

SOLID STATE RELAY

1 Maximum Load current 1A

FTR-SL SERIES

RoHS compliant

■ FEATURES

- Ultra slim and light weight, SIL terminal type
 - size: 5.0 (W) x 28.0 (L) x 15.0 (H): 140mm mounting area
 - weight: approximately 4.0g
- Internal varistor and snubber circuit
- High insulation (between input and output) - dielectric strength 2500Vrms
- Include a zero cross circuit as standard equipment
- High frequency switching, long life and maintenance free
- High impact/vibration resistance, good for automatic assembly, washable
- RoHS compliant since date code: 6202 (February 2nd, 2006)

Please see page 5 for more information



■ ORDERING INFORMATION

[Example] FTR-SL P K 024 W
 (a) (b) (c) (d) (e)

(a)	Series Name	FTR-SL : FTR-SL Series
(b)	Load Voltage	P : AC type
(c)	Input or Output Type	K : Output type
(d)	Nominal Voltage	005 : 5 VDC 012 : 12 VDC 024 : 24VDC 060 : 60 VDC
(e)	Zero Cross Circuit Output Protection	W : With Zero Cross Circuit and Varistor

Note: The part number on the relay cover does not include 'FTR'
 Example: Ordering part number: FTR-SL-PK012W
 Stamped part number: SLPK012W

FTR-SL SERIES

■ SPECIFICATION

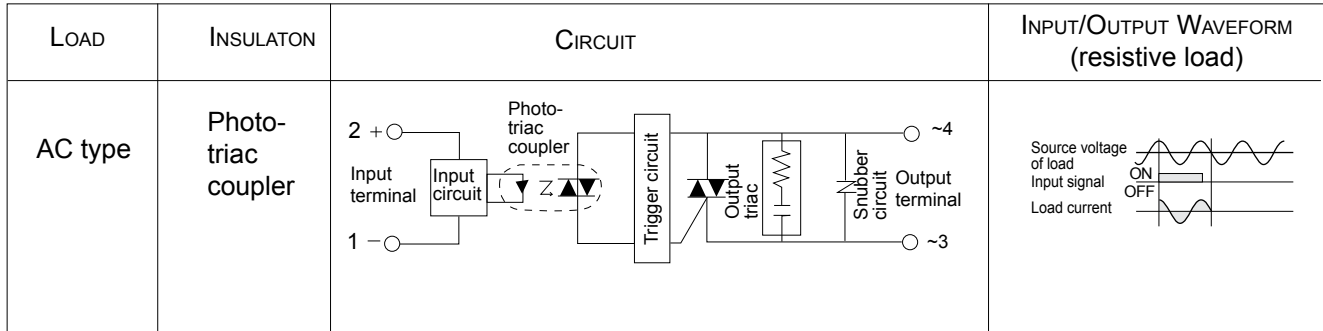
Item		FTR-SLPK005W	FTR-SLPK012W	FTR-SLPK024W	FTR-SLPK060W
Input side	Nominal Voltage	5 VDC	12 VDC	24 VDC	60 VDC
	Operate Range	3.75 to 6 VDC	9 to 14.4 VDC	18 to 28.8 VDC	48 to 66 VDC
	Must operate voltage	3.75 VDC	9.0 VDC	18 VDC	48 VDC
	Must release voltage	1.25 VDC	3.6 VDC	8.4 VDC	18 VDC
	Input Impedance	560Ω ±10%	1.3KΩ ±10%	2.4KΩ ±10%	10KΩ ±10%
Output side	Load voltage range	24 to 250 AC Vrms			
	Max. load current	1 Arms			
	1 cycle surge current	50 A (60 Hz, 1 cycle)			
	max. off-state leakage current	max. 1 mArms (60Hz, 220 AC Vrms)			
	max. on-state voltage drop	max. 1.3 V (1Arms, 50Hz)			
Temperature	Storage temperature range	-40 to +100° C (no frost)			
	Operating temperature range	-30 to +85° C (no frost)			
Time	Max. operating time	max. 1/2 cycle + 1ms			
	Max. release time	max. 1/2 cycle + 1ms			
Output protection		Snubber circuit and varistor			
Other	Case color	Black			
	weight	Approximately 4.0g			

■ INSULATION

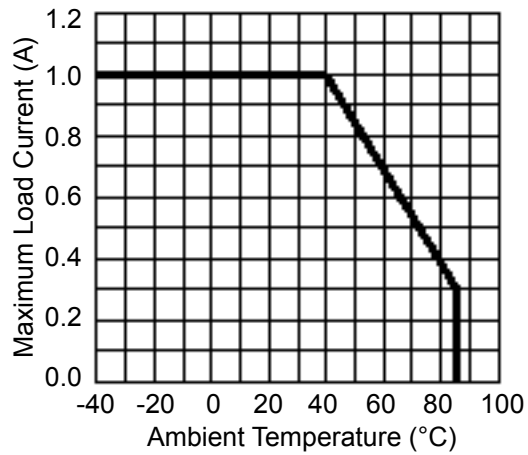
Item	AC 1.0A type	Note
Resistance (initial)	Minimum 1,000 MΩ (500VDC)	Input-output
Surge Voltage	2,500V rms 1 min.	

FTR-SL SERIES

■ BLOCK DIAGRAM

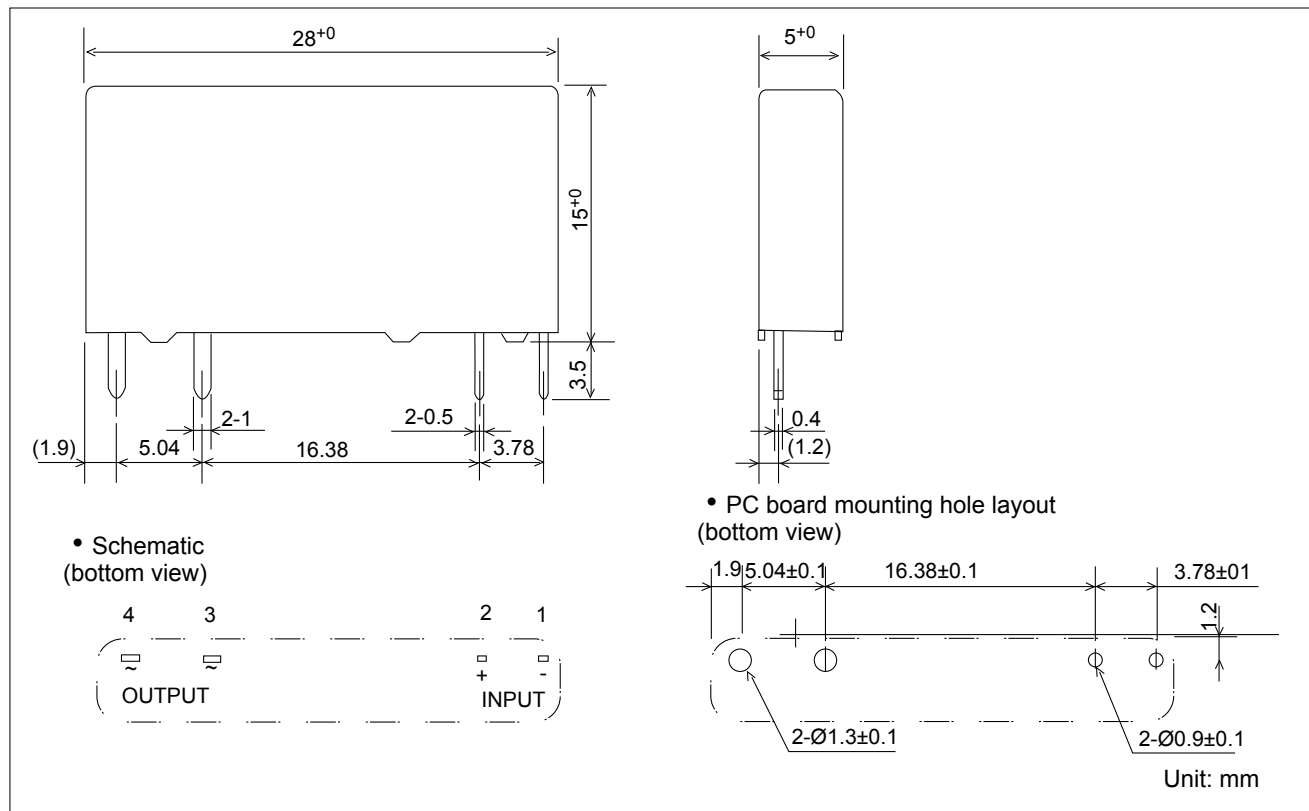


■ CHARACTERISTIC DATA



FTR-SL SERIES

■ DIMENSIONS



■ NOTES

Polarity of terminals are pre-determined. Please design your circuit accordingly.

■ PACKAGE

Style	Quantity/tube (pcs)	MOQ (pcs)
Tube	15	300

RoHS Compliance and Lead Free Relay Information

1. General Information

- Relays produced after the specific date code that is indicated on each data sheet are lead-free now. Most of our signal and power relays are lead-free. Please refer to Lead-Free Status Info. (<http://www.fujitsu.com/us/downloads/MICRO/fcai/relays/lead-free-letter.pdf>)
- Lead free solder paste currently used in relays is Sn-3.0Ag-0.5Cu.
- All signal and most power relays also comply with RoHS. Please refer to individual data sheets. Relays that are RoHS compliant do not contain the 5 hazardous materials that are restricted by RoHS directive (lead, mercury, chromium IV, PBB, PBDE).
- It has been verified that using lead-free relays in leaded assembly process will not cause any problems (compatible).
- "LF" is marked on each outer and inner carton. (No marking on individual relays).
- To avoid leaded relays (for lead-free sample, etc.) please consult with area sales office.
- We will ship leaded relays as long as the leaded relay inventory exists.

Note: Cadmium was exempted from RoHS on October 21, 2005. (Amendment to Directive 2002/95/EC)

2. Recommended Lead Free Solder Profile

- Recommended solder paste Sn-3.0Ag-0.5Cu.

Reflow Solder condition

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.

4. Tin Whisker

- Dipped SnAgCu solder is known as low risk tin whisker. No considerable length whisker was found by our in house test.

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: components@us.fujitsu.com
Web: <http://www.fujitsu.com/us/services/edevices/components/>

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: emea.fujitsu.com/components/

Asia Pacific

Fujitsu Components Asia Ltd.
102E Pasir Panjang Road
#01-01 Citilink Warehouse Complex
Singapore 118529
Tel: (65) 6375-8560
Fax: (65) 6273-3021
Email: fcal@fcal.fujitsu.com
Web: <http://www.fujitsu.com/sg/services/micro/components/>

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