Preliminary

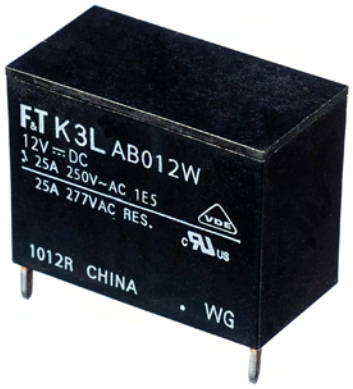
New relay, production not started,
engineering samples available

FUJITSU

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, cat II
- RoHS compliant
  Please see page 5 for more information



■ PARTNUMBER INFORMATION

[Example] FTR-K3 (a) L (b) A (c) B (d) 012 (e) W (f)

(a)	Relay type	FTR-K3 : FTR-K3 Series
(b)	Operating function	L : Latching type
(c)	Contact configuration	A : 1 form A / PCB type J : 1 form A / Tab type
(d)	Coil power	B : Standard sensitive (0.9W)
(e)	Coil rated voltage	012 : 5.....24VDC Coil rating table at page 3
(d)	Contact material	W : $AgSnO_2$

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

■ SPECIFICATION

Item			FTR-K3L
Contact Data	Configuration		1 form A
	Construction		Single
	Material		Silver tin oxide ($AgSnO_2$)
	Resistance (initial)		Max. 100 mOhm 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 10^6 operations
	Electrical		25A, 250VAC, min. 100 x 10^3 operations
Coil Data	Rated power (at 20 °C)		900mW
	Operating temperature range		-40 °C to +60 °C (no frost)
Timing Data	Set (at nominal voltage)		Max. 20ms (without bounce)
	Reset (at nominal voltage)		Max. 20ms (without bounce)
	Coil excitation time (at nominal voltage)		Min. 30ms
Insulation	Resistance (initial)		Min. 1,000MOhm at 500VDC
	Dielectric strength	Between contacts	1,000VAC (50/60Hz) 1min
		Between 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>1us	10 to 55Hz double amplitude 1.5mm
		Endurance	10 to 55Hz double amplitude 1.5mm
	Shock	Misoperation>1us	Min. 200m/s² (11 ± 1ms)
		Endurance	Min. 1,000m/s² (6 ± 1ms)
	Weight		Approximately 25 g
	Sealing		Flux proof cat 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 contions 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, 60ºC

■ COIL POLARITY

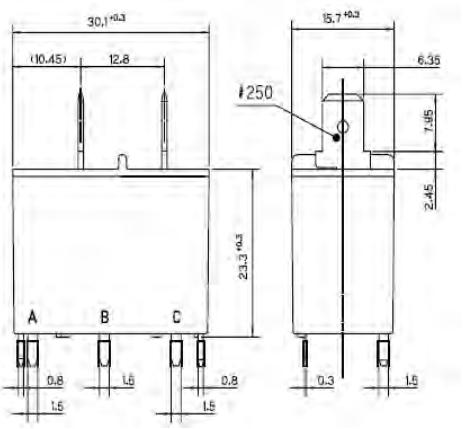
See schematics at page 4.

Coil terminal	A	B	C
Set	-	+	
Reset		+	-

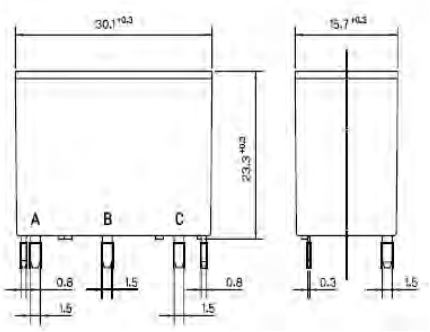
■ DIMENSIONS

- **External dimensions**

Type J



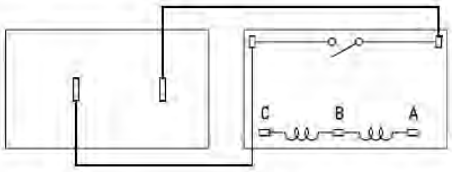
Type A



- **Schematics**

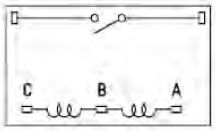
Type J

TOP VIEW BOTTOM VIEW

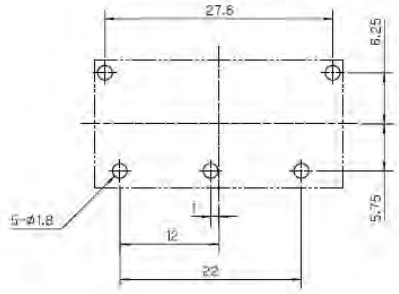


Type A

BOTTOM VIEW



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



Unit: mm

RoHS Compliance and Lead Free Information

1. General Information

- All 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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