

POWER RELAY

1 POLE—8 A Polarized Latching Type

JSL SERIES

RoHS compliant

■ FEATURES

- Small footprint
 - Width: 10mm
 - Height: 12.5mm
- High isolation
 - Insulation distance: 8 mm (between coil and contacts)
 - Dielectric strength: 5,000 VAC (between coil and contacts)
 - Surge strength: 10,000 V (between coil and contacts)
- Plastic materials
 - UL 94 flame class V-0
- Plastic sealed type
- Cadmium free relay
- Lead-free relay
- RoHS compliant - Please see page 7 for more information



■ ORDERING INFORMATION

[Example] JS L D 12 M N — K
 (a) (b) (c) (d) (e) (f) (g)

(a)	Series Name	JSL : JSL Series
(b)	Operating Function	L : Latching type
(c)	Coil Type	Nil : 1 coil D : 2 coils
(d)	Nominal Voltage	Refer to the COIL DATA CHART
(e)	Contact Arrangement	Nil : 1 Form C M : 1 Form A
(f)	Contact Material	N : AgSnO ₂ , Au plated F : AgNi, Au plated D : AgNi
(g)	Sealed Type	Wash tight

PRELIMINARY

JSL SERIES

■ COIL DATA CHART

Coil voltage	1 coil			2 coils		
	Operating Range		Coil resistance (±10%)	Operating Range		Coil resistance (±10%)
	Min. VDC	Max. VDC		Min. VDC	Max.VDC	
5	4 VDC	9 VDC	114 Ω	4 VDC	9 VDC	53 Ω
6	4.8 VDC	10.6 VDC	164 Ω	4.8 VDC	10.6 VDC	75 Ω
9	7.2 VDC	15.9 VDC	368 Ω	7.2 VDC	15.9 VDC	169 Ω
12	9.6 VDC	21.2 VDC	655 Ω	9.6 VDC	21.2 VDC	300 Ω
24	19.2 VDC	42.2 VDC	2,620 Ω	19.2 VDC	42.2 VDC	1,200 Ω

Note : All values in the table are measured at 20°C.

■ SPECIFICATIONS

Item	JSL (1 Coil)	JSL (2 Coils)
Contact	Arrangement	1 Form A, 1 Form C
	Material	Silver alloy
	Configuration	Single
	Resistance (initial)	Max. 100mΩ (at 1A, 6VDC)
	Rating (resistive)	8A 250 VAC / 24 VDC
	Max. carrying current	10A
	Max. switching power	2,000 VA
	Max. switching voltage	400 VAC/ 150 VDC
	Max. switching current	10A
	Min. switching load	100 mA 5 VDC
Coil	Nominal power (at 20°C)	220 mW 480 mW
	Operating temperature (at 20°C)	-40°C to +70°C (no frost)
Time value	Operate	Max. 10 ms (at nominal voltage, without bounce)
	Release (without diode)	Max. 20 ms (at nominal voltage, without bounce)
Life	Mechanical	20x10 ⁶ operations min.
	Electrical	100x10 ³ operations min.
Vibration resistance	Misoperation	10 to 55 Hz at double amplitude of 2mm
	Endurance	10 to 55 Hz at double amplitude of 2mm
Shock resistance	Misoperation	200 m/s ² (11±1 ms)
	Endurance	1,000 m/s ² (6±1 ms)

*1 Minimum switching loads mentioned above are reference values. Please perform the confirmation test with the actual load before production since reference values may vary according to switching frequencies, environmental conditions and expected reliability levels.

■ INSULATION

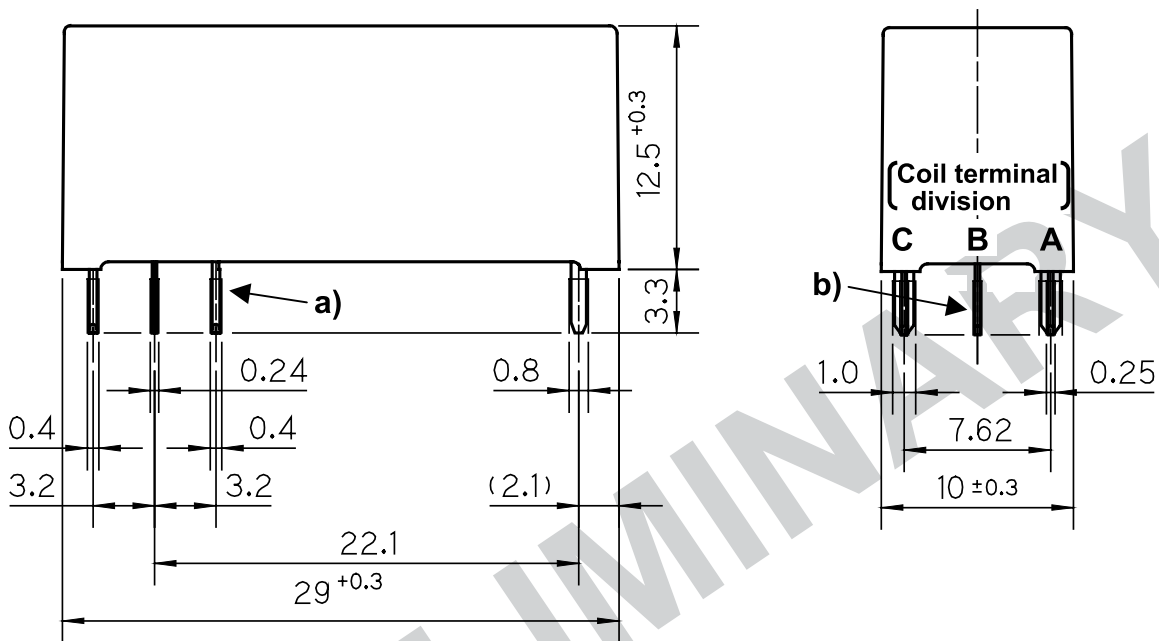
Items		
Resistive (at 500 VDC)	Min. 1,000 MΩ	
Dielectric Strength	Open contacts	1,000 VAC 1 min.
	Coil and contacts	5,000 VAC 1 min.
Surge strength (coil and contacts)	10,000 V (1.2 x 50 μs standard wave)	
Clearance / crepage	8 mm / 8 mm	

■ COIL POLARITY

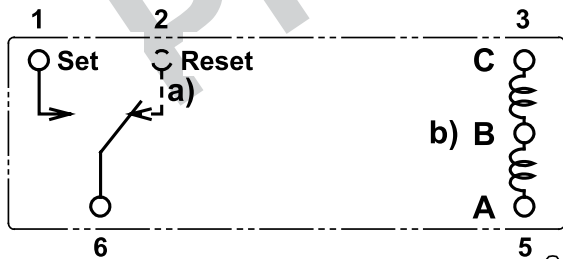
Version	1 coil		2 coils		
Coil terminal division	A	C	A	B	C
Set	+	-	+	-	
Reset	-	+		-	+

■ DIMENSIONS

● Dimensions

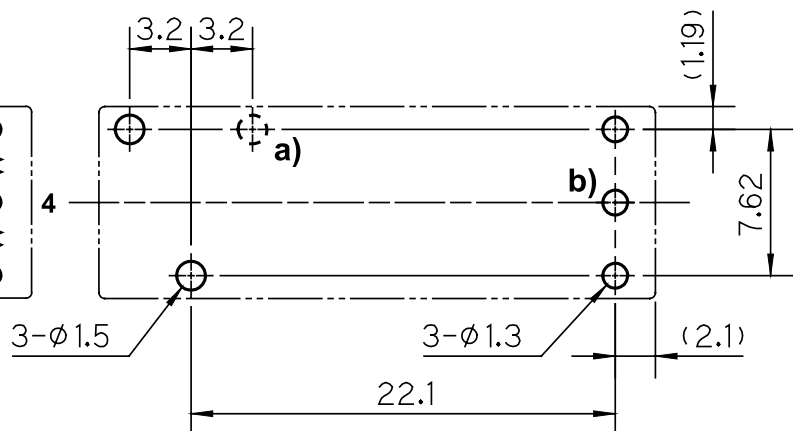


● Schematics (BOTTOM VIEW)



a) for 1 Form C version only
b) for 2 coils version only

● PC board mounting hole layout (BOTTOM VIEW)



Unit: mm

RoHS Compliance and Lead Free Relay Information

1. General Information

- Relays produced after the specific date code that is indicated on each data sheet are lead-free now. All of our signal and power relays are lead-free. Please refer to Lead-Free Status Info. (<http://www.fujitsu.com/us/downloads/MICRO/fcai/relays/lead-free-letter.pdf>)
- Lead free solder paste currently used in relays is Sn-3.0Ag-0.5Cu.
- All signal and power relays also comply with RoHS. Please refer to individual data sheets. Relays that are RoHS compliant do not contain the 5 hazardous materials that are restricted by RoHS directive (lead, mercury, chromium IV, PBB, PBDE).
- It has been verified that using lead-free relays in leaded assembly process will not cause any problems (compatible).
- "LF" is marked on each outer and inner carton. (No marking on individual relays).
- To avoid leaded relays (for lead-free sample, etc.) please consult with area sales office.
- We will ship leaded relays as long as the leaded relay inventory exists.

Note: Cadmium was exempted from RoHS on October 21, 2005. (Amendment to Directive 2002/95/EC)

2. Recommended Lead Free Solder Profile

- Recommended solder paste Sn-3.0Ag-0.5Cu.

Reflow Solder condition

Flow Solder condition:

Pre-heating: maximum 120°C
Soldering: dip within 5 sec. at
260°C solder bath

Solder by Soldering Iron:

Soldering Iron
Temperature: maximum 360°C
Duration: maximum 3 sec.

We highly recommend that you confirm your actual solder conditions

3. Moisture Sensitivity

- Moisture Sensitivity Level standard is not applicable to electromechanical relays.

4. Tin Whisker

- Dipped SnAgCu solder is known as low risk tin whisker. No considerable length whisker was found by our in house test.

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PRELIMINARY