

POWER RELAY

1 POLE - 25A - Latching relay

FTR-K3L-WG Series

■ FEATURES

- 1 pole, 25A
- 2 coils latching type
- 1 Form A
- Contact gap 1.5mm
2.5kV surge breakdown voltage
Compliance with European photovoltaic standard (VDE0126)
- High insulation in small package (between coil and contact)
 - Insulation distance: Clearance > 6.4mm
Creepage > 9.5mm
 - Dielectric strength: 5,000VAC
 - Surge strength: 8,500V
- Flammability UL94V-0 (plastics)
- RoHS compliant
Please see page 6 for more information
Contains no lead and features cadmium-free contacts



■ PARTNUMBER INFORMATION

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

| | | |
|-----|-----------------------|---|
| (a) | Relay type | FTR-K3L : FTR-K3L-Series |
| (b) | Contact configuration | A : 1 form A |
| (c) | Coil type | B : Standard sensitive (900mW) |
| (d) | Coil rated voltage | 012 : 5.....24 VDC Coil rating table at page 3 |
| (e) | Contact material | W : Silver alloy |
| (f) | Version | WG : Contact gap 1.5mm |

Actual marking does not carry the type name : "FTR"

E.g.: Ordering code: FTR-K3LAB012W-WG

Actual marking: K3LAB012W-WG

FTR-K3L-WG SERIES

■ SPECIFICATION

| Item | | | FTR-K3L-WG |
|--------------|---|----------------------|---|
| Contact Data | Configuration | | 1 form A (contact gap 1.5mm) |
| | Material | | Silver alloy |
| | Resistance (initial) | | Max. 100mΩ at 1A, 6VDC |
| | Contact rating | | 25A / 250VAC (resistive) |
| | Max. carrying current | | 30A |
| | Max. switching power | | 6,250VA |
| | Max. switching voltage | | 250VAC |
| | Max. switching current | | 25A |
| | Min. switching load (reference) | | 100mA, 5VDC |
| Life | Mechanical | | Min. 1 x 10 ⁶ operations |
| | Electrical | Resistive | 25A, 250VAC, 100 x 10 ³ operations |
| | | Inductive | 25A, 250VAC (cosφ 0.8), 30 x 10 ³ operations |
| | | Inductive (overload) | 37.5A, 250VAC (cosφ 0.8), 50 operations |
| Coil Data | Rated power (at 20 °C) | | 900mW |
| | Operating temperature range (no frost) | | -40 °C to +85 °C |
| 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, max. 1000ms |
| Insulation | Contact gap | | Min. 1.5 mm |
| | Resistance | | Min. 1,000MΩ at 500VDC |
| | Dielectric strength | Open contacts | 2,500VAC, 1 min. |
| | | Coil and contacts | 5,000VAC, 1 min. |
| | Surge strength | Coil to contacts | 8,500V/ 1.2 x 50μs standard wave |
| | Creepage | | 6.4mm |
| | Clearance | | 9.5mm |
| Other | Vibration resistance | Misoperation | 10 to 55Hz double amplitude 1.5 mm |
| | | Endurance | 10 to 55Hz double amplitude 1.5 mm |
| | Shock resistance | Misoperation | Min. 200m/s ² (11 ± 1ms) |
| | | Endurance | Min. 1,000m/s ² (6 ± 1ms) |
| | Weight | | Approximately 25 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.

FTR-K3L-WG SERIES

■ COIL RATING

| Coil Code | Rated Coil Voltage (VDC) | Coil Resistance +/- 10% (Ohm) | Must Set Voltage (VDC)* | Must Reset Voltage (VDC) * | Max. Set/Reset Voltage (VDC) | Rated Power (mW) |
|-----------|--------------------------|-------------------------------|-------------------------|----------------------------|------------------------------|------------------|
| 005 | 5 | P 28 | +4.0 | - | 9.0 | 900 |
| | | S 28 | - | +4.0 | | |
| 006 | 6 | P 40 | +5.4 | - | 10.8 | |
| | | S 40 | - | +5.4 | | |
| 012 | 12 | P 160 | +9.6 | - | 21.6 | |
| | | S 160 | - | +9.6 | | |
| 024 | 24 | P 640 | +19.2 | - | 43.2 | |
| | | S 640 | - | +19.2 | | |

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

P: Set coil S: Reset coil

■ SAFETY STANDARDS

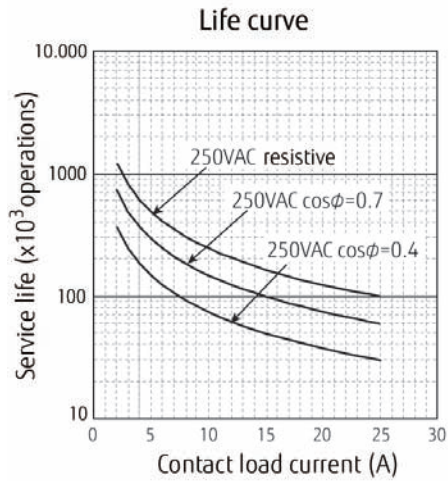
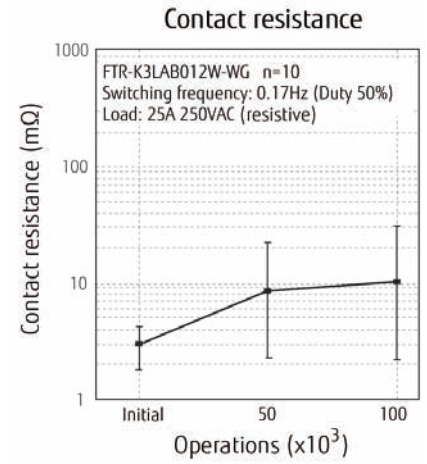
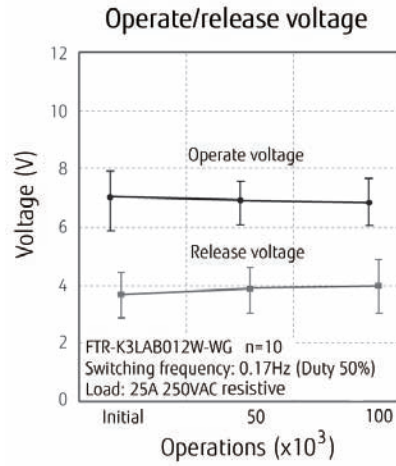
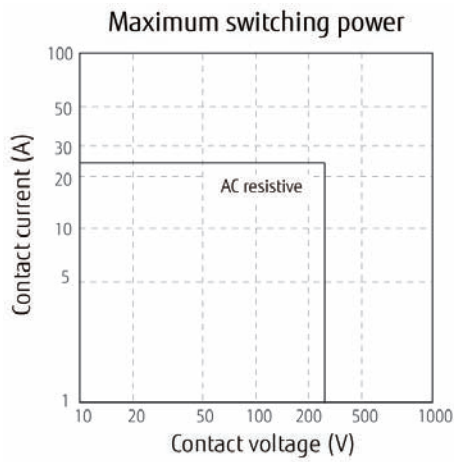
| Type | Compliance | Contact rating |
|------|---------------------------|-----------------------------------|
| UL | UL 508 | Flammability: UL 94-V0 (plastics) |
| | CSA 22.2 No.14 (by cULus) | 25A, 277VAC (resistive, at 60°C) |
| VDE | IEC61810-1 | 25A, 250VAC, (cosφ=1) at 60°C |

FTR-K3L-WG SERIES

CHARACTERISTIC DATA

The graphs are based on measurement data and are typical values.

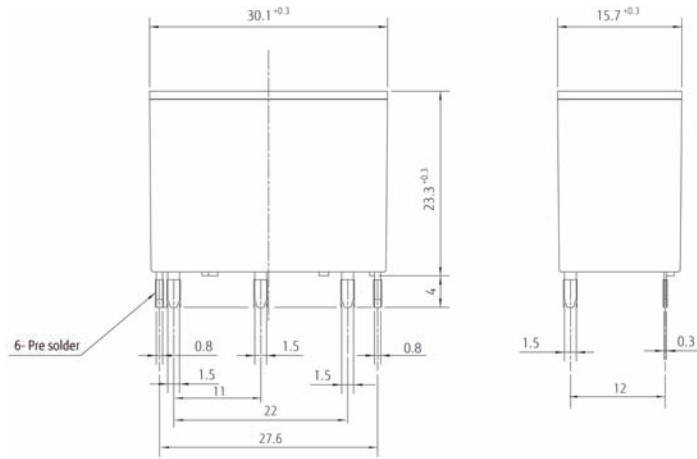
Electrical life tests (resistive load)



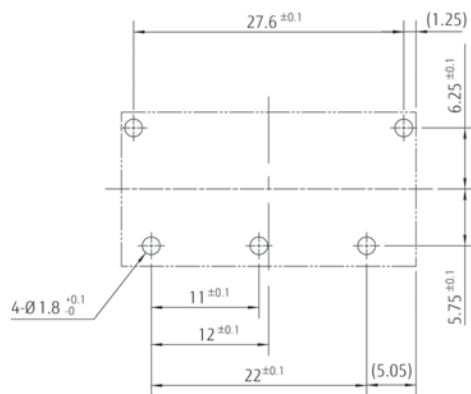
FTR-K3L-WG SERIES

■ DIMENSIONS

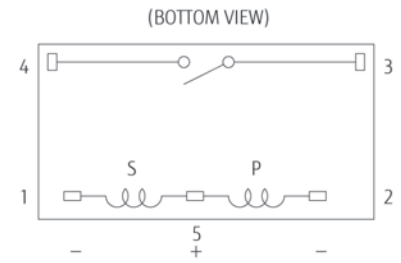
● Dimensions



● PC board mounting hole layout (BOTTOM VIEW)



● Schematics



P: Set coil
S: Reset coil

Contacts drawn in reset condition.

To operate (set), apply (+) to pin 5 and (-) to pin 2.
To release (reset), apply (+) to pin 5 and (-) to pin 1.

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.

Fujitsu Components International Headquarter Offices

Japan

Fujitsu Component Limited
Gotanda-Chuo Building
3-5, Higashigotanda 2-chome, Shinagawa-ku
Tokyo 141, Japan
Tel: (81-3) 5449-7010
Fax: (81-3) 5449-2626
Email: promothq@ft.ed.fujitsu.com
Web: www.fcl.fujitsu.com

North and South America

Fujitsu Components America, Inc.
250 E. Caribbean Drive
Sunnyvale, CA 94089 U.S.A.
Tel: (1-408) 745-4900
Fax: (1-408) 745-4970
Email: components@us.fujitsu.com
Web: <http://us.fujitsu.com/components>

Europe

Fujitsu Components Europe B.V.
Diamantlaan 25
2132 WV Hoofddorp
Netherlands
Tel: (31-23) 5560910
Fax: (31-23) 5560950
Email: info@fceu.fujitsu.com
Web: emea.fujitsu.com/components/

Asia Pacific

Fujitsu Components Asia Ltd.
102E Pasir Panjang Road
#01-01 Citilink Warehouse Complex
Singapore 118529
Tel: (65) 6375-8560
Fax: (65) 6273-3021
Email: fcal@fcal.fujitsu.com
Web: <http://www.fujitsu.com/sg/services/micro/components/>

©2011 Fujitsu Components Europe B.V. All rights reserved. All trademarks or registered trademarks are the property of their respective owners.

The contents, data and information in this datasheet are provided by Fujitsu Component Ltd. as a service only to its user and only for general information purposes.

The use of the contents, data and information provided in this datasheet is at the users' own risk.

Fujitsu has assembled this datasheet with care and will endeavor to keep the contents, data and information correct, accurate, comprehensive, complete and up to date.

Fujitsu Components Europe B.V. and affiliated companies do however not accept any responsibility or liability on their behalf, nor on behalf of its employees, for any loss or damage, direct, indirect or consequential, with respect to this datasheet, its contents, data, and information and related graphics and the correctness, reliability, accuracy, comprehensiveness, usefulness, availability and completeness thereof.

Nor do Fujitsu Components Europe B.V. and affiliated companies accept on their behalf, nor on behalf of its employees, any responsibility or liability for any representation or warrant of any kind, express or implied, including warranties of any kind for merchantability or fitness for particular use, with respect to these datasheets, its contents, data, information and related graphics and the correctness, reliability, accuracy, comprehensiveness, usefulness, availability and completeness thereof. Rev. August 11, 2011

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкуренеспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: org@lifeelectronics.ru