

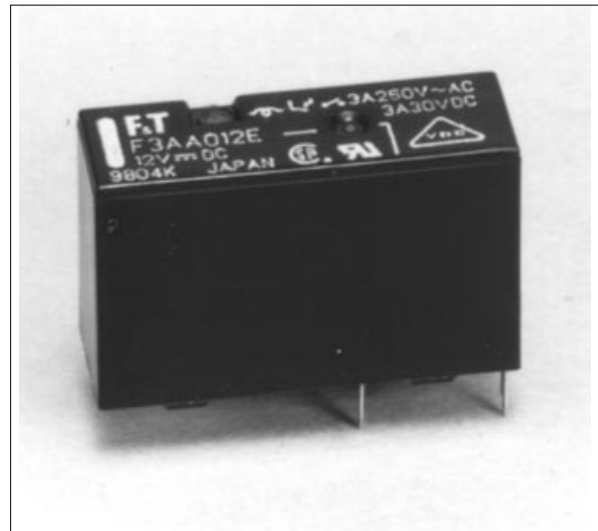
# POWER RELAY

## 1 POLE 3A SLIM TYPE RELAY

### FTR-F3 SERIES

#### ■ FEATURES

- HIGH DENSITY MOUNTING  
Saves Space by 20% Compared to JV type.
- HIGH ISOLATION  
Insulation Distance: Minimum 6mm between coil and contact (conforms to IEC 65)  
Dielectric Strength: 4KV  
Surge Strength: 10KV
- HIGH COIL SENSITIVITY  
Nominal coil power consumption of 200mW
- HIGH FLAMMABILITY RESISTANCE  
Flammability grade of 94V-0, UL Class B (130°C)
- CADMIUM FREE CONTACT FOR ECO-PROGRAM
- SAFETY STANDARDS  
UL, CSA, VDE approved, SEMKO pending
- Plastic sealed relay



#### ■ ORDERING INFORMATION

[Example]     FTR-F3   A   A   012   E   -HA  
                   (a)   (b) (c)   (d)   (e)   (f)

(a)	Series Name	FTR-F3
(b)	Contact Arrangement	A :        Form A
(c)	Coil Type	A :        Standard (200mW)
(d)	Coil Nominal Voltage	005 : 5DC     012 : 12DC 006 : 6DC     018 : 18DC 009 : 9DC     024 : 24DC
(e)	Contact Material	E :        Silver alloy
(f)	Custom Designation	Nil: 3A HA: 5A

Remarks: Actual marking on relay would not carry code FTR and be as below:

Ordering code                      Actual marking  
 FTR-F3AA012E                    →                    F3AA012E

# FTR-F3 SERIES

## ■ SAFETY STANDARD AND FILE NUMBERS

UL508 (File No. E63614)

C22.2 No. 14 (File No. LR40304)

VDE 0435 (License # 6856 UG)

Please note that UL/CSA ratings may differ from the standard ratings.

Please request when the approval markings are required on the cover and/or relay recognized by SEV is required.

Type	Nominal Voltage	Contact Rating
FTR-F3	5 to 24 VDC	1/8 HP 277 VAC 1/10 HP 125V 3A 30 VDC/277 VAC res. 1A 250 VAC inductive (PF=0.4) Pilot duty D300
FRT-F3-HA	5 to 24 VDC	5A 30VDC / 277 VAC resistive

## ■ SPECIFICATIONS

Item	FTR-F3 Series		
Contact	Arrangement	1 Form A (SPST-NO)	
	Material	Silver Alloy	
	Resistance (initial)	Maximum 100mΩ (at 1A 6VDC)	
	Rating (resistive)	250 VAC/30 VDC, 3A / 5A	
	Maximum Carrying Rating	5A	
	Maximum Switching Power	750 VA/90 W	
	Maximum Switching Voltage* <sup>1</sup>	277VAC / 30VDC	
	Maximum Switching Current	5A	
	Minimum Switching Load	10mA, 5VDC	
Coil	Nominal Power (at 20° C)	0.2W	
	Operate Power (at 20° C)	0.11W	
	Operating Temperature	-40° C to +70° C (no frost)	
Time Value	Operate Time (at nominal voltage)	Maximum 10ms	
	Release Time (at nominal voltage)	Maximum 10ms	
Insulation	Resistance (at 500VDC)	Minimum 1,000 MΩ	
	Dielectric Strength	between open contacts	750 VAC 1 minute
		between coil and contacts	4,000 VAC 1 minute
Surge Strength	10,000V / 1.2 x 50 μs Between Coil and Contacts		
Life	Mechanical	5 x 10 <sup>6</sup> operations minimum	
	Electrical	Contact Rating	200 x 10 <sup>3</sup> operations minimum
Vibration	Misoperation	10-55 Hz (double amplitude of 1.5mm)	
	Endurance	10-55 Hz (double amplitude of 1.5mm)	
Shock	Misoperation	100m/s <sup>2</sup> (11±1ms)	
	Endurance	1,000m/s <sup>2</sup> (6±1ms)	
Weight	Approximately 4g		

\*<sup>1</sup> Minimum switching loads mentioned above are reference values. Please perform the confirmation test with the actual load before production since reference values may vary according to switching frequencies, environmental conditions and expected reliability levels.

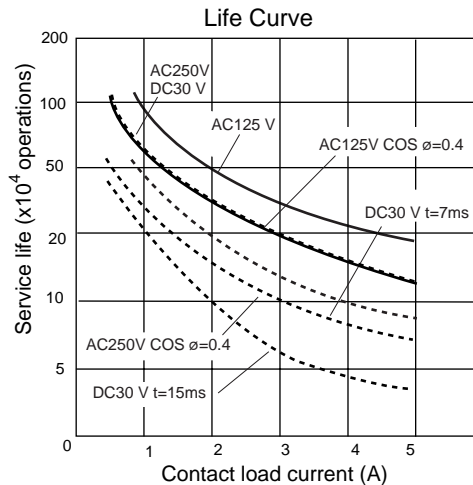
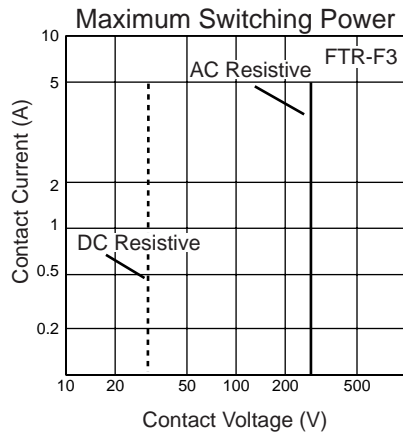
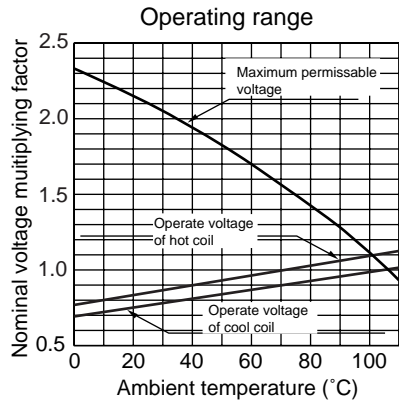
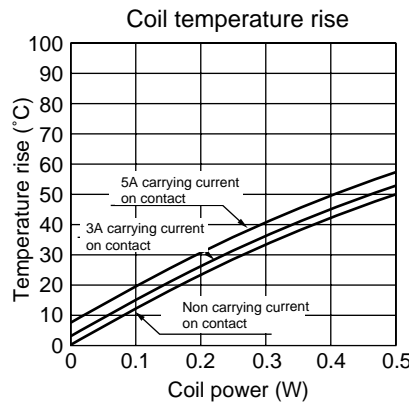
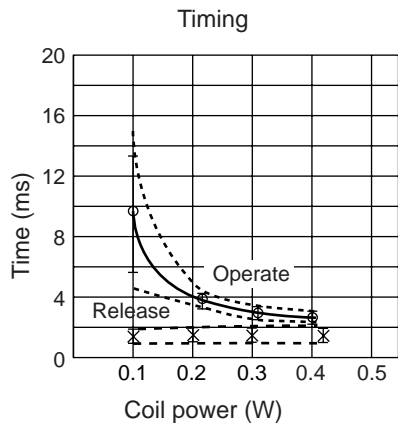
# FTR-F3 SERIES

## COIL DATA CHART

MODEL	Nominal Voltage	Coil Resistance	Operate Voltage	Release Voltage	Nominal Power
FTR-F3AA005E-( )	5VDC	125 Ω	3.75VDC	0.5VDC	200mW
FTR-F3AA006E-( )	6VDC	180 Ω	4.5VDC	0.6VDC	200mW
FTR-F3AA009E-( )	9VDC	405 Ω	6.75VDC	0.9VDC	200mW
FTR-F3AA012E-( )	12VDC	720 Ω	9.0VDC	1.2VDC	200mW
FTR-F3AA018E-( )	18VDC	1,620 Ω	13.5VDC	1.8VDC	200mW
FTR-F3AA024E-( )	24VDC	2,880 Ω	18.0VDC	2.4VDC	200mW

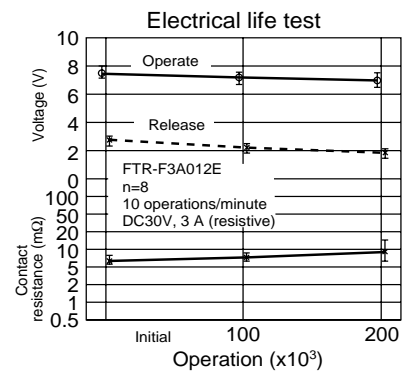
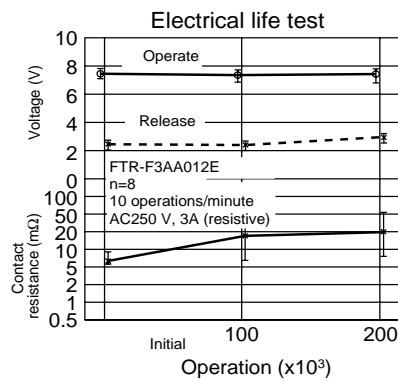
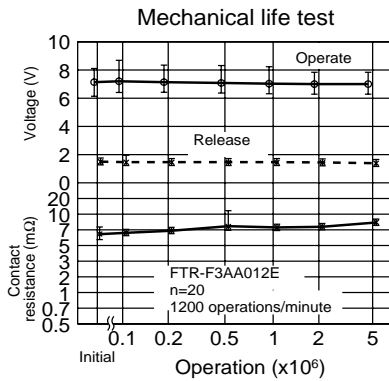
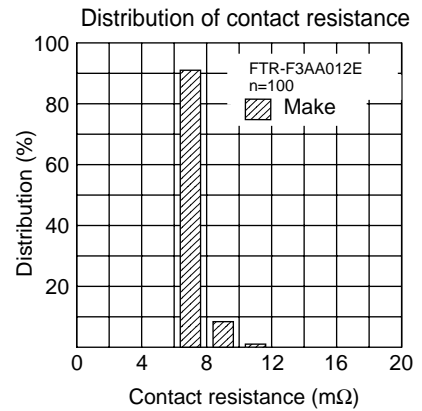
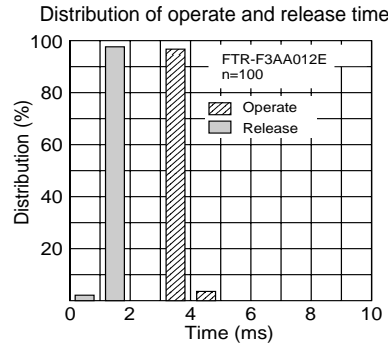
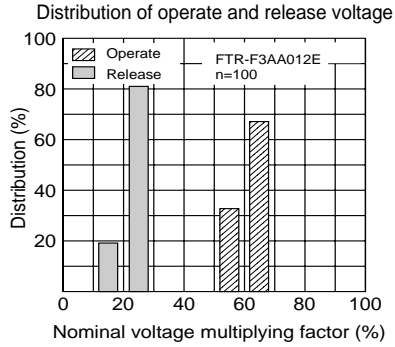
Note: All values in the table are measured at 20°C.

## CHARACTERISTIC DATA



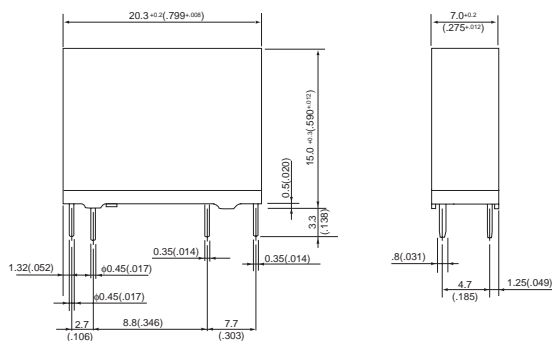
# FTR-F3 SERIES

## REFERENCE DATA

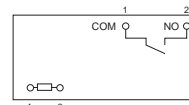


## DIMENSIONS

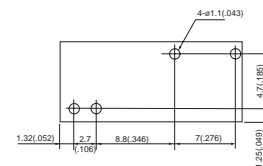
### Dimensions



### Schematics (BOTTOM VIEW)



### PC board mounting hole layout (BOTTOM VIEW)



**Fujitsu Takamisawa  
International  
Headquarter  
Offices**

[www.fujitsu.takamisawa.com](http://www.fujitsu.takamisawa.com)

**Japan**

Fujitsu Takamisawa Component Limited  
Global Marketing and Sales  
Gotanda-Chuo Building  
3-5, Higashigotanda 2-chome, Shinagawa-ku  
Tokyo 141, Japan  
Tel: (81-3) 5449-7010  
Fax: (81-3) 5449-2626

**North and South America**

Fujitsu Takamisawa America, Inc.  
250 E. Caribbean Drive  
Sunnyvale, CA 94089 U.S.A.  
Tel: (1-408) 745-4900  
Fax: (1-408) 745-4970

**Europe**

Fujitsu Takamisawa Europe B.V.  
Diamantlaan 25  
2132 WV Hoofddorp  
Netherlands  
Tel: (31-23) 5560910  
Fax: (31-23) 5560950

**Asia Pacific**

Fujitsu Takamisawa Asia Pacific Pte. Ltd.  
102E Pasir Panjang Road  
#04-01 Citilink Warehouse Complex  
Singapore 118529  
Tel: (65) 375-8560  
Fax: (65) 273-3021