

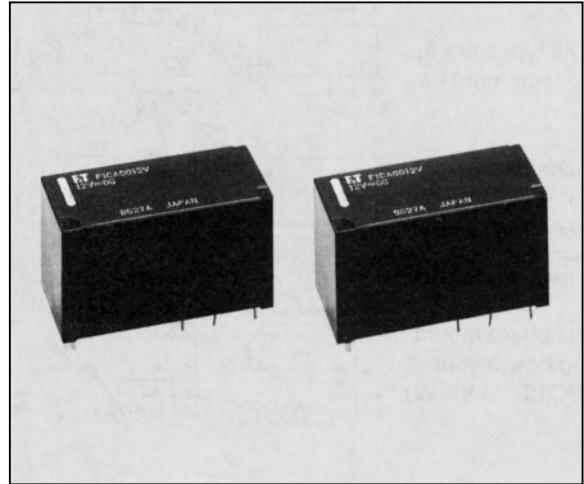
# POWER RELAY

## 2 POLES-5 A (MEDIUM LOAD CONTROL)

### FTR-F1 SERIES

#### ■ FEATURES

- Low profile power relay (height 16.5 mm) by employing unique construction  
DPST/DPDT 5 A, TV-3 rating available
- Higher isolation by employing reinforced insulation construction  
Insulation distance: 8 mm (Between coil and contact)  
Dielectric strength: 5 kV (Between coil and contact)  
Surge strength: 10 kV (Between coil and contact)
- Pin configuration compatible to VB/FBR620
- Conform to CSA (NRTL/C), VDE, SEV, SEMKO, FIMKO, IMQ, ÖVE, BSI (Under approval)



#### ■ ORDERING INFORMATION

[Example]    FTR-F1    A    A    005    V    - \*\*  
                  (a)    (b)    (c)    (d)    (e)    (f)

(a)	Series Name	FTR-F1 : FTR-F1 Series			
(b)	Contact Arrangement	A	: 2 Form A (DPST-NO)		
		C	: 2 Form C (DPDT)		
(c)	Coil Type	A	: Standard Type (0.53 W)		
(d)	Nominal Voltage	005	: 5 VDC	012:	12 VDC
		006	: 6 VDC	024:	24 VDC
		009	: 9 VDC	048:	48 VDC
(e)	Contact Material/TV Type	V	: Gold Plate Silver Alloy (Standard Type)		
		T	: Gold Plate Silver Alloy (TV-3 Rating Type, Only Mark Type)		
(f)	Custom Designation	To be assigned custom specification			

## ■ SPECIFICATIONS

Item		Standard Type	TV-3 Rating Type
Contact	Arrangement	2 Form A (DPST-NO), 2 Form C (DPDT)	2 Form A (DPST-NO)
	Material	Gold Plate Silver Alloy	
	Type	Single type	
	Resistance (initial)	Max. 100 mΩ (at 1 A 6 VDC)	
	Rating (Resistive)	5 A 250 VAC/30 VDC	
	Max. Carrying Current	7 A	
	Max. Switching Rating	1,250 VA/150 W	
	Max. Switching Voltage	380 VAC 300 VDC	
	Max. Switching Current	5 A	
	Min. Switching Load* <sup>1</sup>	10 mA 5 VDC	
	Max. Inrush Current	—	51 A 120 VAC (at lamp load)
Coil	Nominal Power (at 20°C)	0.53 W	
	Operate Power (at 20°C)	0.26 W	
	Operating Temperature	-40°C to +75°C (No frost) (Refer to the CHARACTERISTIC DATA)	
Time Value	Operate (at nominal voltage)	Max. 15 ms	
	Release (at nominal voltage)	Max. 5 ms	
Insulation	Resistance (at 500 VDC)	Min. 1,000 MΩ	
	Dielectric Strength	between open contacts	1,000 VAC 1 minute
		between coil and contacts	5,000 VAC 1 minute
Surge Strength	10,000 V/1.2 × 50 μs		
Life	Mechanical	20 × 10 <sup>6</sup> ops. min.	
	Electrical	Contact Rating	100 × 10 <sup>3</sup> ops. min.
		Lamp Load	—
Other	Vibration Resistance	Misoperation	10 to 55 Hz (double amplitude of 1.65 mm)
		Endurance	10 to 55 Hz (double amplitude of 3.3 mm)
	Shock Resistance	Misoperation	100 m/s <sup>2</sup> (11 ± 1 ms)
		Endurance	1,000 m/s <sup>2</sup> (6 ± 1 ms)
	Unit Mass	Approx. 12 g	

\*<sup>1</sup> Min. Switching Load 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.

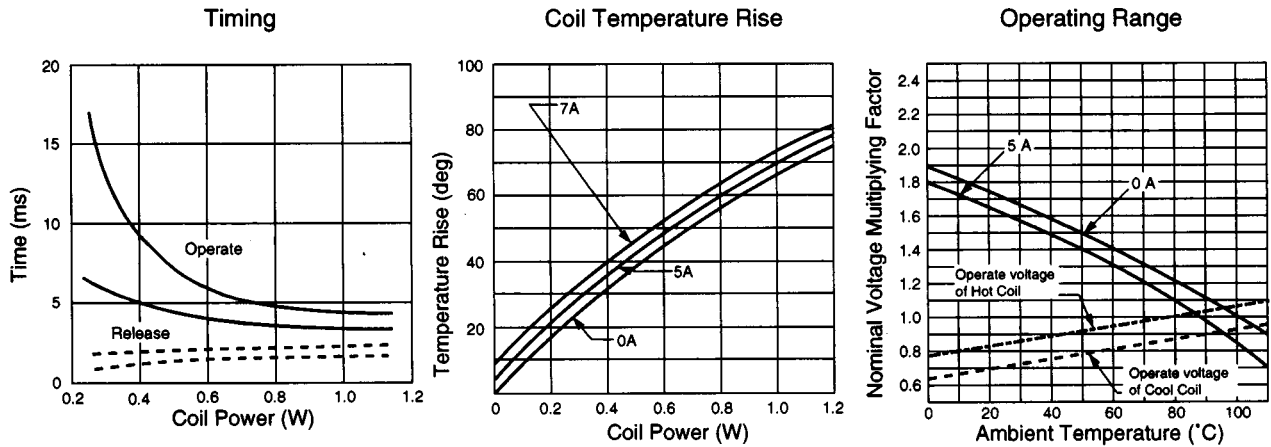
# FTR-F1 SERIES

## ■ COIL DATA CHART

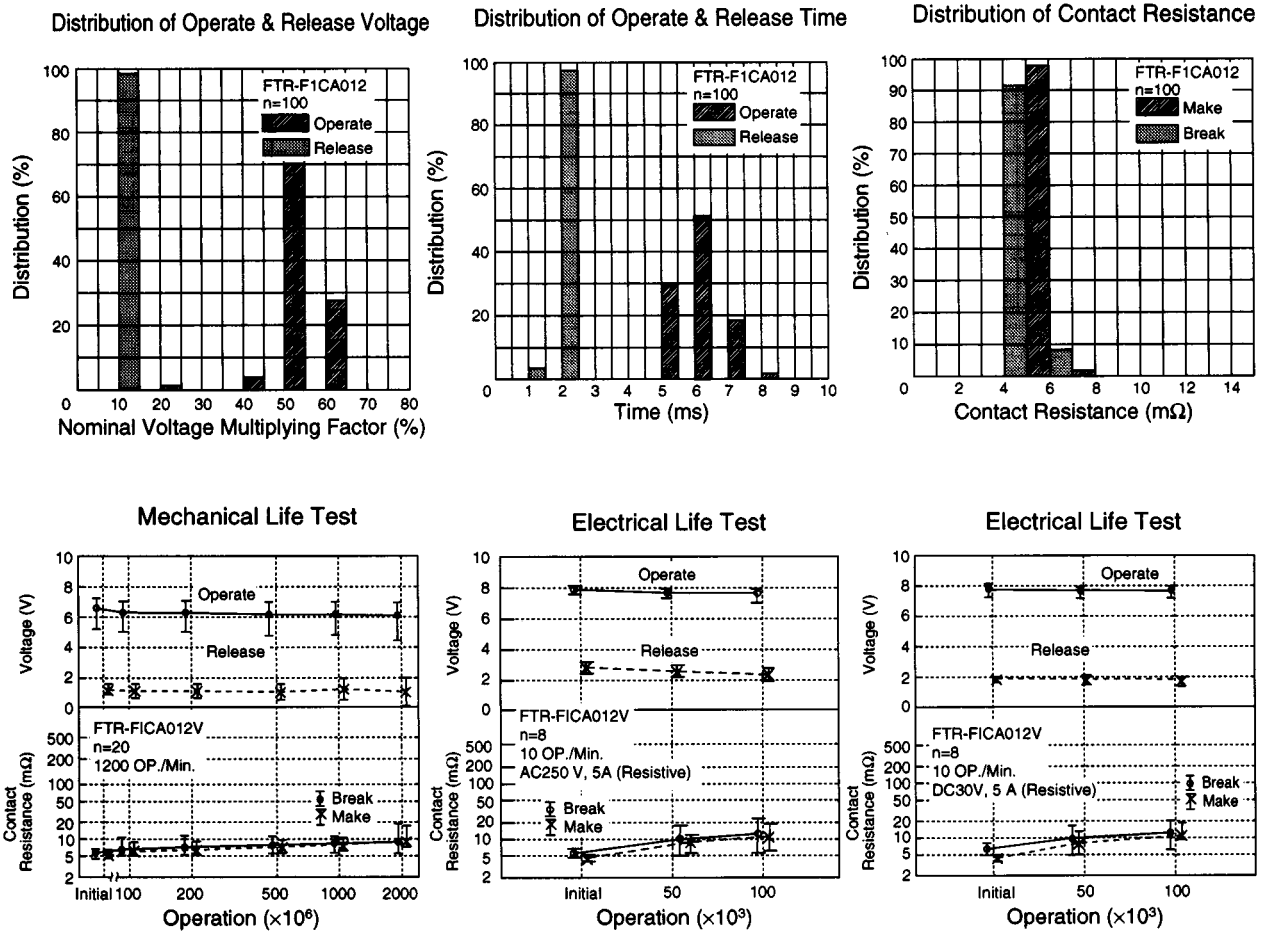
MODEL		Nominal voltage	Coil resistance ( $\pm 10\%$ )	Must Operate Voltage	Must Release Voltage
Standard Type	TV-3 Rating Type				
FTR-F1 (C, A) A005 V	FTR-F1AA005 T	5 VDC	47 $\Omega$	3.5 VDC	0.5 VDC
FTR-F1 (C, A) A006 V	FTR-F1AA006 T	6 VDC	68 $\Omega$	4.2 VDC	0.6 VDC
FTR-F1 (C, A) A009 V	FTR-F1AA009 T	9 VDC	155 $\Omega$	6.3 VDC	0.9 VDC
FTR-F1 (C, A) A012 V	FTR-F1AA012 T	12 VDC	270 $\Omega$	8.4 VDC	1.2 VDC
FTR-F1 (C, A) A024 V	FTR-F1AA024 T	24 VDC	1,100 $\Omega$	16.8 VDC	2.4 VDC
FTR-F1 (C, A) A048 V	FTR-F1AA048 T	48 VDC	4,400 $\Omega$	33.6 VDC	4.8 VDC

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

## CHARACTERISTIC DATA



## REFERENCE DATA

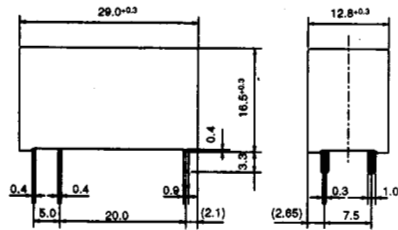


# FTR-F1 SERIES

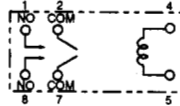
## ■ DIMENSIONS

### • Dimensions

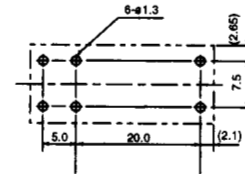
#### FTR-H1A Type



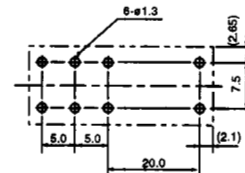
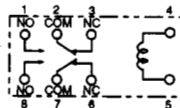
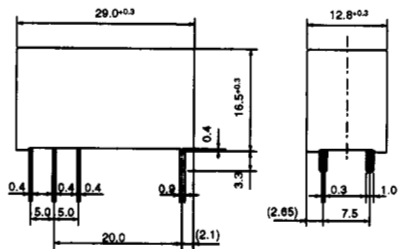
### • Schematics (BOTTOM VIEW)



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



#### FTR-H1C Type



Unit: mm