Power Latching Relay	LA

Features

- Latching relay
- High capacity: 20A 277VAC
- High surge current capacity: 370A
- Small size: 22 x 10 x 14mm
- Meeting reinforce insulation
- Dielectric strength
  (between coil and contact): 5000VAC
- High temperature resistance: 105℃
- Meet IEC62368-1
- TV-10 240VAC capability

c UL us
(File No.:E122258)

1. COIL DATA (at 23℃)

1) 1 coil latching

Nominal Voltage (VDC)	Pick-up Voltage (VDC) max.[1)]	Drop-out Voltage(VDC) min.[1)]	Max.Voltage (VDC)[2)]	Pulse Duration (ms)		Coil Resistance (Ω)(1±10%)	Coil Power (W)
				Typ	Min		
3	2.4	2.4	6	≥50	30	17	Approx. 0.53
5	4.0	4.0	10	≥50	30	47	
6	4.8	4.8	12	≥50	30	68	
9	7.2	7.2	18	≥50	30	152.8	
12	9.6	9.6	24	≥50	30	271.7	
24	19.2	19.2	48	≥50	30	1086.8	

2) 2 coils latching

Nominal Voltage (VDC)	Pick-up Voltage (VDC) max.[1)]	Drop-out Voltage(VDC) min.[1)]	Max.Voltage (VDC)[2)]	Pulse Duration (ms)		Coil Resistance (Ω)(1±10%)	Coil Power (W)
				Typ	Min		
3	2.4	2.4	6	≥50	30	11.25	Approx. 0.8
5	4.0	4.0	10	≥50	30	31.5	
6	4.8	4.8	12	≥50	30	45	
9	7.2	7.2	18	≥50	30	101.5	
12	9.6	9.6	24	≥50	30	180	
24	19.2	19.2	48	≥50	30	720	

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

2) Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time(≤50ms).

2. CONTACT DATA

Contact Arrangement		1 Form A
Contact Resistance[1)]		100mΩ max. (at 1A 6VDC)
Contact Material		$AgSnO_2$
Contact Ratings (Resistive load)		16A 277VAC
Max. Switching Voltage		480VAC
Max. Switching Current		20A
Max. Switching Power		5540VA
Min. Applicable Load		6V 1A
Life Expectancy	Electrical	50,000 operations
	Mechanical	1,000,000 operations

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

3. CHARACTERISTICS

Insulation Resistance		1000MΩ (at 500VDC)
Dielectric Strength	Open Contacts	1000VAC 1min
	Coil and Contacts	5000VAC 1min
Surge Voltage	Coil and Contacts	8kV(1.2/50μs)
Set Time (at nominal voltage)		10ms max.
Reset Time (at nominal voltage)		10ms max.
Temperature Range		-40℃ ~ 105℃
Shock Resistance	Functional	100m/s^2
	Destructive	1000m/s^2
Vibration Resistance		10 ~ 55Hz 1.5mm DA
Humidity		5 ~ 85% RH
Termination		PCB
Weight		Approx. 5.9g
Construction		Plastic sealed
Outline Dimension (L x W x H)		22 x 10 x 14mm

Notes: The data shown above are initial values.

4. SAFETY APPROVAL

UL / cUL	16A 347VAC General use at 105℃ 16A 277VAC/250VAC/125VAC/120VAC General use at 85℃ 10A 277VAC/250VAC/125VAC/120VAC General use at 85℃ TV-8 240VAC/120VAC at 85℃ 2400W 240VAC Tungsten at 85℃ 1200W 120VAC Tungsten at 85℃ 1HP motor 277VAC/250VAC at 85℃ 3A 120VAC/277VAC Electronic ballast at 85℃ 10A 277VAC Standard ballast at 85℃ 20A 277VAC/250VAC/125VAC/120VAC at 85℃ TV-10 240VAC/120VAC at 85℃ 1/2HP motor 120VAC at 85℃ 8A 120VAC/277VAC Electronic ballast at 85℃ 10A 120VAC Electronic ballast at 85℃

Notes:

1) All values unspecified are at room temperature.

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

3) Suitable for overvoltage category Ⅲ, and shall provide protection for a rated impulse withstand voltage peak of 6kv.

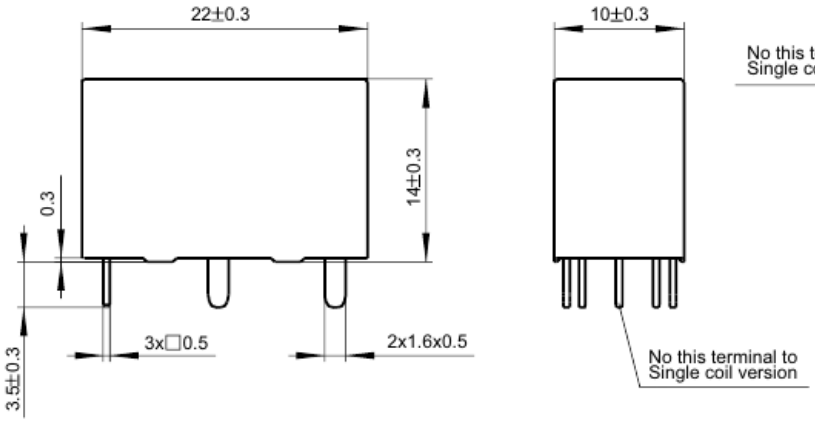
5. ORDERING INFORMATION

LA ①	11 ②	-	12 ③	S ④	L1 ⑤	T ⑥	F ⑦

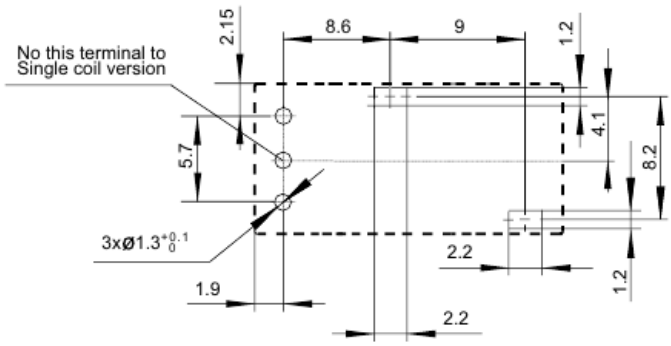
① Relay Model	LA
② Contact Arrangement	11: 1 Form A
③ Coil Voltage	3=3VDC, 5=5VDC, 6=6VDC, 9=9VDC, 12=12VDC, 24=24VDC
④ Construction	S: Sealed type
⑤ Sort	L1: 1 coil latching L2: 2 coils latching
⑥ Contact Material	T: $AgSnO_2$
⑦ Insulation Standard	F: Class F

6. DIMENSIONS (Unit: mm)

Outline Dimensions

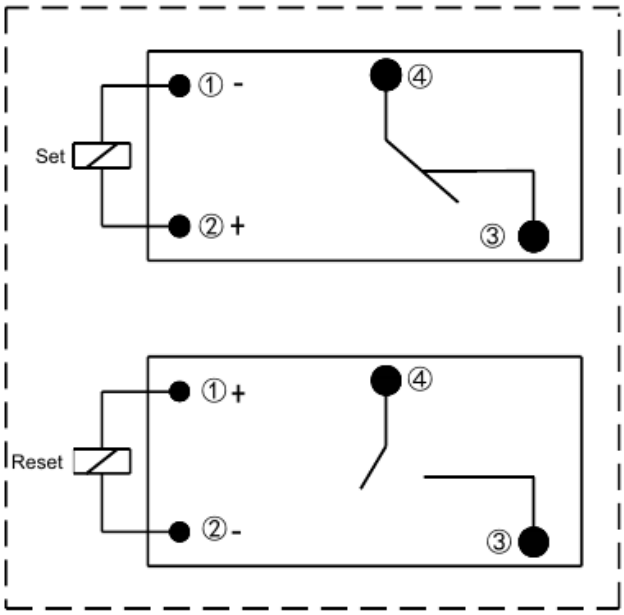


PCB Layout (Bottom view)

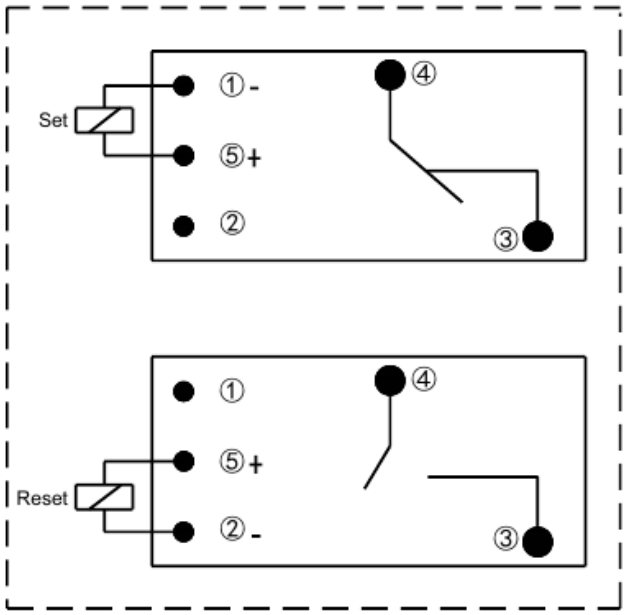


Wiring Diagram (Bottom view)

1 coil latching



2 coils latching



Remark:

1) The pin dimension of the product outline drawing is the size before tinning (It will become larger after tinning), and the mounting hole size is the recommended design size of the PCB board hole. The specific PCB board hole design size can be mapped and adjusted according to the actual product.

2) 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.

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

Notice:

1. Relay is on the “reset” status when being released from stock, with the consideration of shock risen from transit and relay mounting, relay would be changed to “set” or “reset” status, therefore, when application (connecting the power supply), please reset the relay to “set” or “reset” status on request.
2. In order to maintain “set” or “reset” status, energized voltage to coil should reach the rated voltage, impulse width should be 5 times more than “set” or “reset” time. Do not energized voltage to “set” coil and “reset” coil simultaneously. And also long energized time (more than 1 min) should be avoided.
3. Keep the product away from strong magnetic field during transportation, storage and application, to avoid change of set/reset voltage.