

POWER RELAY

1 POLE - 16A LOW PROFILE TYPE

FTR-K1 Series

■ FEATURES

- Low profile (height: 15.7mm)
- HIGH ISOLATION5
Insulation Distance (between coil and contacts: 10mm min.)
Dielectric strength: 5KV
Surge strength: 10KV
- HEAT RESISTANCE, FLAMMABILITY
- UL, Flammability 94V-0
- Cadmium free contacts
- SAFETY STANDARDS
UL, CSA, VDE, SEMKO approved
UL, CSA TV-5 rating approved



■ ORDERING INFORMATION

[Example] FTR-K1 C K 005 W - **
 (a) (b) (c) (d) (e) (f)

(a)	Series Name	FTR-K1: FTR-K1 Series
(b)	Contact Arrangement	A : 1 form A (SPST-NO) C : 1 form C (SPDT) (standard type "K" only)
(c)	Coil Type / Enclosure	K : Standard / Flux free L : High Sensitive / Flux free
(d)	Nominal Voltage	005 : 5 VDC, 006 : 6VDC, 009 : 9VDC 012 : 12VDC 022 : 022VDC (standard type only), 024 : 24VDC, 048 : 48VDC
(e)	Contact Material / TV type	W : AgSnO2 (Provide with "CK" pr "AL") T : AgSnO2 / TV-5 rated, 1form A standard type "K" only
(f)	Contact rated / Terminal pitch/ Temperature range	None :16A/5.0mm/-40 to +85°C (standard type "K: only) -LB :10A/5.0mm/-40 to +105°C (high sensitive type "L")

Actual marking does not carry the type name : "FTR"
E.g.: Ordering code: FTR-K1CK012W Actual marking: K1CK012W

FTR-K1 SERIES

■ SPECIFICATIONS

Item		FTR-K1CK () W (Standard)	FTR-K1AK () T (Standard)	FTR-K1AL () W-LB (High sensitive)	
Contact	Arrangement	1 form C	1 form A		
	Material	Silver alloy			
	Resistance (initial)	Maximum 100mΩ (at 1A 6VDC)			
	Rating	16A, 250VAC/24VDC		10A 250VAC	
	Maximum Carrying Current	16A		10A	
	Maximum Switching Rating	4,000VA / 384W		2,500VAC	
	Maximum Switching Voltage	440VAC / 300VDC		440 VAC	
	Minimum Switching Load*1	10mA 5VDC			
	Maximum Switching Current	16A		10A	
	Minimum Inrush Current	---	120VAC 78A(TV5)		
Coil	Operating Temperature	-40° C to +85° C (no frost)		-40° C to +105° C (no frost)	
Time Value	Operate Time (without diode)	Maximum 15ms (at nominal voltage, no bounce)			
	Release Time (without diode)	Maximum 5ms (at nominal voltage, no bounce)			
Insulation	Resistance (at 500VDC)	Minimum 1,000 Mohms			
	Dielectric Strength	Between open contacts	1,000 VAC 1 minute		
		Between coil and contacts	5,000 VAC 1 minute		
	Surge Strength	10,000V (at 1.2 x 50 micro sec.)			
Life	Mechanical	20 x 10 ⁶ operations minimum			
	Electrical	AC contact rating	50 x 10 ³ ops. minimum	100 x 10 ³ ops. minimum	150 x 10 ³ ops. min. (at 105 degrees)
		DC contact rating	30 x 10 ³ ops. min.	100 x 10 ³ ops. min.	---
		Lamp load (TV-5)	---	25 x 10 ³ ops. min.	---
Other	Vibration Resistance	Misoperation	10 to 500 Hz, 5gn (double amplitude of 0.35mm) 10 to 55 Hz at double amplitude of 0.7mm		
		Endurance	10-55 Hz, (double amplitude of 1.5mm)		
	Shock Resistance	Misoperation	Min. 100m/s ² (11±1ms)		
		Endurance	Min. 1,000m/s ² (6±1ms)		
	Weight	Approximately 13g			

*1 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-K1 SERIES

■ COIL DATA CHART

Standard type (type K)

Coil Number	Nominal Voltage	Coil Resistance (± 10%)	Must Operate Voltage	Must Release Voltage	Nominal Power
005	5VDC	62 Ω	3.5VDC	0.5VDC	400mW
006	6VDC	90 Ω	4.2VDC	0.6VDC	400mW
009	9VDC	202 Ω	6.3VDC	0.9VDC	400mW
012	12VDC	360 Ω	8.4VDC	1.2VDC	400mW
022	22VDC	1,210 Ω	15.4VDC	2.2VDC	400mW
024	24VDC	1,440 Ω	16.8VDC	2.4VDC	400mW
048	48VDC	5,360 Ω	33.6VDC	4.8VDC	430mW

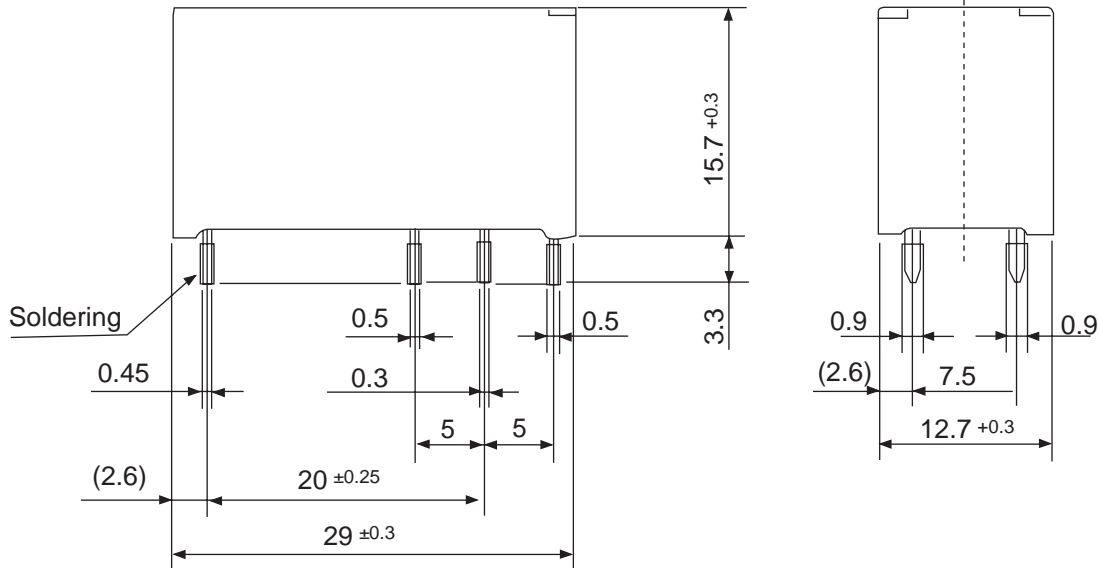
High sensitive type (type L)

Coil Number	Nominal Voltage	Coil Resistance (± 10%)	Must Operate Voltage	Must Release Voltage	Nominal Power
005	5VDC	100 Ω	3.75VDC	0.5VDC	250mW
006	6VDC	145 Ω	4.5VDC	0.6VDC	250mW
009	9VDC	325 Ω	6.75VDC	0.9VDC	250mW
012	12VDC	575 Ω	9VDC	1.2VDC	250mW
024	24VDC	2,310 Ω	18VDC	2.4VDC	250mW
048	48VDC	9,216 Ω	36VDC	4.8VDC	250mW

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

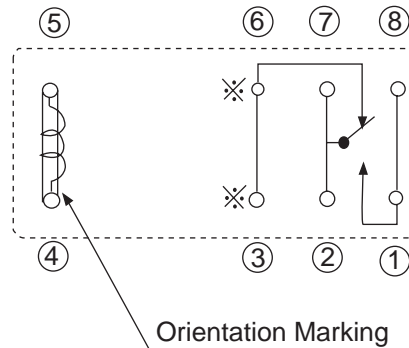
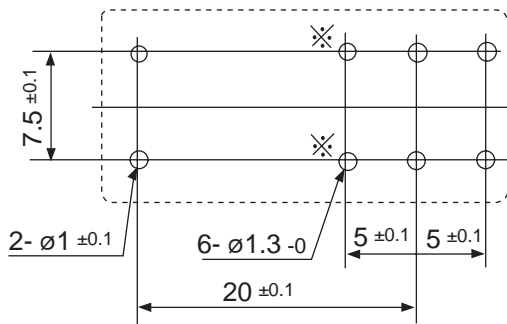
FTR-K1 SERIES

■ DIMENSIONS



● PC Board mounting hole layout (BOTTOM VIEW)

● Schematics (BOTTOM VIEW)



Note: In case of 1 form A, there is no "Stationary contact arm (NC)" (✳).

Unit: mm

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
 Web: 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: marcom@fcai.fujitsu.com
 Web: www.fcai.fujitsu.com

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
 Web: www.fceu.fujitsu.com

Asia Pacific
 Fujitsu Components Asia Ltd.
 102E Pasir Panjang Road
 #04-01 Citilink Warehouse Complex
 Singapore 118529
 Tel: (65) 6375-8560
 Fax: (65) 6273-3021
 Email: fcai@fcal.fujitsu.com
www.fcal.fujitsu.com