

POWER RELAY

2 POLE - 5A - 1.5mm contact gap

FTR-F4G Series

■ FEATURES

- 2 Pole, 5A
- 2 Form A
- Contact gap 1.5mm
- Sealed
- High insulation in small package (between coil and contact)
 - Insulation distance: min 8.0mm
 - Dielectric strength: 5,000VAC
 - Surge strength: 10,000V
- Flammability UL94V-0 (plastics)
- RoHS compliant
 - Features cadmium-free contacts
 - Please see page 5 for more information



■ PARTNUMBER INFORMATION

[Example] FTR-F4G A K 012 T
 (a) (b) (c) (d) (e)

(a)	Relay type	FTR-F4G: FTR-F4G Series
(b)	Contact configuration	A : 2 form A
(c)	Coil type	K : Standard (0.8W)
(d)	Coil rated voltage	012 : 5....48 VDC Coil rating table at page 3
(e)	Contact rating	T : TV rating

Actual marking does not carry the type name : "FTR"

E.g.: Ordering code: FTR-F4GAK012T

Actual marking: F4GAK012T

FTR-F4G SERIES

■ SPECIFICATION

Item	FTR-F4G		
Contact Data	Configuration	2 form A	
	Material	Silver tin oxide	
	Resistance (initial)	≤ 100mOhm at 1A, 6VDC	
	Contact rating	5A, 250VAC (resistive)	
	Max. carrying current	5A	
	Max. switching current	5A	
	Max. switching voltage	400VAC	
	Max. switching power	1,250VA	
	Min. switching load (reference)	100 mA, 5VDC	
Life	Mechanical	500 x 10 ³ operations minimum	
	Electrical (resistive)	100 x 10 ³ operations minimum	
Coil Data	Rated power (at 20 °C)	Approximately 0.8W	
	Operate power (at 20 °C)	Approximately 0.45W	
	Operating temperature range	-40 °C to +70 °C (no frost)	
Timing Data	Operate (at nominal voltage)	≤ 12ms (no bounce)	
	Release *	≤ 5ms (no diode)	
Insulation	Contact gap (initial)	Minimum 1.5mm	
	Resistance (initial)	≥ 1,000MOhm at 500VDC	
	Dielectric strength	Open contacts	1,000VAC, 1min.
		Contacts sets	3,000VAC, 1min.
		Coil and contacts	5,000VAC, 1min.
Surge strength	Coil to contacts	10,000V / 1.2 x 50μs standard wave	
Other	Vibration resistance	Misoperation	10 to 55Hz double amplitude 1.5 mm
		Endurance	10 to 55Hz double amplitude 1.5 mm
	Shock resistance	Misoperation	Min. 100m/s ² (11 ± 1ms)
		Endurance	Min. 1,000m/s ² (6 ± 1ms)
	Weight		Approximately 18 g

*Use a varistor as a protective circuit against reverse surge in the relay coil. A varistor is connected parallel to the coil. The reverse blocking voltage should be about 3 times the value of the power surge voltage.

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■ COIL RATING

Coil Code	Rated Coil Voltage (VDC)	Coil Resistance +/- 10% (Ohm)	Must Operate Voltage (VDC) *	Must Release-Voltage (VDC) *	Rated Power +/- 10% (W)
005	5	31	3.75	0.25	Approx. 0.8
012	12	180	9	0.6	
024	24	720	18	1.2	
048	48	2,880	36	2.4	

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

* Specified values are measured with pulse wave voltage

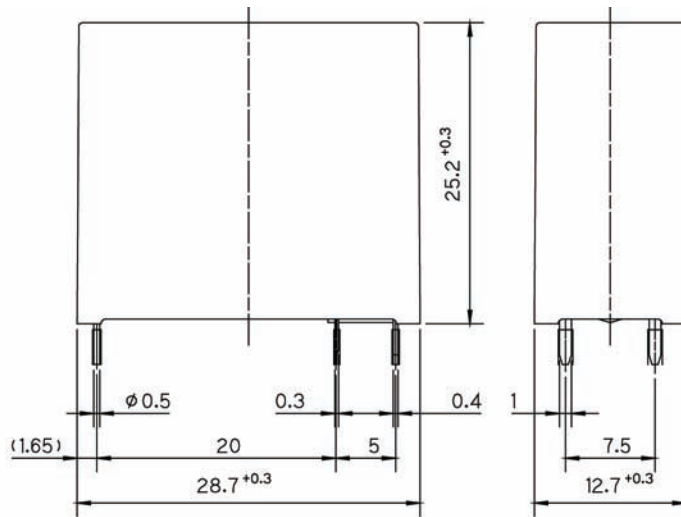
■ SAFETY STANDARDS

Type	Compliance	Contact rating
UL	UL 508	5A, 277VAC, resistive TV-3, 125VAC
VDE	0435	5A, 250VAC (cosφ=1) 70°C

FTR-F4G SERIES

■ DIMENSIONS

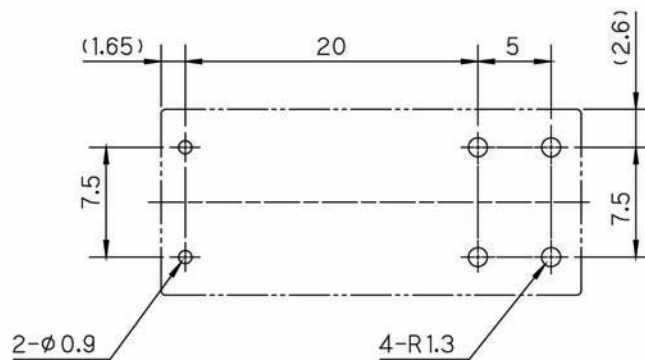
● Dimensions



● Schematics (BOTTOM VIEW)



● PC board pattern (BOTTOM VIEW)



Unit: mm

RoHS Compliance and Lead Free Information

1. General Information

- All signal and power relays produced by Fujitsu Components are compliant with RoHS directive 2002/95EC including amendments.
- Cadmium as used in electrical contacts is exempted from the RoHS directives on October 21st, 2005. (Amendment to Directive 2002/95/EC)
- All of our signal and power relays are lead-free. Please refer to Lead-Free Status Info for older date codes at: <http://www.fujitsu.com/us/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 Profile

- Recommended solder Sn-3.0Ag-0.5Cu.

Flow Solder condition:

Pre-heating: maximum 120°C
Soldering: dip within 5 sec. at
260°C solder bath

Solder by Soldering Iron:

Soldering Iron
Temperature: maximum 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.

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