

POWER RELAY

1 POLE – 8A Polarized Latching Type

JSL Series

■ FEATURES

- Small footprint
Width: 10mm
Height: 12.5mm
- High insulation
Insulation distance : 8.0 mm (between coil and contacts)
Dielectric strength : 5,000 VAC
Surge strength : 10,000 V
- Plastic materials
UL 94 flame class V-0
- RoHS compliant



■ PARTNUMBER INFORMATION

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

(a)	Relay type	JSL	: JSL Series
(b)	Coil type	Nil D	: 1 coil : 2 coils
(c)	Coil rated voltage	12	: 3...24VDC See coil rating table
(d)	Contact configuration	Nil M	: 1 form C : 1 form A
(e)	Contact material	N	: AgSnO ₂ , Au plated
(f)	Sealed type	K	: Plastic sealed type

Note: Actual marking omits the hyphen (-) or (*)

JSL Series

■ SPECIFICATIONS

Item		JSL (1 coil)	JSL-D (2 coils)	Remarks / conditions
Contact data	Configuration	1 form A, 1 form C		
	Construction	Single		
	Material	AgSnO ₂ + Au plated		
	Resistance	Max.100mΩ at 6VDC, 1A		
	Contact rating	8A, 250VAC / 24VDC		Resistive
	Max. carrying current	10A		
	Max. switching voltage	400VAC / 150VDC		
	Max. switching power	2000VA / 192W		
	Max. switching current	10A		
	Min. switching load *1	100 mA, 5VDC		
Coil data	Rated power (20°C)	220 - 290mW	480mW	
	Operating temperature range	-40°C ~ +85°C (at rated voltage)		No frost
Timing data	Set / reset (at nominal coil voltage)	Max. 10ms		Without bounce, no diode
	Applied pulse width	20ms to 1000ms		
Life	Mechanical	Min. 5 x 10 ⁶ operations		
	Electrical (resistive)	Min. 50 x 10 ³ operations		At rated load
Insulation	Insulation Resistance		Min. 1000MΩ at 500VDC	
	Dielectric strength	Open contacts	1000VAC (50/60Hz), 1 minute	
		Coil to contacts	5000VAC (50/60Hz), 1 minute	
	Surge strength	Coil to contacts	10000V / 1.2 x 50μs standard wave	
Clearance / creepage		8mm / 8mm		
Others	Vibration resistance	Misoperation	10Hz ~ 55Hz ~ 10Hz single amplitude 1mm	
		Endurance	10Hz ~ 55Hz ~ 10Hz single amplitude 1.5mm	
	Shock resistance	Misoperation	Min. 100m/s ² (11 ± 1ms)	
		Endurance	Min. 1,000m/s ² (6 ± 1ms)	
	Dimensions / weight		10.0 x 29.0 x 12.5 mm / approx. 8.0g	
	Sealing		Plastic sealed	

*1: 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.

JSL Series

■ COIL DATA

Coil Code	1 coil			2 coils		
	Operating range		Coil Resistance ± 10% (Ω)	Operating range		Coil Resistance ± 10% (Ω)
	Min. VDC	Max. VDC		Min. VDC	Max. VDC	
003	2.4	5.4	41	2.4	5.4	19
005	4	9	114	4	9	53
012	9.6	21.2	655	9.6	21.2	300
024	19.2	42.2	2,304	19.2	42.2	1,200

Note: All values in the table are valid at 20°C and zero contact current, unless otherwise specified.

*: Specified operated values are valid for pulse wave voltage.

Note: Please use at rated coil voltage. Please refer to characteristic data and set up adequate voltage in case of use at over voltage. Care shall be taken on the heat generated on PC board when maximum carrying current exceeds 10A. Please perform the confirmation test with actual conditions.

■ SAFETY STANDARDS

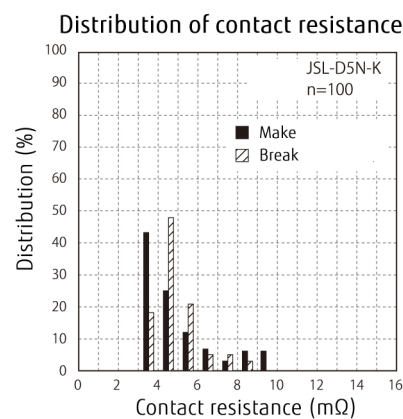
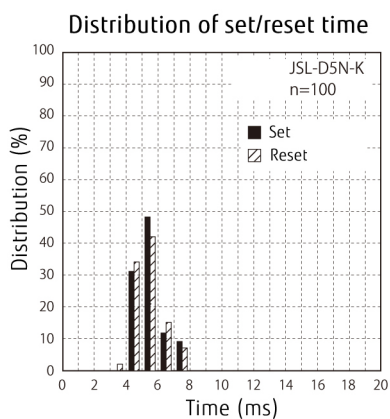
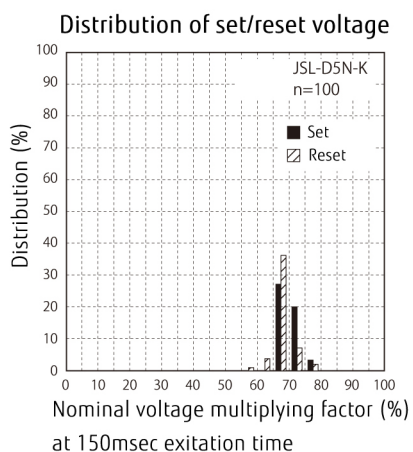
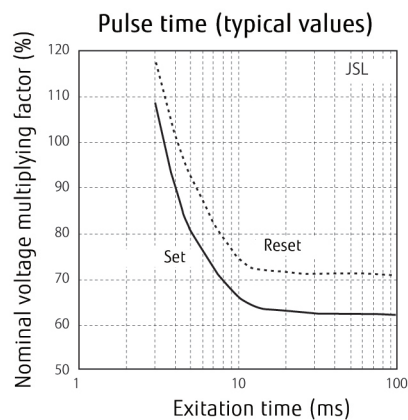
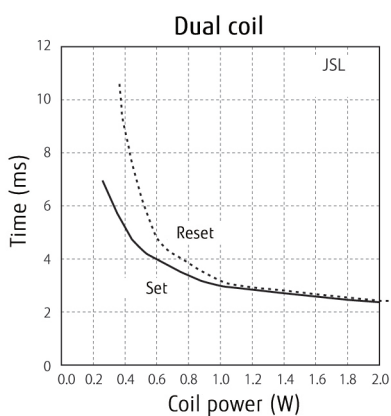
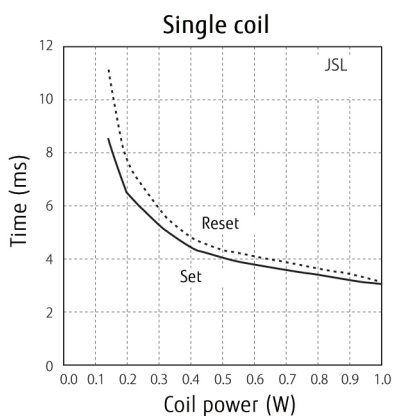
Type	Compliance	Contact rating
UL	UL 508 File No. E63614	Flammability: UL 94-V0 (plastics)
		8A, 24 VDC (resistive) 8A, 250VAC (resistive)
CSA	C22.2 No. 14 File No. LR 40304	
VDE	IEC/EN61810-1 EN60335-1 clause 15.3; 16.3; 29.1; 29.2; 29.3 EN60730-1 clause 12.2; 13.2; 20.1; 20.2; 20.3; 17.5; 17.7; 17.8 EN60974-1 Appendix C	8A, 24VDC (0ms) 8A, 250VAC (cosφ=1)

JSL Series

■ CHARACTERISTIC DATA

(Characteristic data is not guaranteed value but measured values of samples from production line.)

Set/Reset time characteristic (typical values)



■ REFERENCE DATA

Version	1 coil		2 coil		
Terminal No.	3	5	3	4	5
Set	-	+		-	+
Reset	+	-	+	-	

CAUTIONS

- All values mentioned in this datasheet are provided under ideal conditions. Please perform the confirmation test before actual use.
- Reflow soldering is prohibited.
- Do not use relays in the atmosphere with sulfide gas, chloride gas or nitric oxide. Contact resistance may increase.
- Do not use silicon or silicon-containing product or materials near relays. It may cause contact failure.

Notes for latching relays

- Latching relays are shipped in the state set, but state may change due to shock during transportation or mounting. Before using the relays, it is advisable to bring the relays in necessary state (set or reset) and program a circuit sequence. Otherwise, it will or will not operate simultaneously with power activation.
- Please connect relay coils according to specified polarity.
- Do not apply voltage to both set coil and reset coil at a time.

GENERAL INFORMATION

1. ROHS Compliance

- All relays produced by FCL Components are compliant with RoHS directive 2011/65/EU, including commission delegated directive 2015/863.

2. Recommended lead free solder condition

- 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.
- Recommended solder for assembly: Sn-3.0Ag-0.5Cu.

Flow Solder Condition:

Pre-Heating: Maximum 120°C
within 90 sec.
Soldering: Dip within 5 sec. at 255°C±5°C solder bath

Relay must be cooled by air immediately after soldering

Solder by Soldering Iron:

Soldering Iron: 30-60W
Temperature: Maximum 340-360°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.

Contact

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