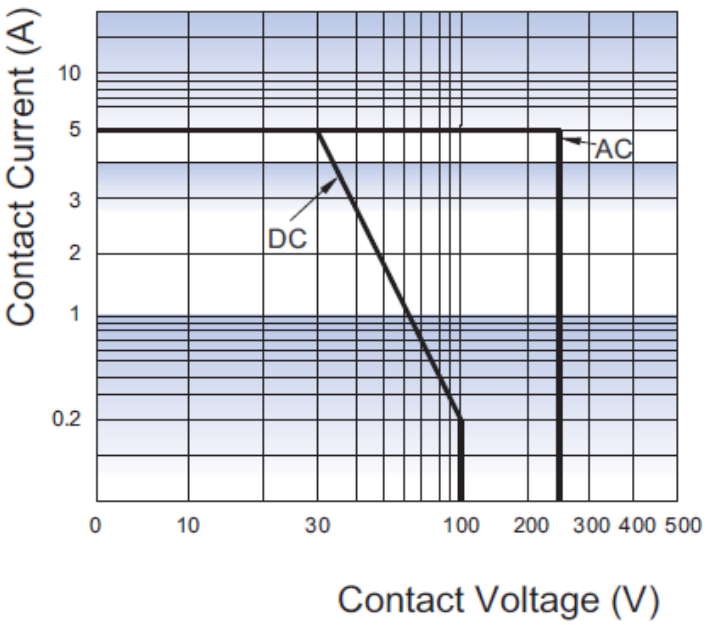
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.

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

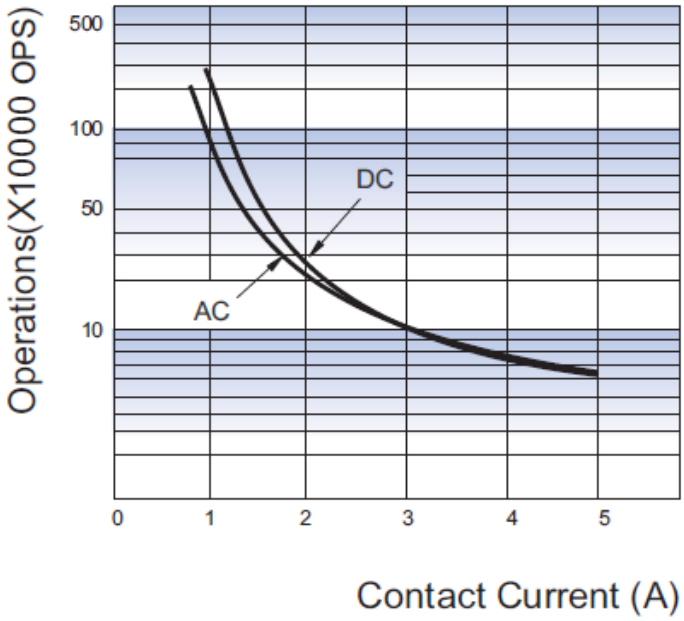
3) The width of the gridding is 2.54mm.

7. CHARACTERISTIC CURVES

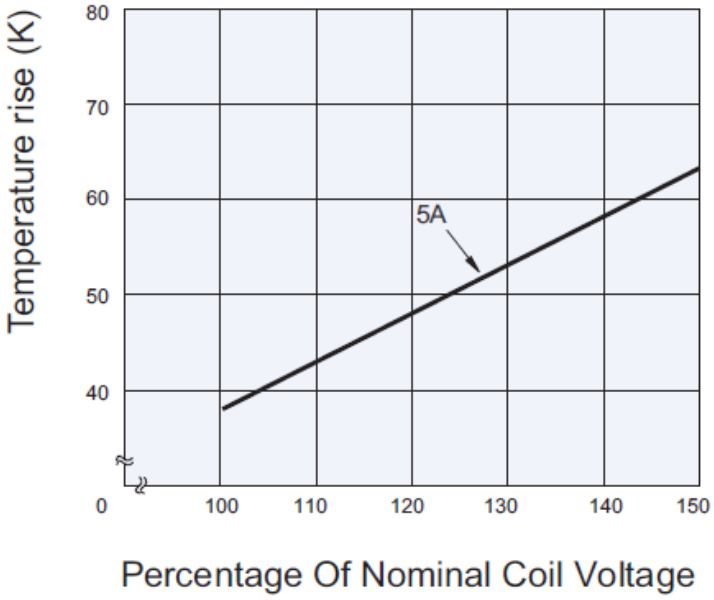
Maximum Switching Power



Endurance Curve



Coil Temperature Rise



Electrical Endurance Curve of Inductive Load