

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 L A B 012 W
 (a) (b) (c) (d) (e) (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/s ² (11 ± 1ms) |
| | | Endurance | Min. 1,000m/s ² (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 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**

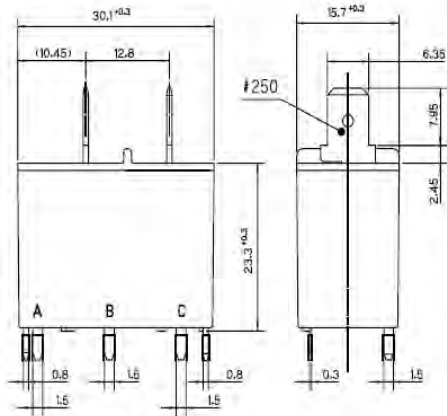
See schematics at page 4.

| Coil terminal | A | B | C |
|---------------|---|---|---|
| Set | - | + | |
| Reset | | + | - |

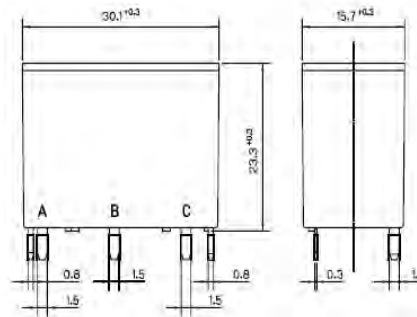
■ DIMENSIONS

● External dimensions

Type J



Type A

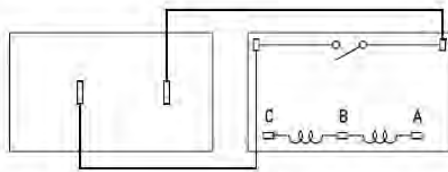


● Schematics

Type J

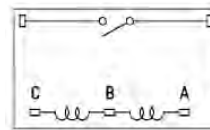
TOP VIEW

BOTTOM VIEW

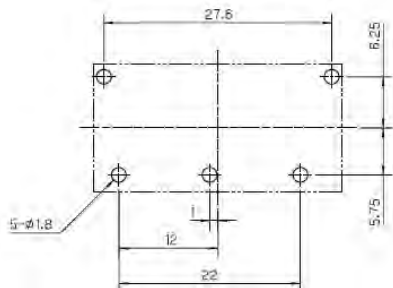


Type A

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 2002/95/EC 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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| | |
|--|---|
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- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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