

# POWER RELAY

## 1 POLE - 5A Slim Power Relay

### FTR-MY Series

#### ■ FEATURES

- Width 5mm, height 12mm (31% smaller than NY series)  
area 100 mm<sup>2</sup>, 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 <sup>6</sup> operations	
	Electrical	Min. 100 x 10 <sup>3</sup> operations (at 3A 250VAC, 30VDC resistive) Min. 50 x 10 <sup>3</sup> 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 55Hz double amplitude 1.5mm
		Endurance	10 to 55Hz double amplitude 5.0mm
	Shock	Misoperation	Min. 100m/s <sup>2</sup> (11 ± 1ms)
		Endurance	Min. 1,000m/s <sup>2</sup> (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	

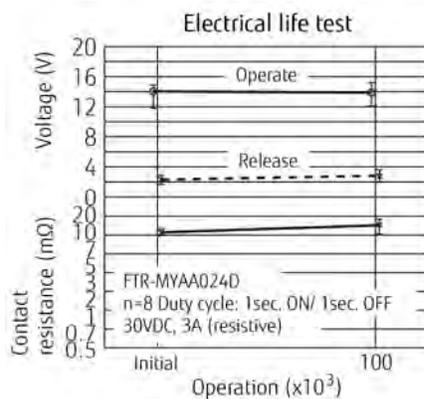
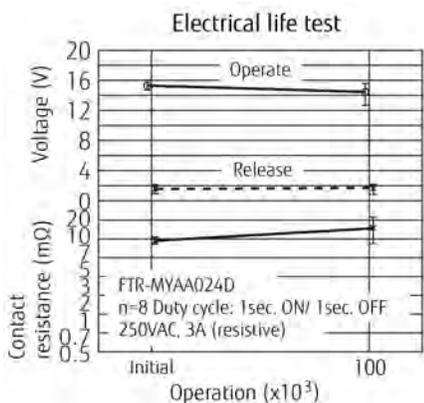
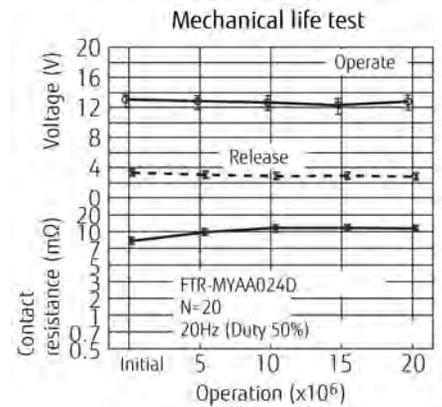
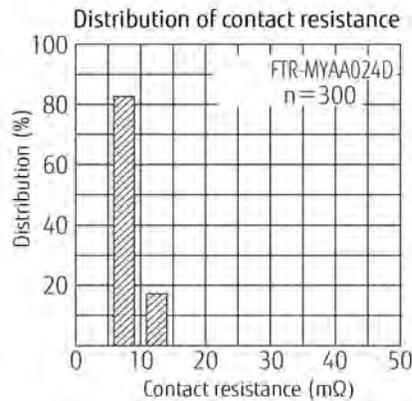
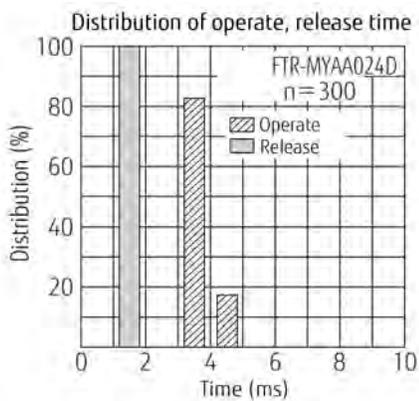
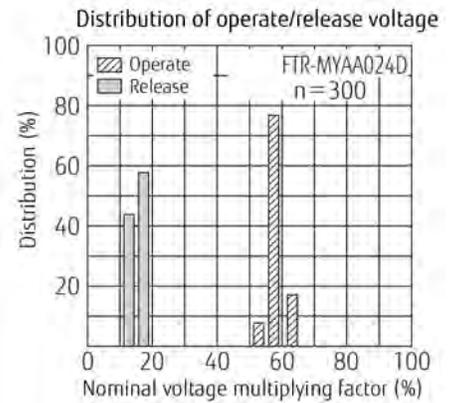
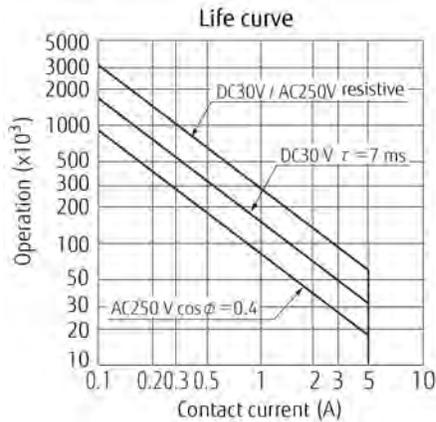
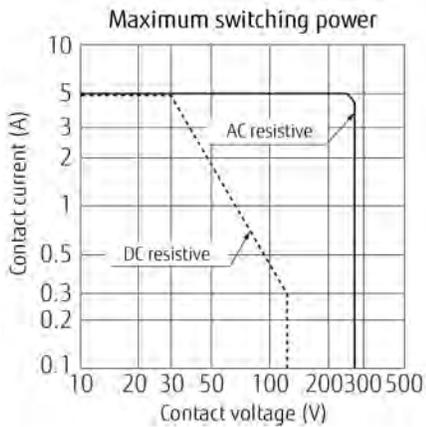
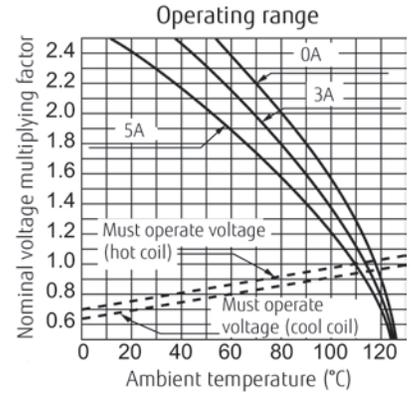
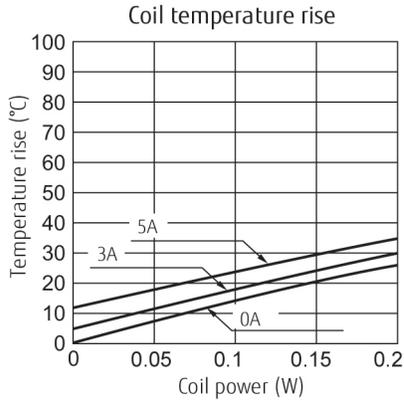
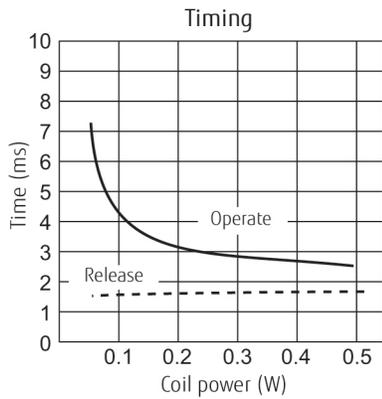
Note: All values in the table are valid for 20°C and zero contact current.

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

## ■ SAFETY STANDARDS

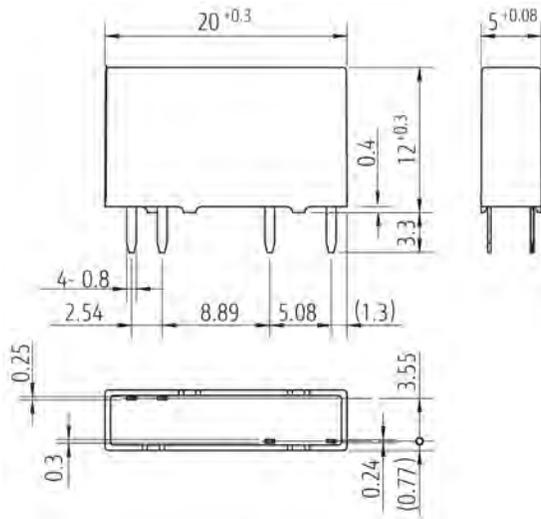
Type	Compliance	Contact rating
UL	UL 508, UL 1604	Flammability: UL 94-V0 (plastics)
	E63614, E225300	5A, 277 VAC (resistive) 5A, 30 VDC (resistive)
CSA	C22.2 No. 14 LR 40304	1/10 HP, 277VAC /125VAC Pilot duty: D300, C300, R300
VDE	0435 part 201 40014781	5A, 250VAC, cosφ1, 50K 5A, 30VDC, 0msec, 50K

## CHARACTERISTIC DATA

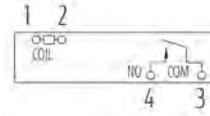


## ■ DIMENSIONS

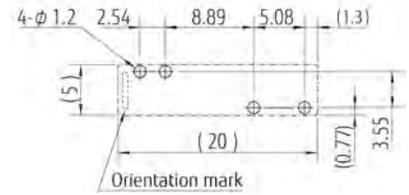
### ● Dimensions



### ● 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 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.

## 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](mailto:promothq@ft.ed.fujitsu.com)  
Web: [www.fcl.fujitsu.com](http://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](mailto: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](mailto:info@fceu.fujitsu.com)  
Web: [emea.fujitsu.com/components/](http://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](mailto:fcal@fcal.fujitsu.com)  
Web: <http://www.fujitsu.com/sg/services/micro/components/>

©2013 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. October 31, 2013