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

	FTR-SL	P	K	024	W
[Example]	(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

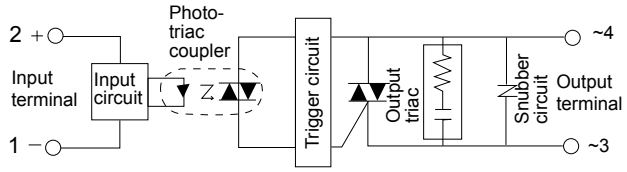
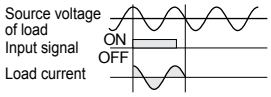
■ SPECIFICATION

Item		FTR-SLPK005W	FTR-SLPK012W	FTR-SLPK024W	FTR-SLPK060W
Iput 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%
Outpt 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			

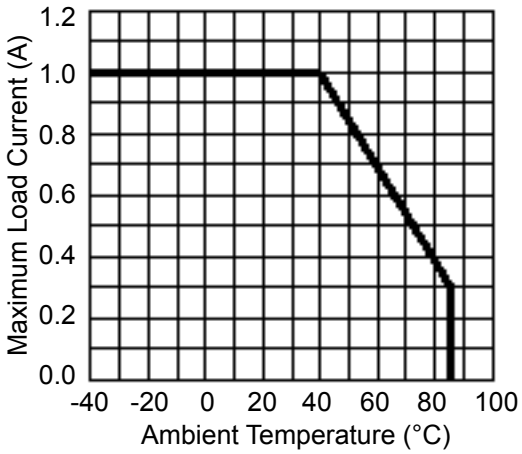
■ INSULATION

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

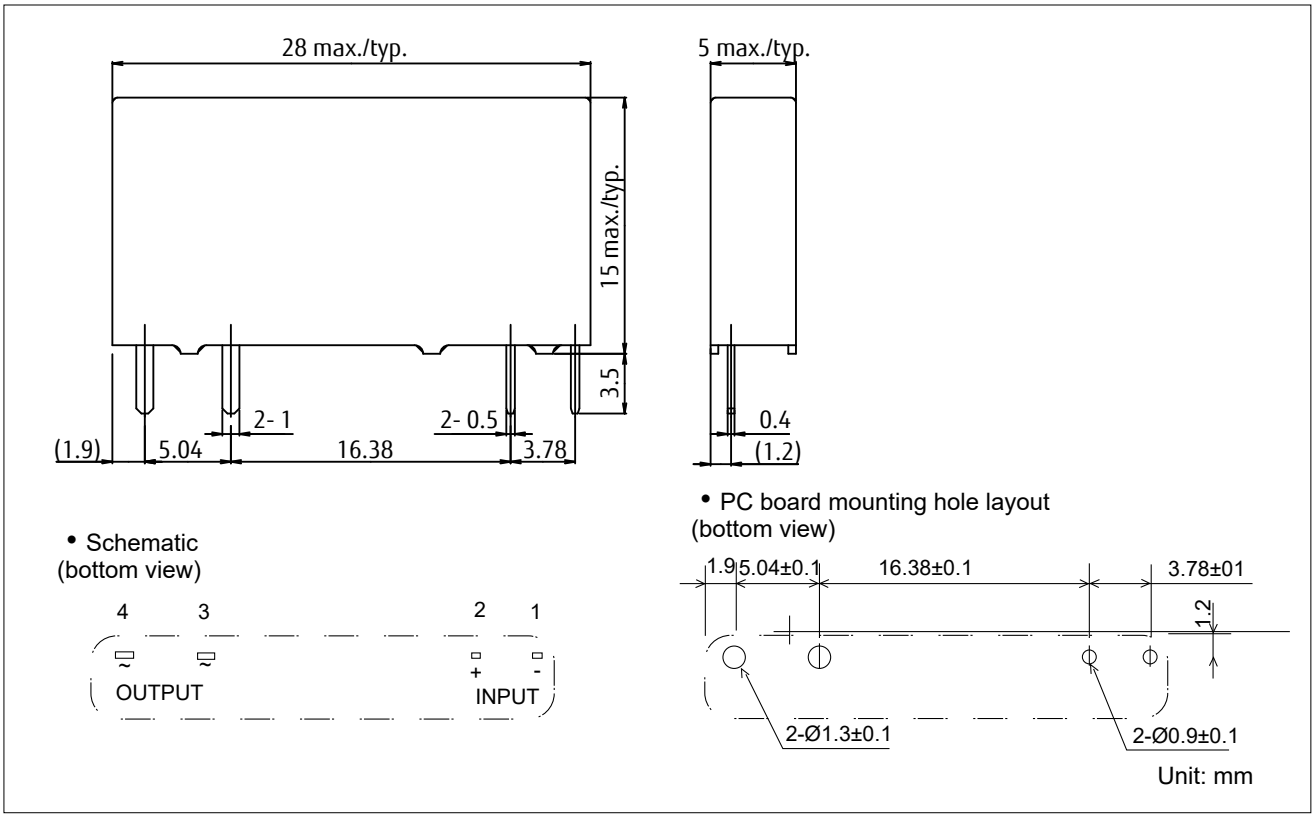
■ BLOCK DIAGRAM

LOAD	INSULATON	CIRCUIT	INPUT/OUTPUT WAVEFORM (resistive load)
AC type	Photo-triac coupler		

■ CHARACTERISTIC DATA



■ DIMENSIONS



■ NOTES

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

■ PACKAGE

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e b u T 5 1	0 0 3

CAUTIONS

- All values mentioned in this datasheet are provided under ideal conditions. Please perform the confirmation test before actual use.
- Reflow soldering is prohibited.
- Do not use relays in the atmosphere with sulfide gas, chloride gas or nitric oxide. Contact resistance may increase.
- Do not use silicon or silicon-containing product or materials near relays. It may cause contact failure.

GENERAL INFORMATION

1. ROHS Compliance

- All relays produced by Fujitsu Components are compliant with RoHS directive 2011/65/EU, including commission delegated directive 2015/863.

2. Recommended lead free solder condition

- 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.
- Recommended solder for assembly: Sn-3.0Ag-0.5Cu.

Flow Solder Condition:

Pre-Heating:	maximum 120˚C within 90 sec.
Soldering:	dip within 5 sec. at 255°C±5°C solder bath

Relay must be cooled by air immediately after soldering

Solder by Soldering Iron:

Soldering Iron:	30-60W
Temperature:	maximum 340-360˚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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