

FTR-P6 Series

■ Specifications

Item			FTR-P6	
				Remarks / conditions
Contact data	Configuration		1 form C	
	Material		Silver-tin oxide	
	Voltage drop		Max. 100 mV	At 1A, 12VDC (resistance)
	Contact rating		25A, 14VDC	Motor locked
	Max. carrying current		25A / 1h	25°C, nominal voltage applied to coil
	Max. inrush current		35A	
	Min. switching load *		1A, 6VDC	Reference
Coil	Coil power consumption		Approx. 0.8W	At rated coil voltage
	Operating temperature range		-40°C ~ +85°C	No frost
	Storage temperature range		-40°C ~ +100°C	No frost
	Operating humidity		45 to 85% RH	
Timing data	Operate		Max. 10ms	
	Release		Max. 5ms	
Life	Mechanical		Min. 1 x 10 ⁶ operations	
	Electrical		Min. 100 x 10 ³ operations	14VDC, 25A locked motor
Insulation	Insulation resistance		Min. 100MΩ at 500VDC	Initial
	Dielectric withstanding voltage	Open contacts	500VAC (50/60Hz), 1 minute	
		Coil contact	500VAC (50/60Hz), 1 minute	
Other	Vibration resistance	Misoperation	10 to 200Hz, 44m/s ² (4.5G), constant acceleration	
		Endurance	10 to 200Hz, 44m/s ² (4.5G), constant acceleration	
	Shock resistance	Misoperation	Min. 100m/s ² (11 ± 1ms)	
		Endurance	Min. 1,000m/s ² (6 ± 1ms)	
	Dimensions / weight		9.0 x 12.0 x 10.3 mm / approx. 3.3g	

*: Minimum switching loads mentioned above are reference values. Please perform the confirmation test with actual load before production since reference values may vary according to switching frequencies, environmental conditions and expected reliability levels.

Note: Care shall be taken on the heat generated on PC board when maximum carrying current exceeds 10A. Please perform the confirmation test with actual conditions.

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■ Coil Data

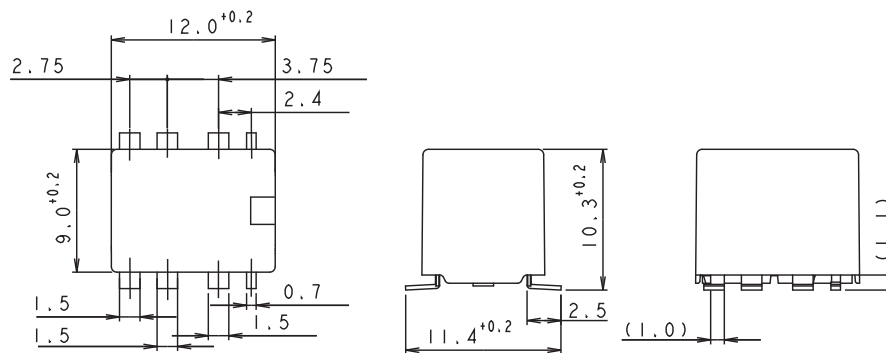
Coil code	Rated Coil Voltage (VDC)	Coil Resistance +/-10% (Ω)	Must Operate Voltage* (VDC)	Must Release Voltage* (VDC)
010	10	125	6.5 (at 20°C) 8.2 (at 85°C)	0.8 (at 20°C) 1.0 (at 85°C)
012	12	180	7.3 (at 20°C) 9.2 (at 85°C)	1.0 (at 20°C) 1.3 (at 85°C)

Note: All values in the table are valid at 20°C and zero contact current, unless otherwise specified.

*: Specified operated values are valid for pulse wave voltage.

■ Dimensions

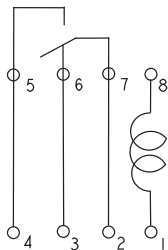
- Dimensions



*Dimensions of the terminals do not include thickness of pre-solder.

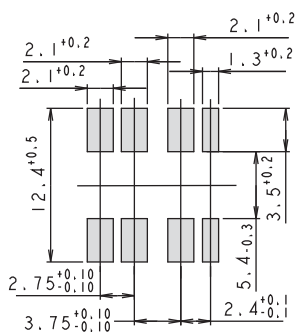
- Schematics

(TOP VIEW)



- PC Board Mounting Hole Layout

(TOP VIEW)

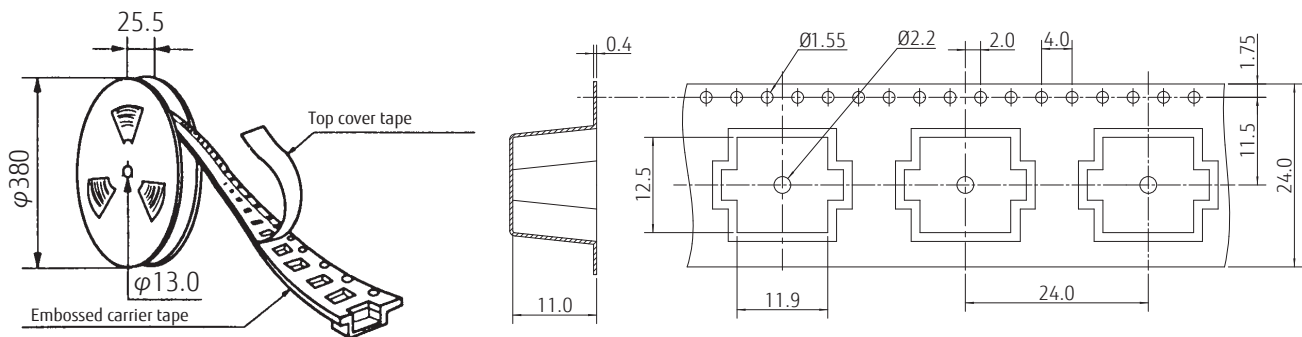


(): Reference value

Unit: mm

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■ Packaging

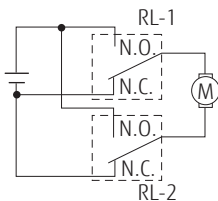


■ Characteristic Data (Reference)

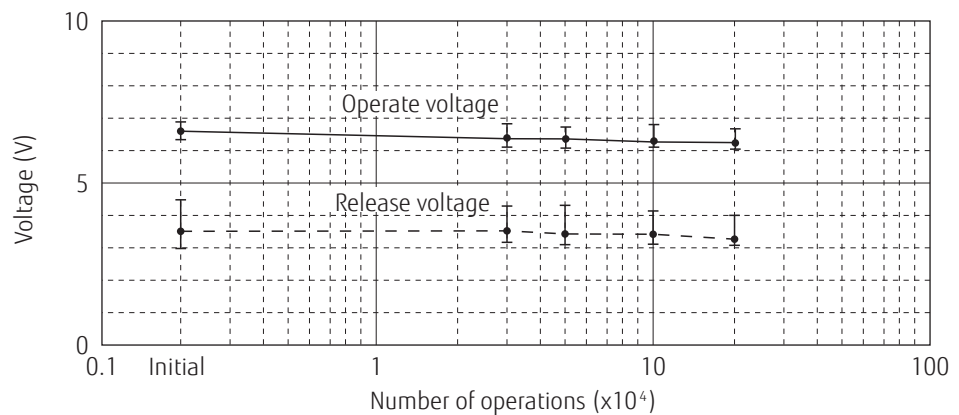
Life test (example)

- Test condition
25A 16VDC
motor lock
100,000 operations min.
0.5 sec. ON, 5.5 sec. OFF

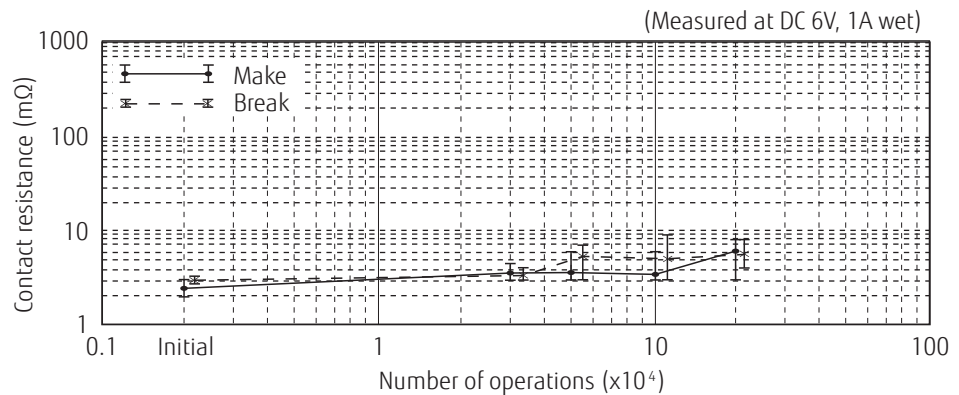
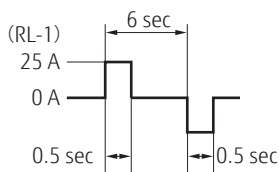
- Test circuit



- Operate / release voltage



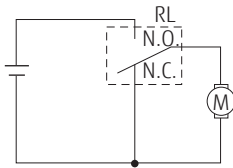
- Current wave form



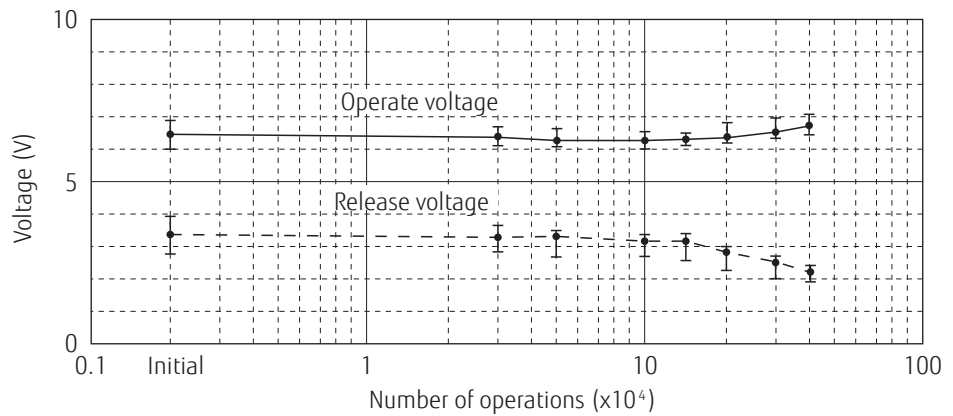
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- Test condition
Inrush current 20A, 16VDC
motor free
400,000 operations min.
1.5 sec. ON, 2.0 sec. OFF

- Test circuit

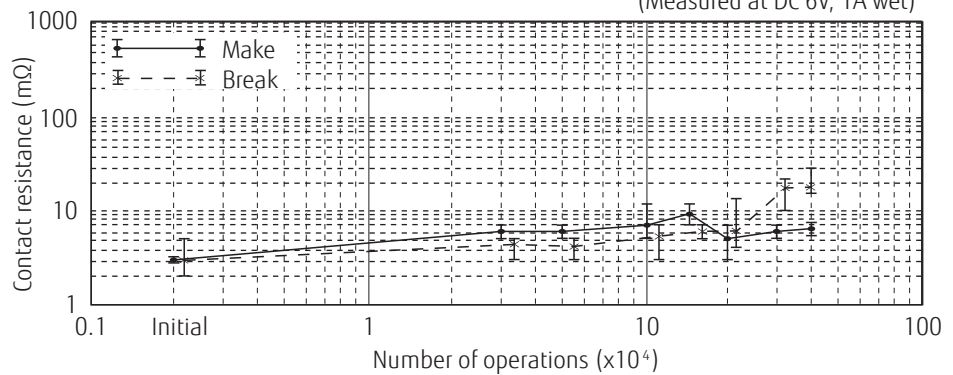
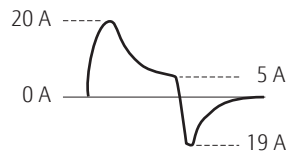


- Operate / release voltage

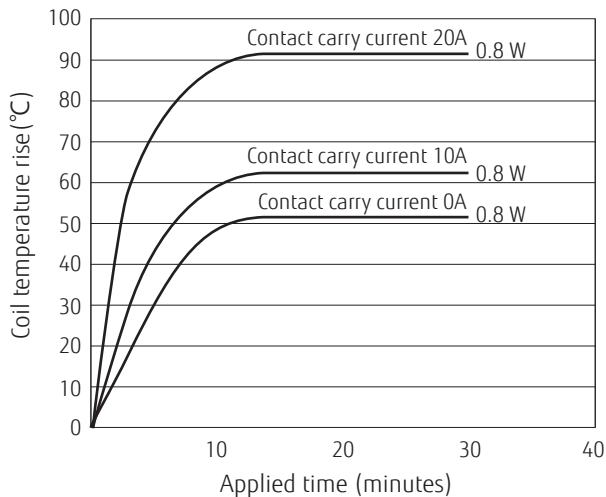


(Measured at DC 6V, 1A wet)

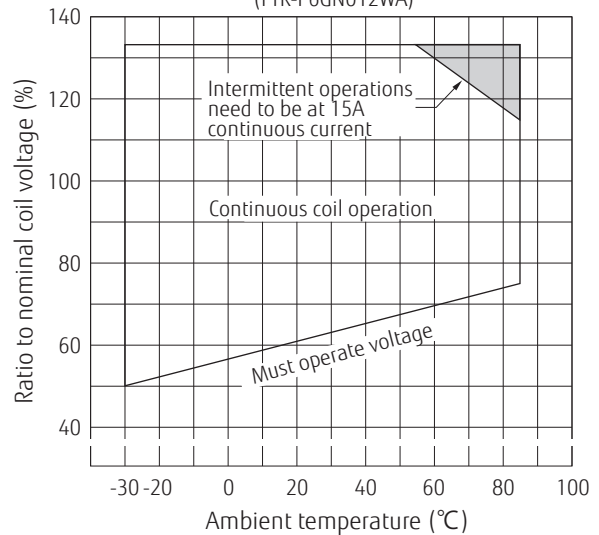
- Current wave form



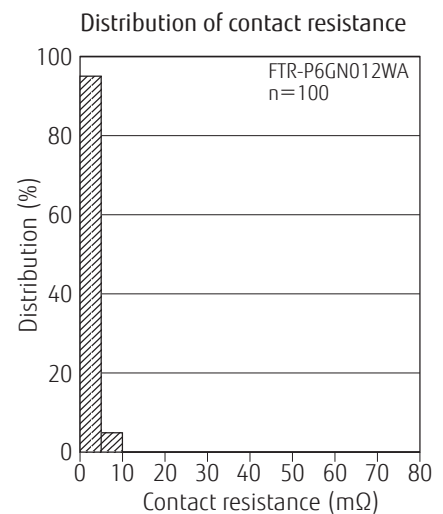
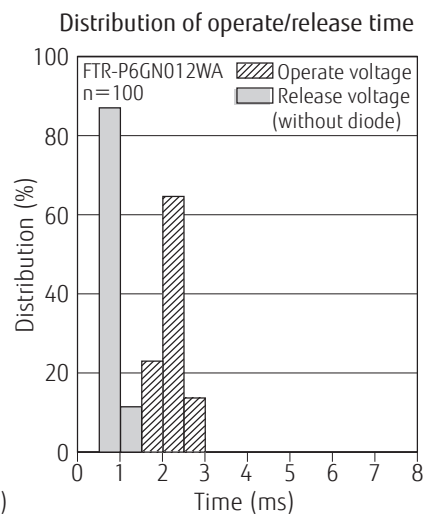
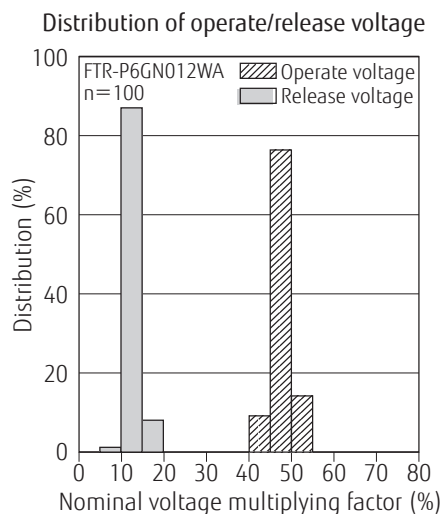
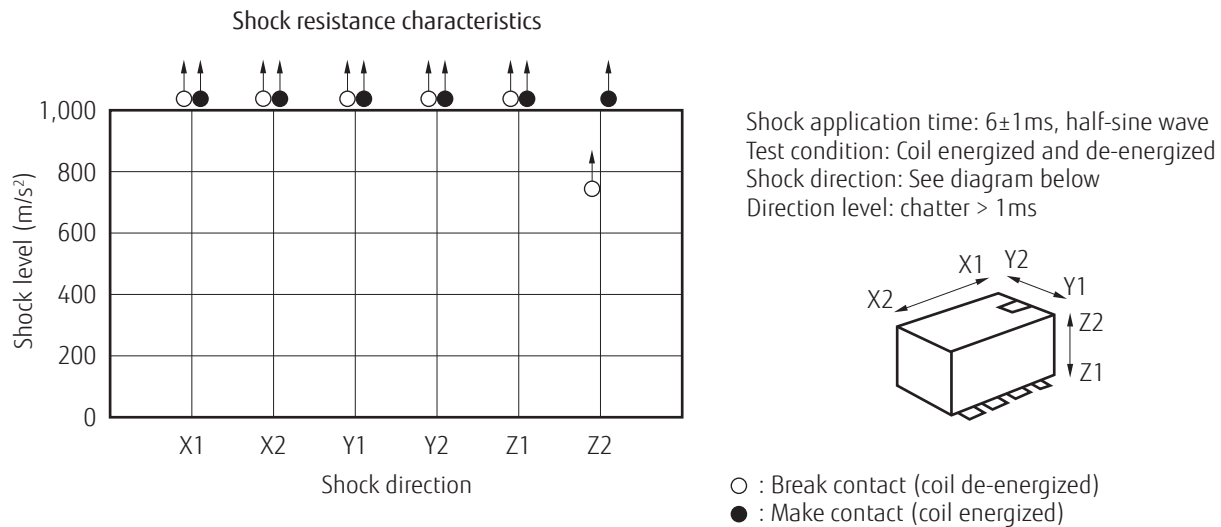
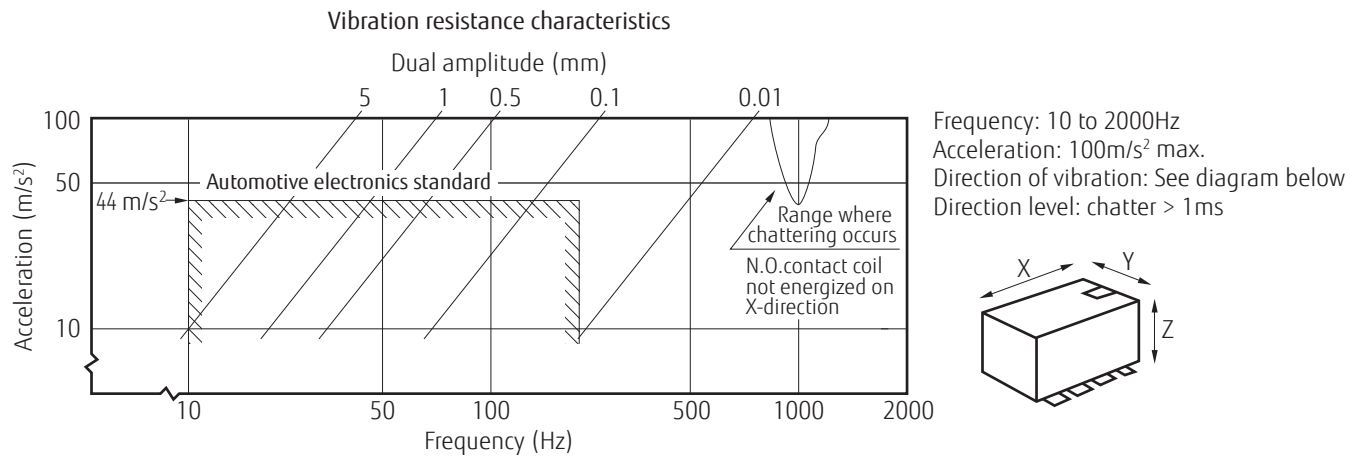
Coil temperature rise



Operating coil voltage range
(FTR-P6GN012WA)



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GENERAL INFORMATION

1. ROHS Compliance

- All relays produced by Fujitsu Components are compliant with RoHS directive 2011/65/EU including amendments.
- Use of Cadmium in electrical contacts is exempted as per Annex III of the RoHS directive 2001/65/EU. Please consider expiry date of exemption. Relays with Cadmium containing contacts are not to be used for new designs.
- All relays are lead-free. Please refer to Lead-Free Status Info for older date codes at: <http://www.fujitsu.com/downloads/MICRO/fcai/relays/lead-free-letter.pdf>
- Characteristic data is not guaranteed values, but measured values of samples from production line.

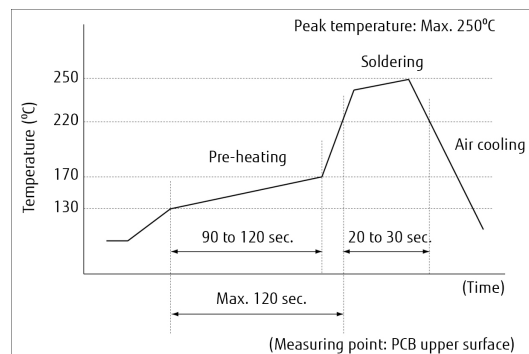
2. Recommended lead free solder condition

- 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.

Solder by Soldering Iron:

Soldering Iron 30-60W
Temperature: maximum 340-360°C
Duration: maximum 3 sec.

Reflow Solder Condition:



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. -DP relay will be shipped in moisture barrier bag.

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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