

POWER RELAY

1 POLE - 5A Slim Power Relay

FTR-MY Series

■ FEATURES

- Width 5mm, height 12mm (31% smaller than NY series)
area 100 mm², super slim , low power, compact and light weight 2.5gr.
- Nominal power: 110mW (8% less than NY series),
Operate power: 54mW
High sensitive
- High reliable contacts, bifurcated gold overlay silver alloy (cadmium free)
- Complies with IEC 61010, 61131
- Dielectric strength: 3,000VAC
- Surge strength: 5,080V
- Safety standards
UL, CSA, VDE, CQC
- RoHS compliant
Please see page 6 for more information
- Plastic sealed type, RTIII



■ APPLICATIONS

- PLC, I/O module inverter control

■ PARTNUMBER INFORMATION

[Example] $\frac{\text{FTR-MY}}{\text{(a)}}$ $\frac{\text{A}}{\text{(b)}}$ $\frac{\text{A}}{\text{(c)}}$ $\frac{\text{012}}{\text{(d)}}$ $\frac{\text{D}}{\text{(e)}}$

| | | |
|-----|-----------------------|---|
| (a) | Relay type | FTR-MY : FTR-MY-Series |
| (b) | Contact configuration | A : 1 form A |
| (c) | Coil type | A : Standard type (110mW) |
| (d) | Coil rated voltage | 012 : 4.5.....24 VDC Coil rating table at page 3 |
| (e) | Contact material | D : Gold overlay AgNi |

Actual marking does not carry the type name : "FTR"
E.g.: Ordering code: FTR-MYAA012D Actual marking: MYAA012D

■ SPECIFICATION

| Item | FTR-MY | | |
|--------------|------------------------------|--|--|
| Contact Data | Configuration | 1 form A | |
| | Construction | Bifurcated | |
| | Material | Gold overlay silver alloy (Ag90 Ni10+Au) | |
| | Resistance (initial) | Max. 30 mΩ at 6VDC, 1A | |
| | Contact rating | 5A, 250VAC / 30VDC | |
| | Max. carrying current | 5A | |
| | Max. switching current | 5A | |
| | Max. switching voltage | 277VAC / 125VDC | |
| | Max. switching power | 1,250VA / 150W | |
| | Min. switching load * | 1 mA, 5VDC | |
| Life | Mechanical | Min. 20 x 10 ⁶ operations | |
| | Electrical | Min. 100 x 10 ³ operations (at 3A 250VAC, 30VDC resistive) Min. 50 x 10 ³ operations (at 5A 250VAC, 30VDC resistive) (switching frequency 20 times/minute) | |
| Coil Data | Rated power (at 20 °C) | 110 mW | |
| | Operate power (at 20 °C) | 54 mW | |
| | Operating temperature range | -40 °C to +90 °C (no frost) | |
| Timing Data | Operate (at nominal voltage) | Max. 10 ms (without bounce) | |
| | Release (at nominal voltage) | Max. 5 ms | |
| Insulation | Resistance (initial) | Min. 1,000MΩ at 500VDC | |
| | Dielectric strength | Open contacts | 750VAC (50/60Hz) 1min |
| | | Contacts to coil | 3,000VAC (50/60Hz) 1min |
| | Surge strength | Coil to contacts | 5,080V / 1.2 x 50μs standard wave |
| Other | Vibration resistance | Misoperation | 10 to 55 to 10 single amplitude 0.75mm |
| | | Endurance | 10 to 55 to 10 single amplitude 2.5mm |
| | Shock | Misoperation | Min. 100m/s ² (11 ± 1ms) |
| | | Endurance | Min. 1,000m/s ² (6 ± 1ms) |
| | Weight | Approximately 2.5 g | |
| | Sealing | Plastic sealed RTIII | |

* 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) | Must Operate Voltage (VDC) * | Must Release-Voltage (VDC) * | Rated Power (mW) |
|-----------|--------------------------|-------------------------------|------------------------------|------------------------------|------------------|
| 4.5 | 4.5 | 185 | 3.15 | 0.225 | 110 |
| 005 | 5 | 230 | 3.5 | 0.25 | |
| 006 | 6 | 330 | 4.2 | 0.3 | |
| 009 | 9 | 740 | 6.3 | 0.45 | |
| 012 | 12 | 1,310 | 8.4 | 0.6 | |
| 018 | 18 | 2,950 | 12.6 | 0.9 | |
| 024 | 24 | 5,240 | 16.8 | 1.2 | |

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

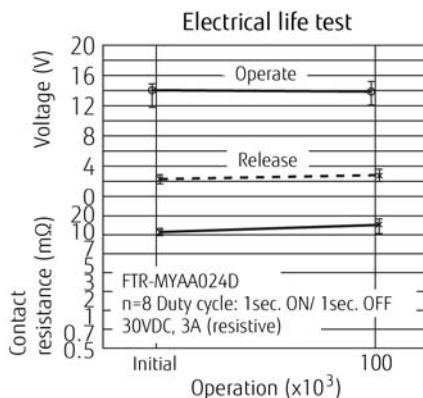
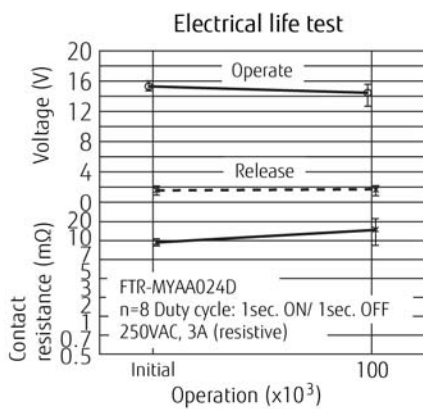
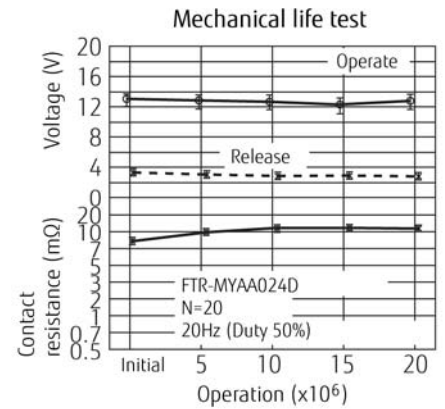
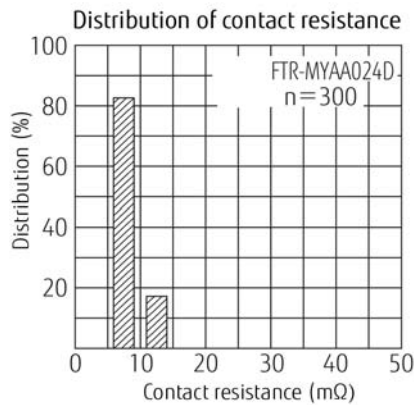
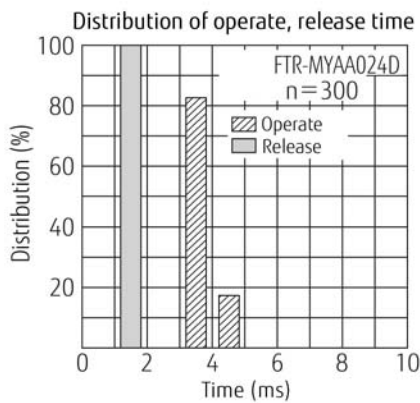
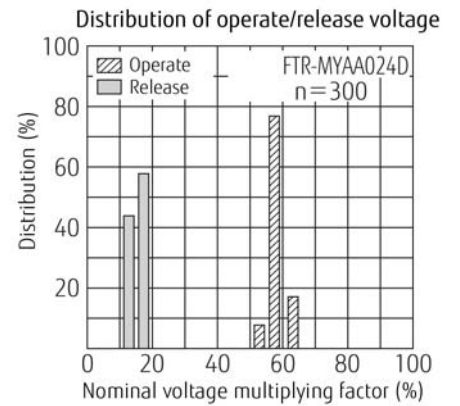
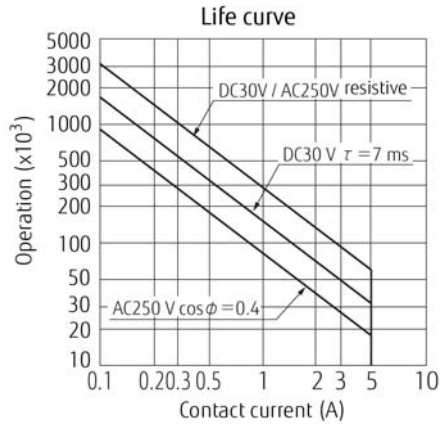
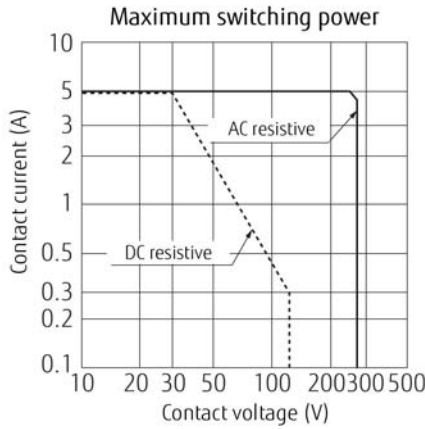
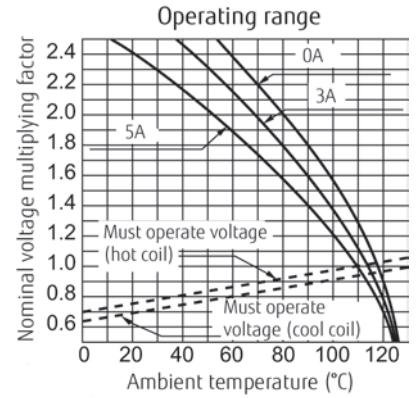
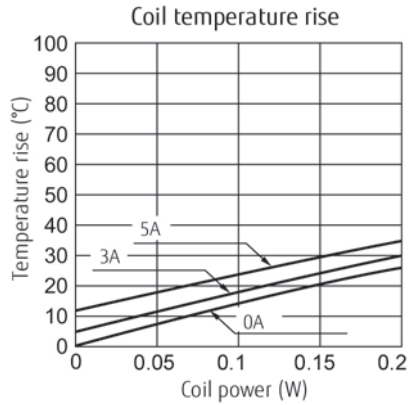
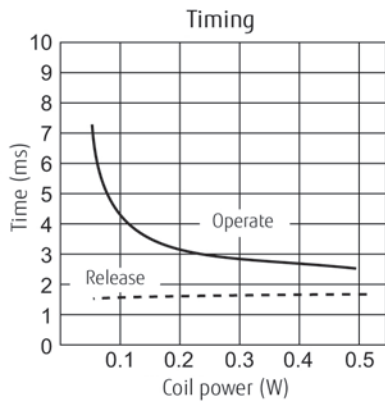
* Specified operate values are valid for pulse wave voltage.

■ SAFETY STANDARDS

| Type | Compliance | Contact rating |
|------|--|--|
| UL | UL 508 ANSI/ISA 12.12.01 | Flammability: UL 94-V0 (plastics) |
| | E63614, E225300 | 5A, 277 VAC (resistive) 5A, 30 VDC (resistive) 1/10 HP, 277VAC /125VAC Pilot duty: D300, C300, R300 |
| CSA | C22.2 No. 14 LR 40304 | |
| VDE | IEC/EN61810-1 | 5A, 250VAC, $\cos\phi 1$, 50K 5A, 30VDC, 0msec, 50K |
| CQC | GB15092.1 11001063129, 03001007663 | 5A 250VAC |

Note: Confirm to IEC61010, 61131 reinforced insulation

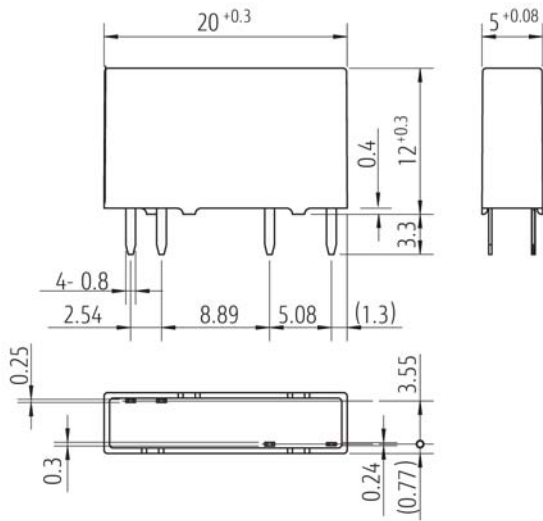
CHARACTERISTIC DATA



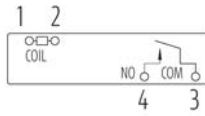
FTR-MY SERIES

■ DIMENSIONS

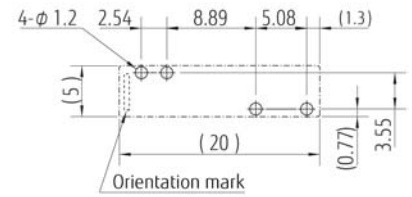
● Dimensions



● Schematics



● 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

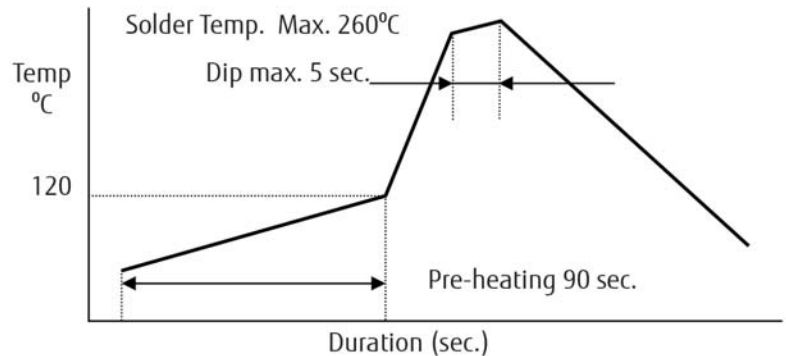
- Recommended solder Sn-3.0Ag-0.5Cu.

Flow Solder Condition:

Pre-heating: maximum 120°C
within 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 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.

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/>

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