

### ■ Features

- 10A switching capability
- Small footprint
- Sealed type available
- Class B/F available
- Conform to RoHS, ELV directive

### ■ Ordering Code

HJR-3FF — S — H F (TBF-1) / 12VDC / IT						
1	2	3	4	5	6	7
1. Relay Model	2. S: Sealed	3. Contact Form: H: Form A, Z: Form C				
4. Temperature Range: F: UL/TUV 105°C, VDE 85°C Nil: UL/TUV 85°C, VDE 70°C						
5. Insulation System: TBF-1: Class F, Nil: Standard				6. Coil Nominal Voltage: 3, 5, 6, 9, 12, 18, 24, 48VDC		
7. IT: GWIT, 750°C (at 2 minutes), Nil: Standard						

### ■ Coil Data (at 20°C)

Nominal Voltage(VDC)	3	5	6	9	12	18	24	48	0.36W
Coil Resistance( $\Omega \pm 10\%$ )	25	69	100	225	400	900	1600	6400	
Rated Current(mA)	120	71.4	60	40	30	20	15	7.5	
Max Operate Voltage(VDC)	2.25	3.75	4.5	6.75	9	13.5	18	36	
Min Release Voltage(VDC)	0.15	0.25	0.3	0.45	0.6	0.9	1.2	2.4	
Max Applicable Voltage	130% of nominal voltage at 70°C, 170% of nominal voltage at 23°C								

### ■ Contact Data

Contact Form	1H/1Z	
Contact Material	Silver Alloy	
Load	Resistive Load( $\cos\phi=1$ )	
Contact Ratings	1H:10A 240VAC 12A 120VAC	1Z: 7A 240VAC 10A 120VAC
Minimum Load	100mA 5VDC	
Max Switching Voltage	250VAC/30VDC	
Max Switching Current	15A	
Max Switching Power	2770VA/240W	
Contact Resistance	100m $\Omega$ Max at 6VDC 1A	
Life Expectancy	Electrical: 100,000 Operations (at 30 Operations/minute)	
	Mechanical: 10,000,000 Operations (at 300 Operations/minute)	

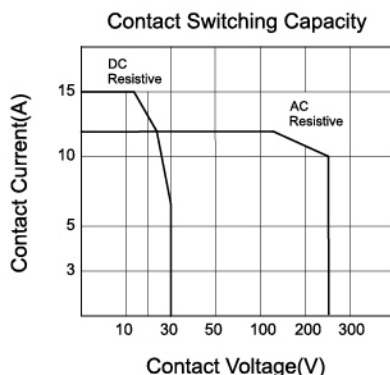
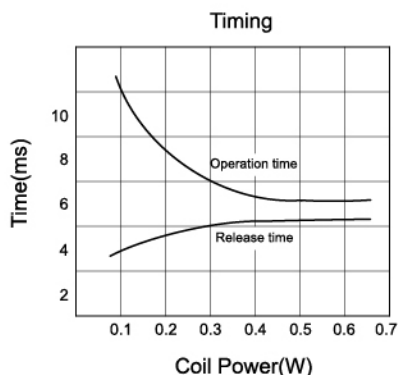
## ■ Characteristics Data

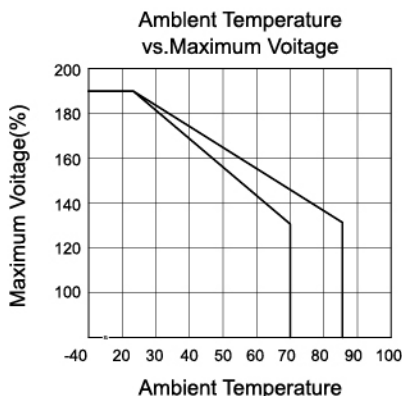
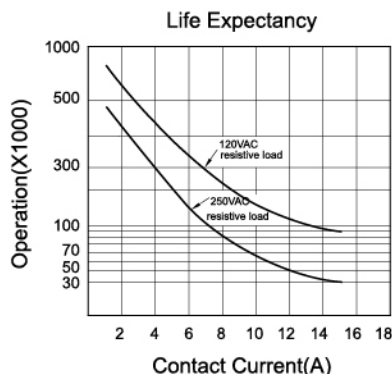
Insulation Resistance	100MΩMin at 500VDC
Dielectric Strength Between Open Contacts	750VAC (50/60Hz for one minute)
Between Contacts and Coil	1500VAC (50/60Hz for one minute)
Operate Time	10ms
Release Time	5ms
Temperature Range	-40°C to +85°C
Shock Resistance	Operating Extremes: 10G Damage Limits: 100G
Vibration Resistance	10-55Hz, 1.5mm
Max. Switching Frequency	Mechanical: 18,000 operations/hr Electrical: 1,800 operations/hr
Humidity	40-85%
Weight	Approx: 10g
Safety Standard	UL cUL TÜV CQC VDE

## ■ Approved Standards

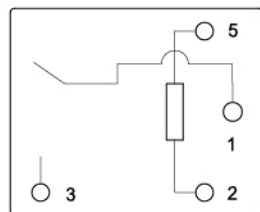
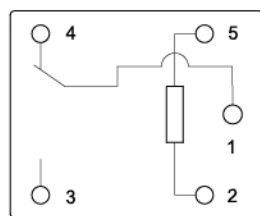
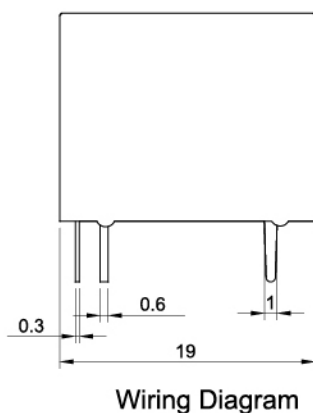
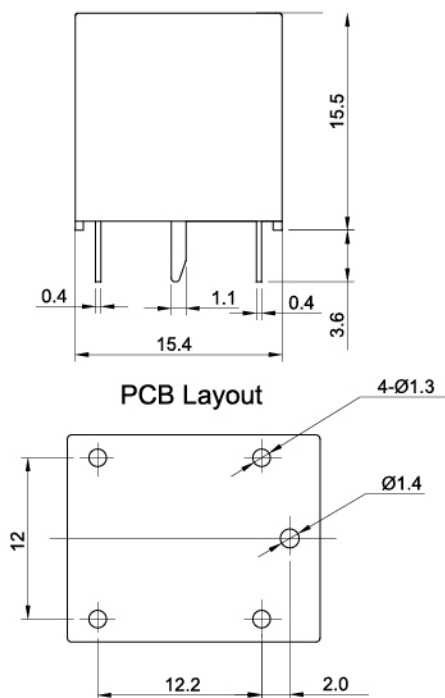
Model	Coil Rating	Safety Standard	Contact Rating
HJR-3FF	3 to 48VDC	TÜV	1H: 15A 125VAC 10A 240VAC
			1Z: 15A 125VAC 7A 240VAC
		UL/cUL	1H: 10A 240VAC 12A 120VAC
			1Z: 7A 240VAC 10A 120VAC
			1/8HP(FLA 3.8A) 125VAC
			1/8HP(FLA 1.6A) 277VAC
		VDE	1H: 7A 250VAC/30VDC
			1Z: 7A 250VAC/30VDC
			H F:10A 250VAC;10A 30VDC
			Z F:10A 250VAC;10A 30VDC
		CQC	7A 240VAC 10A 240VAC

## ■ Engineering Data





## Overall and Mounting Dimensions



### Remark:

- 1). In case the tolerance is not shown in outline dimension, the tolerance should be  $\pm 0.2\text{mm}$  for outline dimensions  $\leq 1\text{mm}$ ;  $\pm 0.3\text{mm}$  for outline dimension:  $1\sim 5\text{mm}$  and  $\pm 0.4\text{mm}$  for outline dimension  $> 5\text{mm}$ .
- 2). The tolerance without indication is always  $\pm 0.1\text{mm}$  for the dimension of PCB layout.

### Disclaimer:

These specifications are just for customers' reference and subject to change without notice.