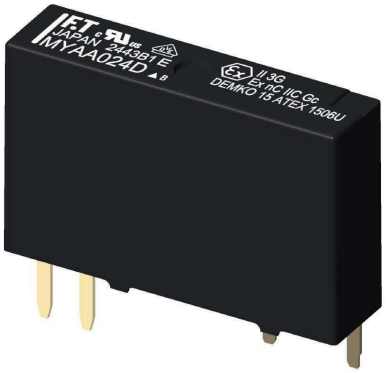
POWER RELAY
1 POLE - 5A SLIM POWER RELAY (ATEX COMPLIANT)

FTR-MY Series

RoHS Compliant

■ FEATURES



- Compliant to IEC60079-15 EU ATEX Directive for use in hazardous location
- Width 5mm, height 12mm (31% smaller than NY series), mounting area 100mm^2, super slim, low power, compact and light weight 2.5g
- Nominal power: 110mW (8% less than NY series)
- Operate power: 54mW
- High sensitive
- High reliable contacts, bifurcated gold overlay silver alloy (cadmium free)
- Conform to UL61010-1, UL61010-2-201, IEC/EN61010-1, IEC/EN61010-2-201 (max. 277VAC)
- Dielectric strength: 3,000VAC
- Surge strength: 5,080V
- Safety standards: UL, CSA, VDE, CQC
- Flammability : UL94V-0 (Plastics mold)
- RoHS compliant
- Plastic sealed type, RTIII

■ APPLICATIONS

PLC, FA equipment etc.used in hazoudous location

■ PART NUMBERS

[Example] FTR-MY A A 012 D - B
(a) (b) (c) (d) (e) (f)

(a)	Relay type	FTR-MY series
(b)	Contact configuration	A : 1a (1 Form A)
(c)	Coil type	A : Standard type (110mW)
(d)	Coil rated voltage	012 : 4.5...24VDC Please refer to coil rating table
(e)	Contact material	D : Gold overlay AgNi
(f)	Special type	B : ATEX compliant

Actual marking does not carry the type name : “FTR”

E.g.: Ordering code: FTR-MYAA012D-B Actual marking: MYAA012D

■ SPECIFICATIONS

Item			Specifications	Remarks/Conditions
Contact Data	Configuration		1a (1 Form A)	
	Construction		Bifurcated (cross bar)	
	Material		Gold overlay silver alloy	
	Resistance		Max. 30 mΩ	Initial at 1A, 6VDC
	Contact rating		5A, 250VAC / 30VDC	Resistive
	Max. carrying current		5A	
	Max. switching current		5A	
	Max. switching voltage		277VAC / 125VDC	
	Max. switching power		1,250VA / 150W	
	Min. switching load *1		1mA, 5VDC	
Coil	Rated power (at 20°C)		110mW	
	Operate power (at 20°C)		54mW	
	Operating temperature range		-40°C to +90°C	No frost
Time	Operate (at nominal voltage)		Max. 10ms	Without bounce
	Release (at nominal voltage)		Max. 5ms	Without bounce
Life	Mechanical		Min. 20 x 10^6 operations	
	Electrical (resistive)		Min. 100 x 10^3 operations (at 3A 250VAC, 30VDC resistive) Min. 50 x 10^3 operations (at 5A 250VAC, 30VDC resistive)	
Insulation	Insulation resistance (Initial)		Min. 1,000MΩ	At 500VDC
	Dielectric strength	Open contacs	750VAC (50/60Hz) 1 min.	
		Coil to contacts	3,000VAC (50/60Hz) 1 min.	
	Surge strength	Coil to contacts	5,080V / 1.2 x 50μs standard wave	
	Clearance		Min. 5.15mm	
	Creepage		Min. 5.89mm	
Others	Vibration resistance	Misoperation	10 to 55 to 10 single amplitude 0.75mm	Coil ON/OFF, 3 axis, total 6 cycles
		Endurance	10 to 55 to 10 single amplitude 2.5mm	Coil OFF, 3 axis, total 6 hours
	Shock resistance	Misoperation	Min. 100m/s^2 (11±1ms)	Coil ON/OFF, 3 axis, total 36 operations
		Endurance	Min. 1,000m/s^2 (6±1ms)	Coil OFF, 3 axis, total 18 operations
	Dimensions / Weight		5.0 x 20.0 x 12.0mm / Approx. 2.5g	
	Sealing		Plastic sealed RTIII	

*1: 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 DATA

Coil Code	Rated Coil Voltage (VDC)	Coil Resistance ±10% (Ω)	Must Operate Voltage*1 (VDC)	Must Release Voltage*1 (VDC)	Rated Power (mW)
4.5	4.5	185	3.15	0.225	110
005	5	230	3.5	0.25	
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.

*1: Specified operate values are valid for pulse wave voltage.

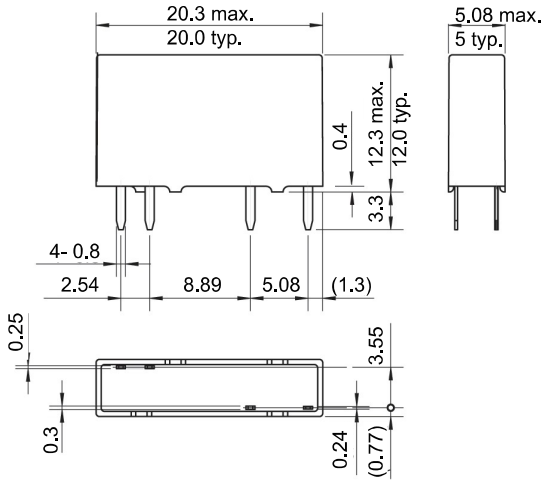
Please use at rated coil voltage. Please refer to characteristic data and set up adequate voltage in case of use at over voltage.

■ PART NUMBER LIST

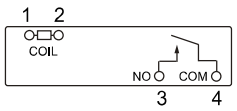
Part Number	Contact Configuration	Rated Power	Contact Material	Contact Rating	Special type
FTR-MYAA( )D-B	1a (1 Form A)	Approx.110mW	Gold overlay silver alloy	5A, 250VAC 5A, 30VDC	ATEX compliant

■ DIMENSIONS

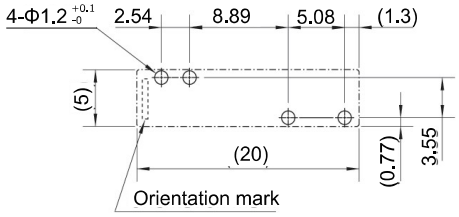
● Dimensions



● Schematics (BOTTOM VIEW)



● PC board mounting hole layout (BOTTOM VIEW)



* Dimensions of the terminals do not include thickness of pre-soldering.

* Tolerance of PC boarrd mounting hole layout: ±0.1 unless otherwise specified.

( ) : Reference
Unit: mm

■ SAFETY STANDARDS

●Certifications

Certified Body/Type	Certification No./Certified Part Number/Applicable Standard	Contact Rating
cULus	Certification No. E63614 Part number : FTR-MYAA( )D Standard : UL 60947-1, UL 60947-4-1, CSA C22.2 No. 60947-1, CSA C22.2 No. 60947-4-1 Certification No. E225300 Part number : FTR-MYAA( )D Standard : UL 121201, CSA C22.2 No. 213(Class I, Division 2)	5A, 277VAC (resistive) 5A, 30VDC (resistive) 1/10hp, 277VAC/125VAC Pilot duty: D300, C300, R300
CSA	Certification No. LR40304 Part No. : FTR-MYAA( )D Standard : CSA C22.2 No.14	
VDE	Certification No. 40014781 Part No. : FTR-MYAA( )D Standard : EN61810-1	5A, 250VAC (cosφ=1)
CQC	Certification No. 11001063129 (Japan factory) 17001164877 (China factory) Part No. : FTR-MYAA( )D Standard : GB 4943.1, IEC 61810-1	5A, 250VAC

The part numbers on the safety standards' certifications and the ordering part numbers may differ. Coil code is in ( ).

Also conform to UL61010-1, UL61010-2-201, IEC/EN61010-1, IEC/EN61010-2-201 (max. 277VAC)

WARNING: Exposure to some chemicals may degrade the sealing properties of materials used in the relay.

●ATEX directive compliance

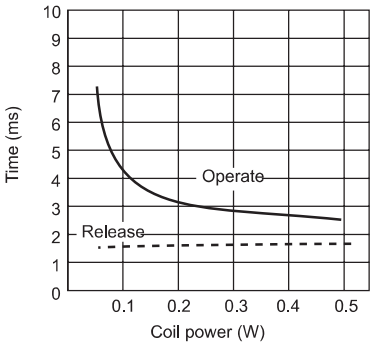
Certified Body/Type	Certification No./Certified Part Number/Applicable Standard	Contact Rating
UL	UL registtration No. : DEMKO 15 ATEX 1506U Part No. : FTR-MYAA( )D▲B Standard: IEC/EN 60079-0, IEC/EN 60079-15 Equipment protection level: Ⓔx II 3G Ex nC IIC Gc	5A, 30VDC (resistive) 5A, 277VAC (resistive) 3A, 250VAC (general use) 1/10hp, 125VAC 1/10hp, 277VAC Pilot Duty: D300, C300, R300 3A, 250VAC

Coil code is in ( ).

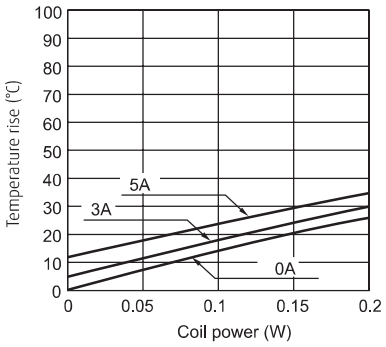
■ CHARACTERISTIC DATA

(Characteristic data is not guaranteed value but measured values of samples from production line.)

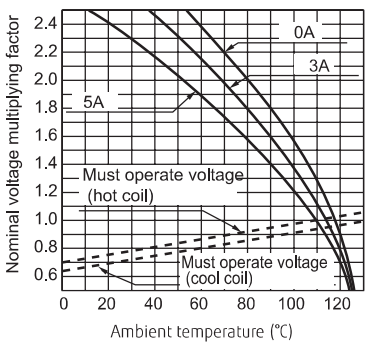
Timing



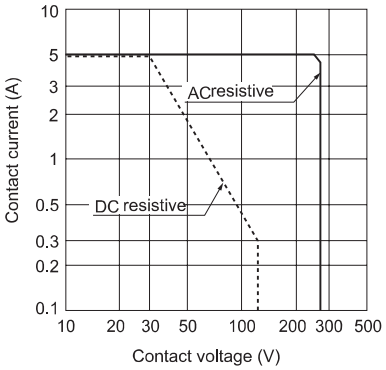
Coil temperature rise



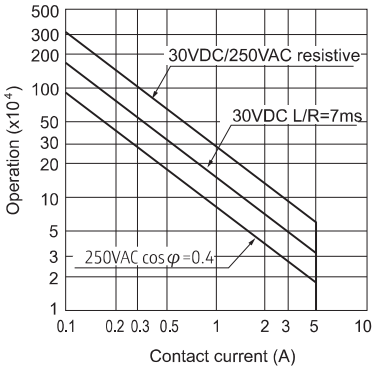
Operating range



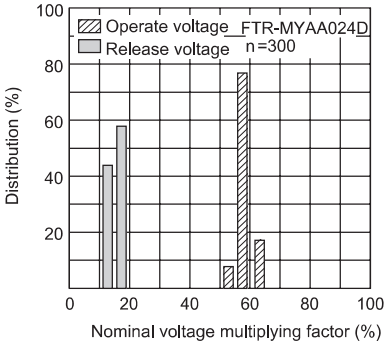
Maximum switching power



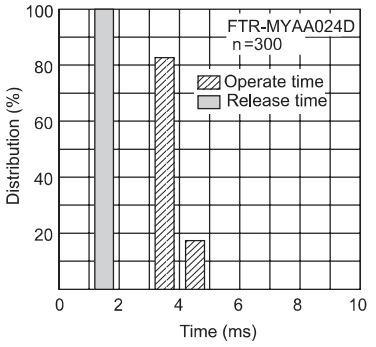
Life curve



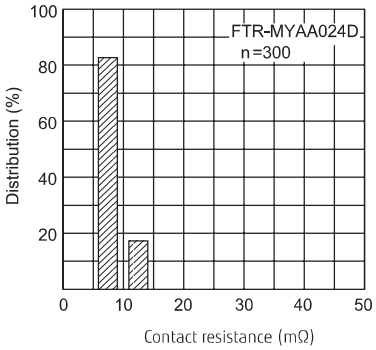
Distribution of operate/relase voltage



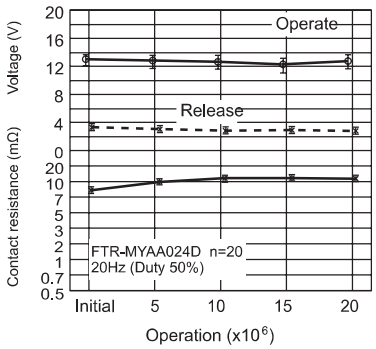
Distribution of operate/relase time



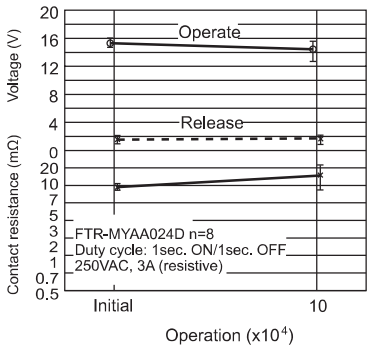
Distribution of contact resistance



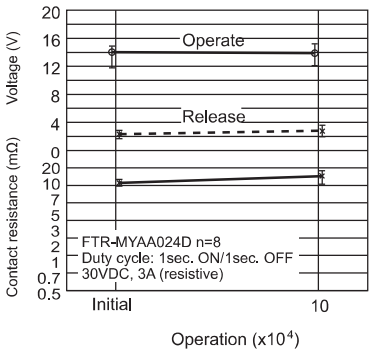
Mechanical life test



Electrical life test



Electrical life test



CAUTIONS

- All values mentioned in this datasheet are provided under ideal conditions. Please perform the confirmation test before actual use.
- Reflow soldering is prohibited.
- Do not use relays in the atmosphere with sulfide gas, chloride gas or nitric oxide. Contact resistance may increase.
- Do not use silicon or silicon-containing product or materials near relays. It may cause contact failure.

GENERAL INFORMATION

1. ROHS Compliance

- All relays produced by FCL Components are compliant with RoHS directive 2011/65/EU, including commission delegated directive 2015/863.

2. Recommended lead free solder condition

- 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.
- Recommended solder for assembly: 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 340-360˚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.

Contact

Japan
FCL COMPONENTS LIMITED
Shinagawa Seaside Park Tower
12-4, Higashi-shinagawa 4-chome,
Tokyo 140 0002, Japan
Tel: +81-3-3450-1682
Email: fcl-contact@cs.fcl-components.com

North and South America
FCL COMPONENTS AMERICA, INC.
2055 Gateway Place Suite 480,
San Jose, CA 95110 USA
Tel: +1-408-745-4900
Email: contact@fcl-components.us

Europe
FCL COMPONENTS EUROPE B.V.
Diamantlaan 25
2132 WV Hoofddorp, Netherlands
Tel: +31-23-556-0910
Email: info@fcl-components.eu

Asia Pacific
FCL COMPONENTS ASIA PTE LTD.
No. 20 Harbour Drive, #07-01B
Singapore 117612
Tel: +65-6375-8560
Email: fcal@fcl-components.com

China
FCL COMPONENTS (SHANGHAI) CO.,LTD.
Unit 1105, Central Park - Jing An,
No.329 Heng Feng Road, Shanghai
200070, China
Tel: +86-21-3253 0998
Email: fcsh@fcl-components.com

Hong Kong
FCL COMPONENTS HONG KONG CO., LIMITED
Unit 2313, Seapower Tower, Concordia
Plaza, No.1 Science Museum Road,
TST, Kowloon, Hong Kong
Tel: +852-2881-8495
Email: fcal@fcl-components.com

Web: www.fcl-components.com/en/

© 2024 FCL Components Limited. All rights reserved. All trademarks or registered trademarks are the property of their respective owners.

FCL Components Products are intended for general use, including without limitation, in personal, household and office environments, in buildings and for ordinary use in the industry. FCL Components Products are not intended to be used in applications where extremely high safety is required (”High Safety Required Applications”), such as, but not limited to, applications in nuclear facilities, in aircraft automatic flight control, in air traffic control, in mass transit system control, in missile launch system, in weapon systems, in medical equipment for life support or any application involving a direct serious risk of physical injury or death.
Please do not use FCL Components Products without securing the sufficient safety and reliability required for the High Safety Required Applications.
In addition, FCL Components shall not be liable against the customer and/or any third party for any claims or damages arising in connection with the use of FCL Components Products in the High Safety Required Applications.
FCL Components warrants that its Products, if properly used and services, will conform to their specification and will be free from defects in material and workmanship for twelve months from delivery.
The implied warranties of merchantability and fitness for a particular purpose and all other warranties, representations and conditions, express or implied by statute, trade usage or otherwise, expect as set forth in this warranty, are excluded and shall not apply to the Products delivered.

The contents, data and information in this datasheet are provided by FCL Components Limited 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.
FCL Components has assembled this datasheet with care and will endeavor to keep the contents, data and information correct, accurate, comprehensive, complete and up to date.
FCL Components Limited 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 FCL Components Limited and affiliated companies accept on their behalf, nor on behalf of its employees, any responsibility or liability with respect to these datasheets, its contents, data, information and related graphics and the correctness, reliability, accuracy, comprehensiveness, usefulness, availability and completeness thereof. Rev. December 10, 2024.