

# POWER RELAY

## 1 POLE - 6A (Medium Load Control)

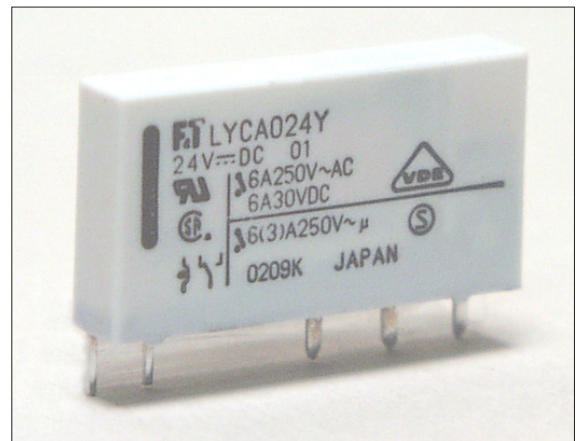
### SLIM TYPE

### FTR-LY Series

RoHS compliant

#### ■ FEATURES

- Slim(15.0mm(h) x 5.0 mm(w) x 28.0mm (l))
- Mounting space: 140mm<sup>2</sup>, weight: 5.0g
- High insulation in small package (between coil and contacts)
  - Insulation Distance: 8mm min.)
  - Dielectric strength: 4,000 VAC
  - Surge strength: 6,000V
- Plastic materials
  - UL94 flame class V-0
  - CTI>250 (UL CTI level class 2)
- UL, CSA, VDE, SEMKO under approval
  - UL: conforms to UL508, 1604
  - CSA: conforms to CSA22.2 No.14
  - SEMKO: conforms to EN61058-1, 61095
  - VDE: conforms to VDE 0435, 0631, 0700
- Contains no lead and features cadmium-free contacts
- Socket type available
- RoHS Compliant since production



#### ■ ORDERING INFORMATION

[Example]     FTR-LY   A   A   005   Y   SK  
                   (a)   (b)   (c)   (d)   (e)   (f)

(a)	Series Name	FTR-LY : FTR-LY Series
(b)	Contact Arrangement	A : 1 form A     P: 1 form A (Right Angle Type) C : 1 form C     R: 1 form C (Right Angle Type)
(c)	Coil Type / Enclosure	A : Standard / Plastic sealed
(d)	Nominal Voltage 012	005 : 5 VDC, 006 : 6VDC, : 12VDC, 024 : 24VDC, 048 : 48VDC
(e)	Contact Material	Y : Silver alloy V : Gold plated silver alloy
(f)	Socket Type	NIL : PCB mounting type SK : Socket mounting type (contact arrangement A&C only)

Actual marking does not carry the type name : "FTR" and "SK"  
 E.g.: Ordering code: FTR-LYAA012Y     Actual marking: LYAA012Y

# FTR-LY SERIES

## ■ SPECIFICATIONS

Item		FTR-LY		
Contact	Arrangement	1 form C	1 form A	
	Material	Gold plated silver alloy, silver alloy		
	Style	Single		
	Resistance (initial)	Maximum 100m ohm s		
	Rating	6A 250VAC or 6A 30VDC		
	Maximum Carrying Current	6A		
	Maximum Switching Power	1,500VA		
	Maximum Switching Voltage	250VAC		
	Minimum Switching Load*1	10mA 5VDC		
	Maximum Switching Current	6A		
Coil	Operating Temperature	-40° C to +85° C (no frost)		
	Rating Power	170m W		
	Must operate power	75mW		
	Max. allowable voltage	150% of nominal voltage (at 20 deg.)		
Time Value	Operate Time (without diode)	Maximum 8ms (at nominal voltage, no bounce)		
	Release Time (without diode)	Maximum 4m s (at nominal voltage, no bounce)		
Insulation	Resistance (at 500VDC)	Minimum 1,000 Mohm s		
	Dielectric Strength	Between open contacts	1,000 VAC 1 minute	
		Between coil and contacts	4,000 VAC 1 minute	
	Surge Strength	6,000V (at 1.2 x 50 micro sec.)		
Life	Mechanical	10 x 10 <sup>6</sup> operations minimum		
	Electrical	AC contact rating	60 x10 <sup>3</sup> ops. min. (N.O.) 30 x10 <sup>3</sup> ops. min. (N.C.) at 6A 250VAC/30VDC	
Other	Vibration Resistance	Misoperation	10 to 55 Hz, at double amplitude of 1.0mm	
		Endurance	10-55 Hz, at double amplitude of 1.5m m	
	Shock Resistance	Misoperation	Min. 50m/s <sup>2</sup> (11±1ms)	Min. 100m/s <sup>2</sup> (11±1ms)
		Endurance	Min. 1,000m/s <sup>2</sup> (6±1ms)	
	Weight	Approximately 4g		

# FTR-LY SERIES

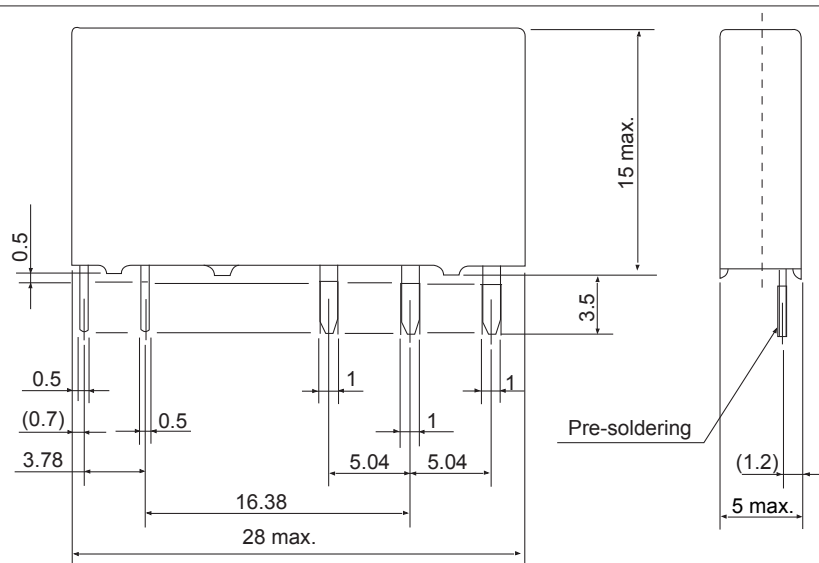
## COIL DATA CHART

Model		Nominal Voltage	Coil Resistance ( $\pm 10\%$ )	Must Operate Voltage	Must Release Voltage	Nominal Power
1 form A type	1 form C type					
FTR-LYAA005Y(-SK)	FTR-LYCA005Y(-SK)	5VDC	147 $\Omega$	3.3VDC	0.25VDC	170mW
FTR-LYAA006Y(-SK)	FTR-LYCA006Y(-SK)	6VDC	212 $\Omega$	4.0VDC	0.3VDC	170mW
FTR-LYAA012Y(-SK)	FTR-LYCA012Y(-SK)	12VDC	847 $\Omega$	8.0VDC	0.6VDC	170mW
FTR-LYAA024Y(-SK)	FTR-LYCA024Y(-SK)	24VDC	3,388 $\Omega$	15.9VDC	1.2VDC	170mW
FTR-LYAA048Y(-SK)	FTR-LYCA048Y(-SK)	48VDC	10,600 $\Omega$	31.7VDC	2.4VDC	217mW
FTR-LYPA005Y	FTR-LYRA005Y	5VDC	147 $\Omega$	3.3VDC	0.25VDC	170mW
FTR-LYPA006Y	FTR-LYRA006Y	6VDC	212 $\Omega$	4.0VDC	0.3VDC	170mW
FTR-LYPA012Y	FTR-LYRA012Y	12VDC	847 $\Omega$	8.0VDC	0.6VDC	170mW
FTR-LYPA024Y	FTR-LYRA024Y	24VDC	3,388 $\Omega$	15.9VDC	1.2VDC	170mW
FTR-LYPA048Y	FTR-LYRA048Y	48VDC	10,600 $\Omega$	31.7VDC	2.4VDC	217mW

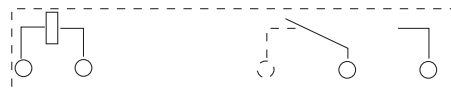
Note: All values in the table are measured at 20°C.

## DIMENSIONS

Thru hole type



Drilling Plan (BOTTOM VIEW)



Wiring Diagram (BOTTOM VIEW)

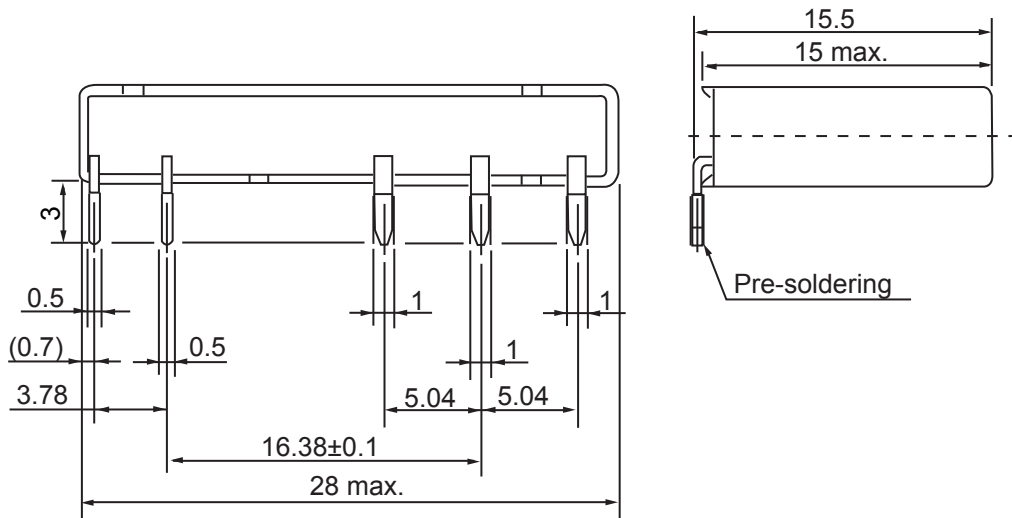
\*1: This terminal is not applicable for 1 form A type

Unit: mm

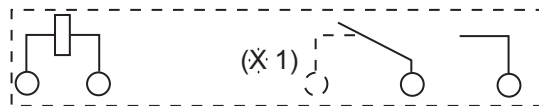
# FTR-LY SERIES

## ■ DIMENSIONS

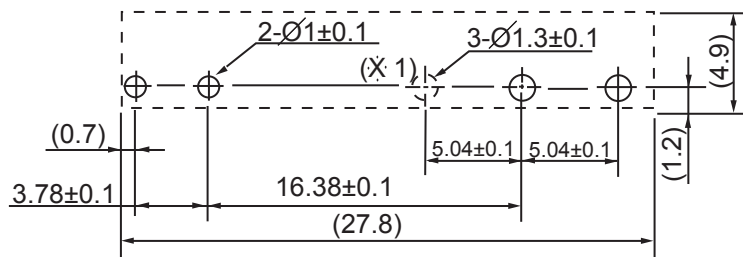
Right Angle type



Drilling Plan  
(Bottom view)



Wiring Diagram  
(Bottom view)



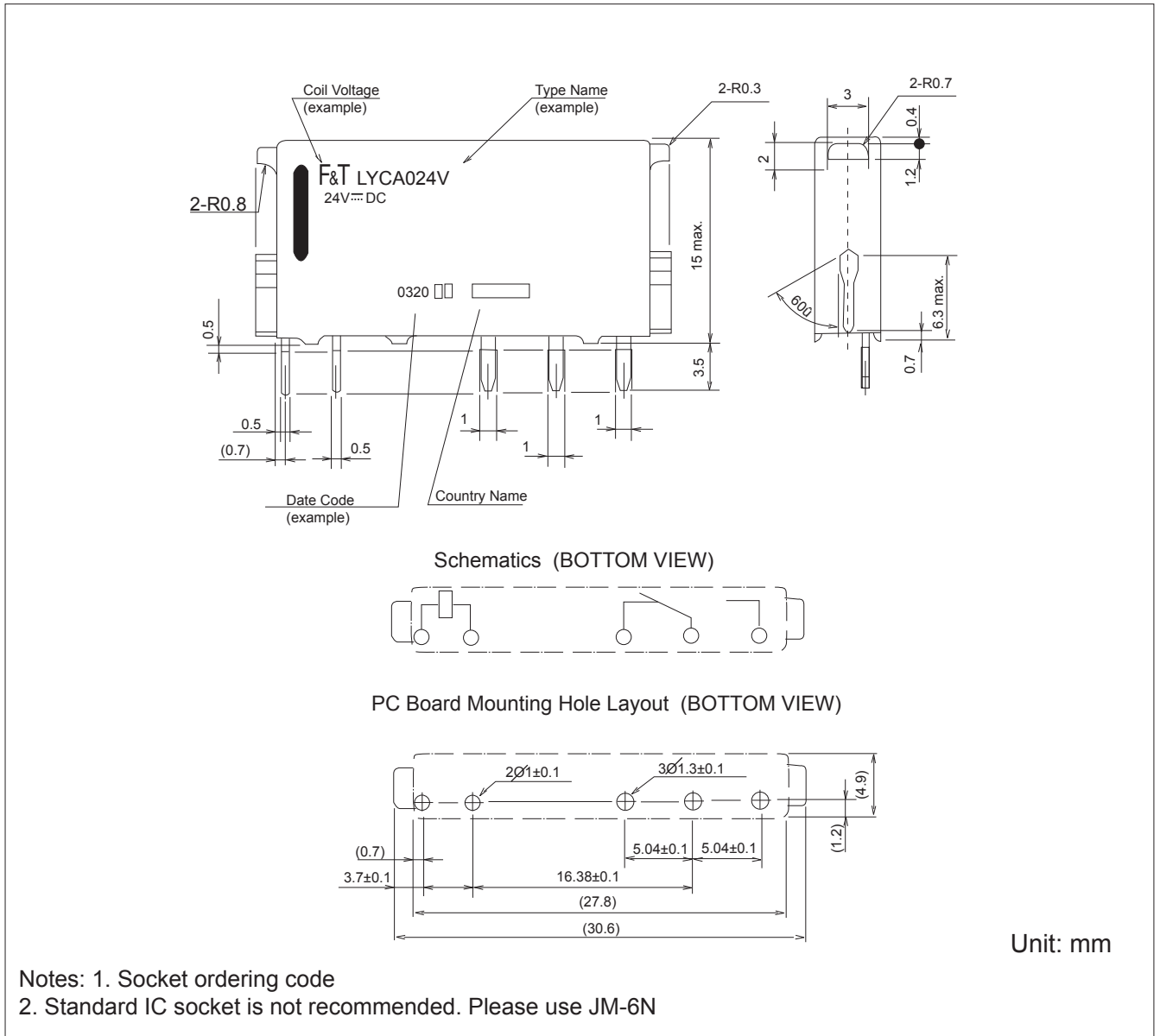
(X 1): this terminal is not applicable for 1 form A type

Unit: mm

# FTR-LY SERIES

## ■ DIMENSIONS

Socket type



## 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.

# FTR-LY SERIES

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