

## POWER RELAY

**2 Poles - 8A Polarized Latching Relay****FTR-F1L Series****RoHS compliant**

## ■ FEATURES

- Low profile
  - Height : **16.5mm**
- High Isolation
  - Insulation distance : **8mm** (between coil and contacts)
  - Dielectric strength : **5,000VAC** (between coil and contacts)
  - Surge strength : **10,000V** (between coil and contacts)
- Plastic Materials
  - UL94 flame class V-0
- **Cadmium Free** Relay
- **Lead Free** Relay



## ■ SAFETY STANDARD (Under approval)

UL508

C22.2 No.14

VDE 0435, 0631, 0860

Contact Rating	8A 24VDC, resistive 50,000operations
	8A 250VAC, resistive 50,000operations

## ■ NOMENCLATURE

Part No.

<u>FTR-F1</u>	<u>L</u>	<u>D</u>	<u>C</u>	<u>A</u>	<u>012</u>	<u>V</u>	_____
↑	↑	↑	↑	↑	↑	↑	Contact rating R : 8A
_____	_____	_____	_____	_____	_____	_____	Coil rated voltage
_____	_____	_____	_____	_____	_____	_____	Coil power A : Standard
_____	_____	_____	_____	_____	_____	_____	Contact arrangement A : 2 Form A
_____	_____	_____	_____	_____	_____	_____	C : 2 Form C
_____	_____	_____	_____	_____	_____	_____	Coil type None : 1coil
_____	_____	_____	_____	_____	_____	_____	D : 2coils
_____	_____	_____	_____	_____	_____	_____	Operating function : Latching type
_____	_____	_____	_____	_____	_____	_____	Relay type name : FTR-F1

## ■ COIL DATA

Rated Voltage VDC	1 coil			2 coils		
	Operating Range		Coil Resistance Ohm +/-10%	Operating Range		Coil Resistance ohm +/-10%
	Min. VDC	Max. VDC		Min. VDC	Max. VDC	
5	3.5	9	62.5	3.5	9	41.7
12	8.4	21.2	360	8.4	21.2	240
24	16.8	42.2	1,440	16.8	42.2	960

All values in the table are measured at 20 degree C.

## ■ SPECIFICATION

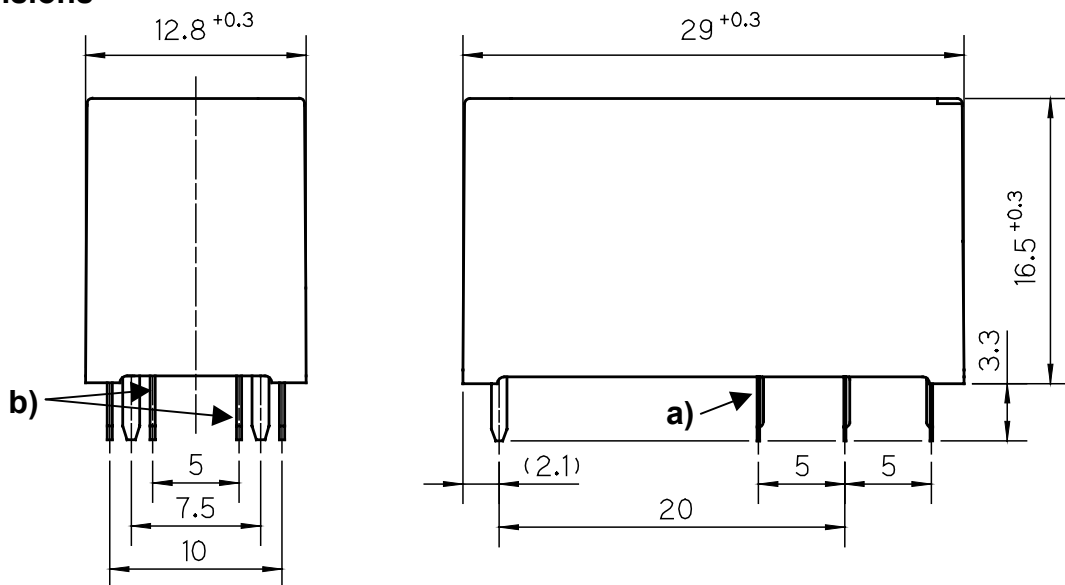
Item		Contents	
Contact	Arrangement	2 form A / 2 form C	
	Material	AgSnO <sub>2</sub>	
	Style	Single	
	Resistance (initial)	Maximum 100mohm (at 1A 6VDC)	
	Rating (resistive)	8A 250VAC / 24VDC	
	Maximum Carrying Current	8A	
	Maximum Switching Power	2,000VA / 192W	
	Maximum Switching Voltage	400VAC / 300VDC	
	Maximum Switching Load <sup>*1</sup>	10mA 5VDC	
Coil	Nominal Power (at 20 degree C)	1coil 400mW 2coils 600mW	
	Operating Temperature	-40 to +85 degree C (No frost)	
Time Value	Operate and Release Time (at nominal voltage, without bounce)	Maximum 15ms	
	Min. Coil Excitation Time (at nominal voltage)	30ms	
Insulation	Resistance (at 500VDC)	Minimum 1,000Mohm	
	Dielectric Strength	Between Open Contacts	1,000VAC 1minute
		Adjacent contacts	3,000VAC 1minute
	Between Coil and Contacts	5,000VAC 1minute	
Surge Strength (Between Coil and Contacts)	10,000V (1.2 x 50 μs)		
Life	Mechanical	3 x 10 <sup>6</sup> Operations Minimum	
	Electrical	50 x 10 <sup>3</sup> Operations Minimum	
Vibration resistance	Misoperation	10 to 55Hz (double amplitude of 1.65mm)	
	Endurance	10 to 55Hz (double amplitude of 3.3mm)	
Shock resistance	Misoperation	100m/s <sup>2</sup> (11+/-1ms)	
	Endurance	1,000m/s <sup>2</sup> (6+/-1ms)	

<sup>\*1</sup> 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

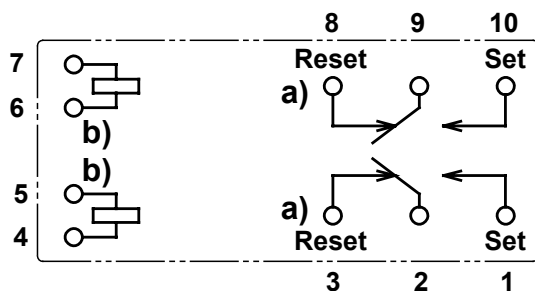
## ■ COIL POLARITY

Version	1 coil		2 coils			
Terminal No.	4	7	4	5	6	7
Set	-	+			-	+
Reset	+	-	+	-		

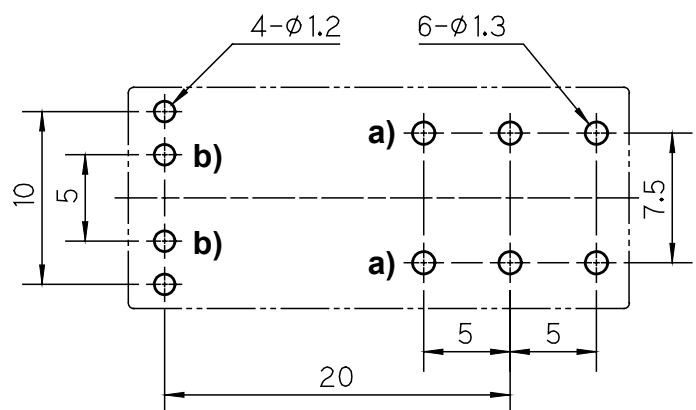
## ● Dimensions



## ● Schematics (BOTTOM VIEW)



## ● PC board mounting hole layout (BOTTOM VIEW)



a) for 2 form C version only  
b) for 2 coils version only

Unit : mm

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