

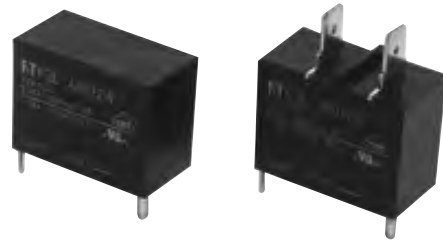
# POWER RELAY

## 1 POLE - 25A Latching Relay

### FTR-K3L Series

#### ■ FEATURES

- 1 pole, 25A, 1 form A
- 2 coils latching type
- High insulation (between coil and contacts)  
 Insulation distance:  
 clearance min. 6.4mm  
 creepage min. 9.5mm  
 Dielectric strength: 5,000VAC  
 Surge strength: 8,500V
- Cadmium free contact for eco-program
- Plastic materials  
 - UL 94 flame class V-0
- Flux proof, RT II
- RoHS compliant  
 Please see page 5 for more information



#### ■ PARTNUMBER INFORMATION

[Example]     FTR-K3L    A    B    012    W  
                   (a)    (b)   (c)   (d)   (e)

(a)	Relay type	FTR-K3L : FTR-K3L-Series
(b)	Contact configuration	A : 1 form A / PCB type J : 1 form A / Tab type
(c)	Coil power	B : Standard sensitive(0.9W)
(d)	Coil rated voltage	012 : 5.....24 VDC Coil rating table at page 3
(e)	Contact material	W : AgSnO <sub>2</sub>

Actual marking does not carry the type name : "FTR"  
 E.g.: Ordering code: FTR-K3LAB012W    Actual marking: K3LAB012W

# FTR-K3L SERIES

## ■ SPECIFICATION

Item			FTR-K3L
Contact Data	Configuration		1 form A
	Construction		Single
	Material		Silver tin oxide (AgSnO <sub>2</sub> )
	Resistance (initial)		Max. 100 mΩ at 6VDC, 1A
	Contact rating (resistive)		25A, 250VAC
	Max. carrying current		30A
	Max. switching voltage		250VAC
	Max. switching power		6,250VA
	Max. switching current		25A
	Min. switching load *		100mA, 5VDC
Life	Mechanical		Min. 1 x 10 <sup>6</sup> operations
	Electrical (resistive)		25A, 250VAC, min. 100 x 10 <sup>3</sup> operations
Coil Data	Rated power (at 20 °C)		900mW
	Operating temperature range		-40 °C to +85 °C (no frost)
Timing Data	Set (at nominal voltage)		Max. 20ms (without bounce, without diode)
	Reset (at nominal voltage)		Max. 20ms (without bounce, without diode)
	Coil excitation time (at nominal voltage)		Min. 30ms, max. 1,000ms
Insulation	Resistance		Min. 1,000MΩ at 500VDC
	Dielectric strength	Open contacts	1,000VAC (50/60Hz) 1min
		Coil to contacts	5,000VAC (50/60Hz) 1min
	Surge strength	Coil to contacts	8,500V / 1.2 x 50μs standard wave
	Clearance		6.4mm
Creepage		9.5mm	
Other	Vibration resistance	Misoperation	10 to 55Hz double amplitude 1.5mm
		Endurance	10 to 55Hz double amplitude 1.5mm
	Shock	Misoperation	Min. 200m/s <sup>2</sup> (11 ± 1ms)
		Endurance	Min. 1,000m/s <sup>2</sup> (6 ± 1ms)
	Weight		Approximately 25 g
Sealing		Flux proof RT II	

\* 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	Rated Coil Voltage (VDC)	Coil Resistance +/- 10% (Ohm)	Set/Reset Voltage		Rated Power (mW)
			Min. (VDC) *	Max. (VDC) *	
005	5	28	4.0	9.0	900
012	12	160	9.6	21.6	
024	24	640	19.2	43.2	

Note: All values in the tables are valid for 20°C and zero contact current.

\* Specified operate values are valid for pulse wave voltage.

## ■ SAFETY STANDARDS

Type	Compliance	Contact rating
UL	UL 508	Flammability: UL 94-V0 (plastics)
		25A, 277VAC
VDE	0435	25A, 250VAC, 60°C

## ■ COIL POLARITY

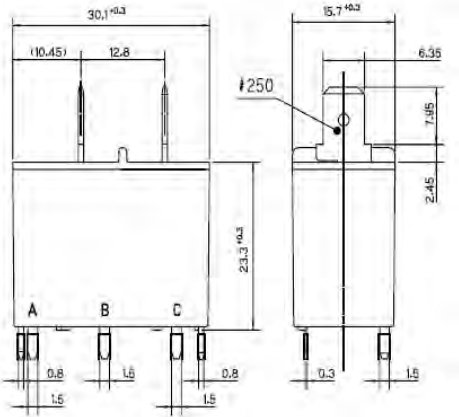
See schematics at page 4.

Coil terminal	A	B	C
Set	-	+	
Reset		+	-

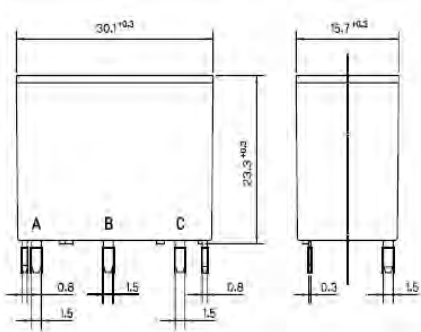
■ DIMENSIONS

● Dimensions

Type J



Type A

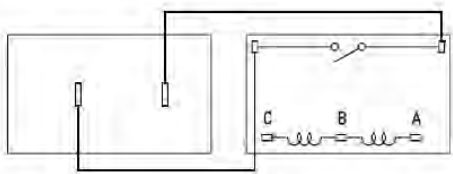


● Schematics

Type J

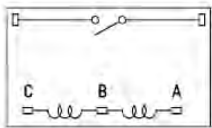
TOP VIEW

BOTTOM VIEW

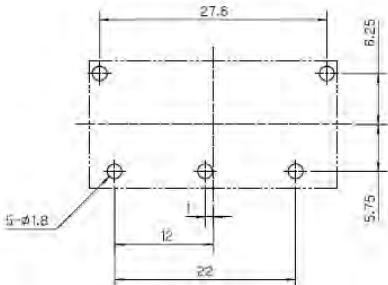


Type A

BOTTOM VIEW



● PC board mounting hole layout (BOTTOM VIEW)



Unit: mm

## RoHS Compliance and Lead Free Information

### 1. General Information

- All relays produced by Fujitsu Components are compliant with RoHS directive 2011/65/EU including amendments.
- Cadmium as used in electrical contacts is exempted from the RoHS directives.  
As per Annex III of directive 2011/65/EU.
- All relays are lead-free. Please refer to Lead-Free Status Info for older date codes at:  
<http://www.fujitsu.com/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 Condition

- Recommended solder Sn-3.0Ag-0.5Cu.

#### Flow Solder Condition:

Pre-heating: maximum 120°C  
within 9 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 350-360°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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