FUJITSU

POWER RELAY
1 POLE - 8A Polarized Latching Type
JSL Series

■ FEATURES

- Small footprint
  - Width: 10mm
  - Height: 12.5mm
- High insulation
  - 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 5 for more information

■ PARTNUMBER INFORMATION

[Example] JSL (a) D (b) 12 (c) M (d) N (e) - K (f)

(a)	Relay type	JSL	:JSL-Series
(b)	Coil type	Nil D	: 1 coil : 2 coils
(c)	Coil rated voltage	12	: 3.....24 VDC Coil rating table at page 3
(d)	Contact configuration	Nil M	: 1 form C : 1 form A
(e)	Contact material	N	: $AgSnO_2$, Au plated
(f)	Sealed type	K	: Wash tight

■ SPECIFICATION

Item			JSL (1 coil)	JSL (2 coils)
Contact Data	Configuration		1 form A, 1 form C	
	Construction		Single	
	Material		$AgSnO_2$ + Au plated	
	Resistance (initial)		Max. 100 mΩ at 6VDC, 1A	
	Contact rating (at resistive load)		8A, 250VAC / 24VDC	
	Max. carrying current		10A	
	Max. switching voltage		400VAC / 150VDC	
	Max. switching power		2,000VA / 192W	
	Max. switching current		10A	
	Min. switching load *		100 mA, 5 VDC	
Life	Mechanical		Min. 5 x 10^6 operations	
	Electrical		Min. 50 x 10^3 operations	
Coil Data	Rated power (at 20 °C)		220mW (24V coil, 250mW)	480mW
	Operating temperature range		-40 °C to +70 °C (no frost)	
Timing Data	Set / reset (at nominal coil voltage)		Max. 10ms (no bounce included)	
	Exitation time (at nominal coil voltage)		Min. 20ms	
Insulation	Resistance (initial)		Min. 1,000MOhm at 500VDC	
	Dielectric strength	Open contacts	1,000VAC (50/60Hz) 1min	
		Contacts to coil	5,000VAC (50/60Hz) 1min	
	Surge strength	Coil to contacts	10,000V / 1.2 x 50µs standard wave	
	Clearance		8 mm	
	Creepage		8 mm	
Other	Vibration resistance	Misoperation>1us	10 to 55Hz double amplitude 2 mm	
		Endurance	10 to 55Hz double amplitude 3 mm	
	Shock	Misoperation>1us	Min. 200m/s² (11 ± 1ms)	
		Endurance	Min. 1,000m/s² (6 ± 1ms)	
	Weight		Approximately 8 g	

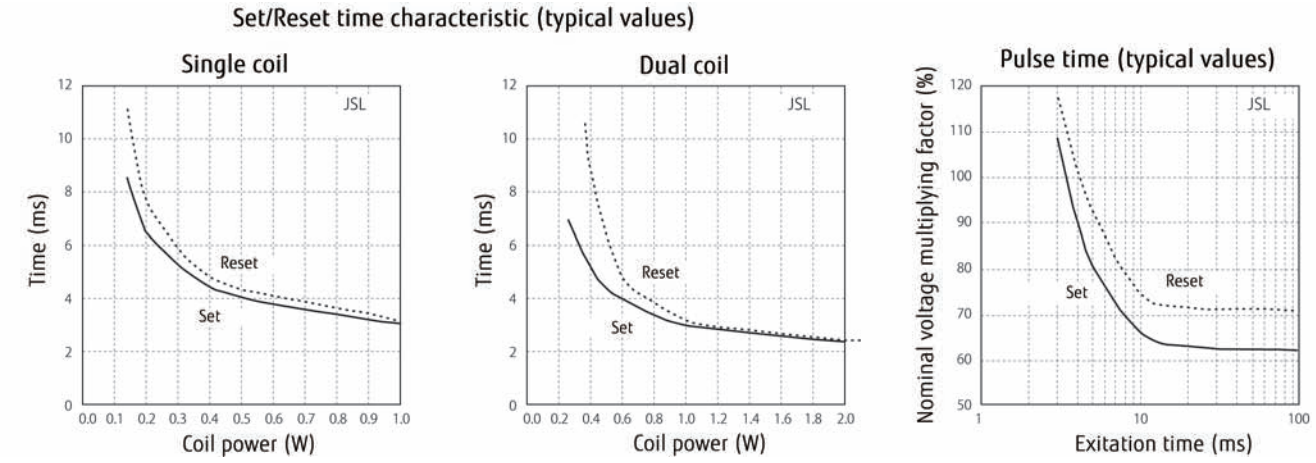
* Minimum switching loads mentioned above are reference values. Please perform the confirmation test with actual load before production since reference values may vary according to switching frequencies, environmental conditions and expected reliability levels.

■ COIL RATING

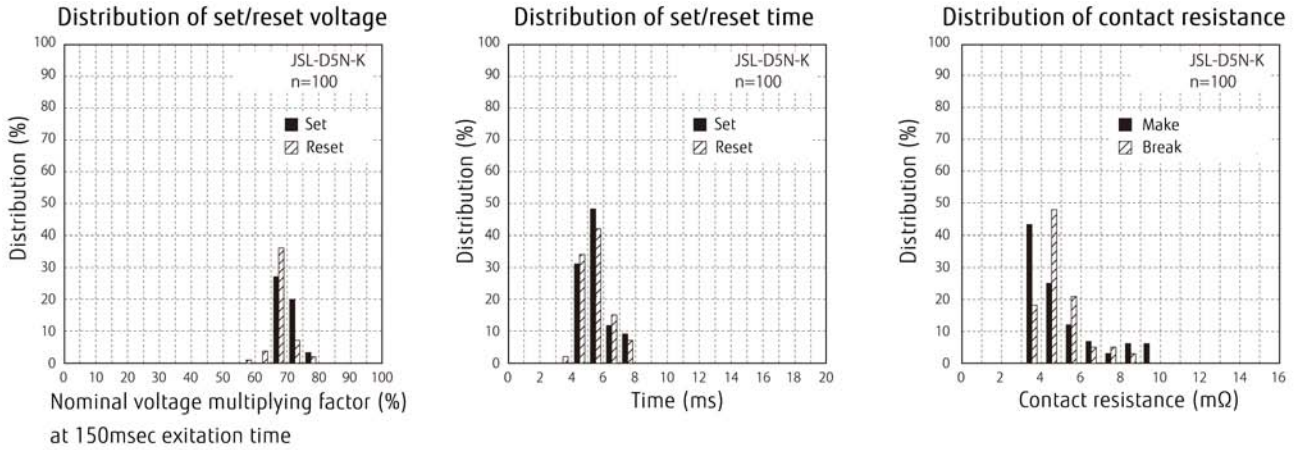
Coil Code	1 coil			2 coils		
	Operating range		Coil Resistance +/- 10% (Ohm)	Operating range		Coil Resistance +/- 10% (Ohm)
	Min. VDC	Max. VDC		Min. VDC	Max. VDC	
3	2.4	5.4	41	2.4	5.4	19
5	4	9	114	4	9	53
6	4.8	10.6	164	4.8	10.6	75
9	7.2	15.9	368	7.2	15.9	169
12	9.6	21.2	655	9.6	21.2	300
24	19.2	42.2	2,304	19.2	42.2	1,200

Note: All values in the table are valid for 20°C and zero contact current.
* Specified operate values are valid for pulse wave voltage.

■ CHARACTERISTIC DATA



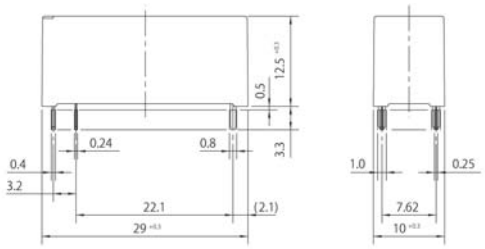
■ REFERENCE DATA



■ DIMENSIONS Unit: mm +/- = Set, (+)/(-) = Reset

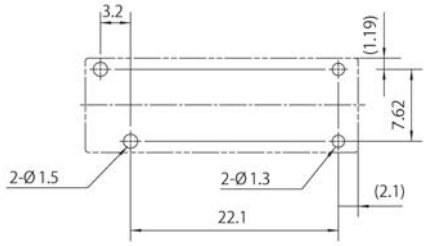
JSL-M type

- **Dimensions**



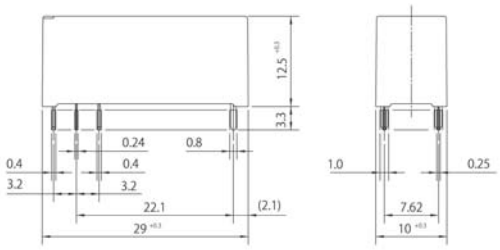
- **Schematics** (BOTTOM VIEW)

- **PC board mounting hole layout** (BOTTOM VIEW)

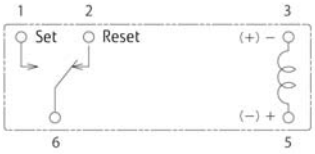


JSL type

- **Dimensions**



- **Schematics** (BOTTOM VIEW)



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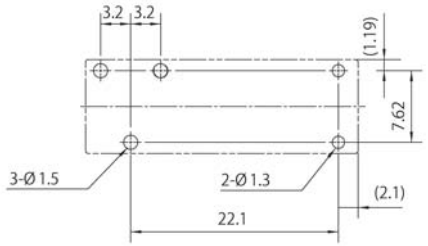
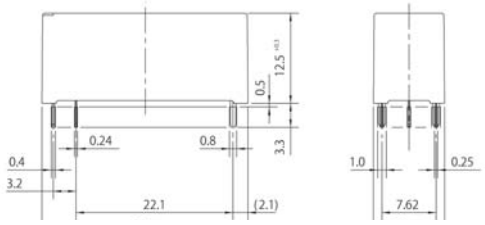


JSL-DM type

- **Dimensions**



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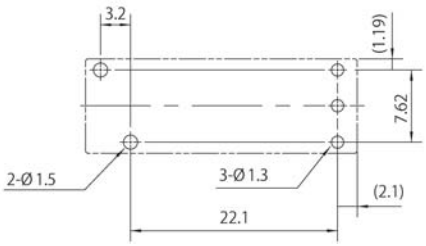
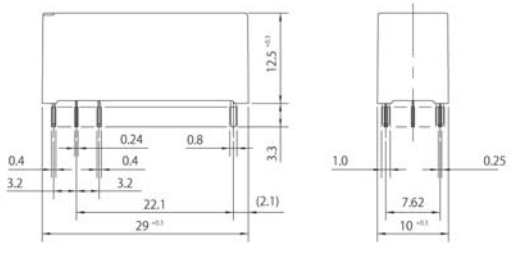
- **PC board mounting hole layout** (BOTTOM VIEW)



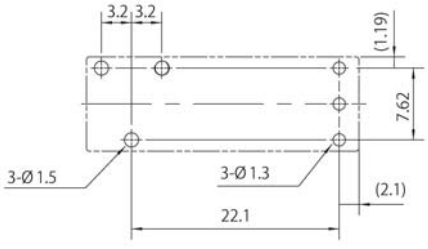
JSL-D type

- **Dimensions**



- **Schematics** (BOTTOM VIEW)

- **PC board mounting hole layout** (BOTTOM VIEW)



RoHS Compliance and Lead Free Information

1. General Information

- All signal and power relays produced by Fujitsu Components are compliant with RoHS directive 2002/95EC including amendments.
- Cadmium as used in electrical contacts is exempted from the RoHS directives on October 21st, 2005. (Amendment to Directive 2002/95/EC)
- All of our signal and power relays are lead-free. Please refer to Lead-Free Status Info for older date codes at: http://www.fujitsu.com/us/downloads/MICRO/fcai/relays/lead-free-letter.pdf
- Lead free solder plating on relay terminals is Sn-3.0Ag-0.5Cu, unless otherwise specified. This material has been verified to be compatible with PbSn assembly process.

2. Recommended Lead Free Solder Profile

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

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, unless otherwise indicated.

4. Tin Whiskers

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

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