



08002028073

E173485

R50116165

■ Features

- 12A switching capability
- Small footprint
- Sealed version
- Class B/F available
- Conform to RoHS,ELV directive

■ Ordering Code

HJR-21FF — S — H * (TBF-1) / 12VDC / XX						
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: TUV 105°C, Nil: TUV 85°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	24	48	0.36W
Coil Resistance($\Omega \pm 10\%$)	25	69	100	225	400	1600	6400	
Rated Current(mA)	120	71.4	60	40	30	15	7.5	
Max Operate Voltage(VDC)	2.25	3.75	4.5	6.75	9	18	36	
Min Release Voltage(VDC)	0.15	0.25	0.3	0.45	0.6	1.2	2.4	0.45W
Coil Resistance($\Omega \pm 10\%$)	20	56	80	180	320	1280	5120	
Rated Current(mA)	150	90	75	50	37.5	18.7	9	
Max Operate Voltage(VDC)	2.25	3.75	4.5	6.75	9	18	36	
Min Release Voltage(VDC)	0.15	0.25	0.3	0.45	0.6	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 ϕ =1)	
Contact Ratings	1H:12A 240VAC 15A 125VAC(TUV) 15A 120VAC , TV-5A@120VAC	1Z:10A 240VAC 12A 120VAC , TV-5A@120VAC 15A 125VAC(TVU)
Minimum Load	10mA 5VDC	
Max Switching Voltage	250VAC/30VDC	
Max Switching Current	15A	
Max Switching Power	2770VA/240W	
Contact Resistance	100m Ω Max at 6VDC 1A	
Life Expectancy	Electrical: 100,000 Operations (at 30 Operations/minute)	
	Mechanical: 10,000,000 Operations (at 300 Operations/minute)	

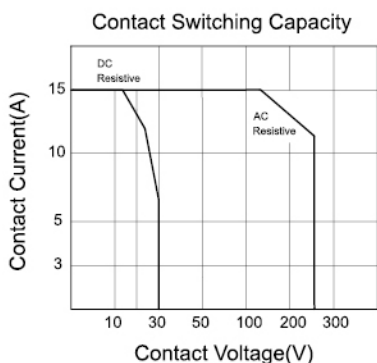
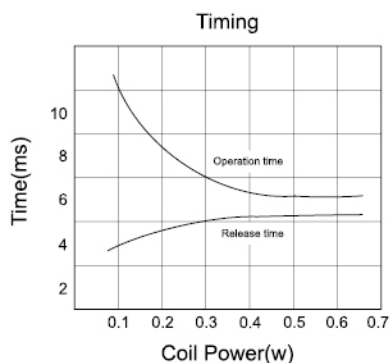
■ Characteristics Data

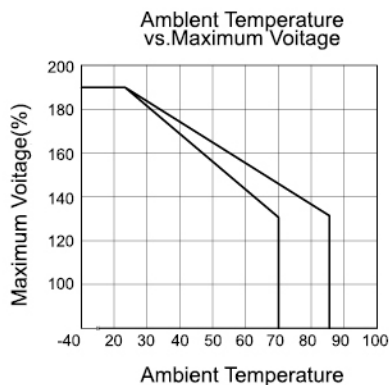
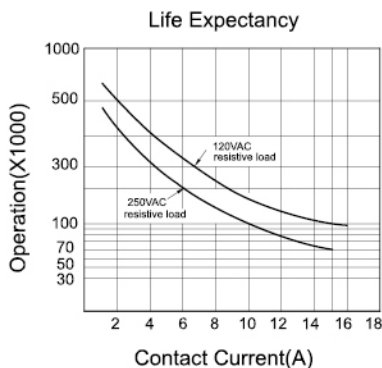
Insulation Resistance	100MΩMin at 500VDC
Dielectric Strength Between Open Contacts	750VAC (for one minute)
Between Contacts and Coil	1500VAC (for one minute)
Operate Time	10ms
Release Time	5ms
Temperature Range	-40°C to +70°C (Class F:85°C)
Shock Resistance	Operating Extremes: 10G Damage Limits: 100G
Vibration Resistance	10-55Hz, 1.5mm
Max. Switching Frequency	Mechanical: 18,000 operations/hr Electrical: 1,800 operations/hr
Humidity	40-85%
Weight	Approx: 13g
Safety Standard	UL cUL TÜV CQC

■ Approved Standards

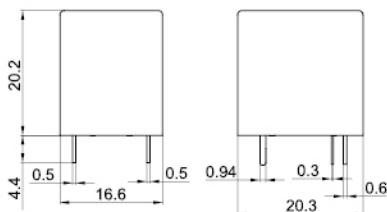
Model	Coil Rating	Safety Standard	Contact Rating
HJR-21FF	3 to 48VDC	UL/cUL	H: 15A 120VAC 12A 240VAC TV-5A@ 120VAC
			Z,D: 12A 120VAC 10A 240VAC TV-5A@ 120VAC
		TÜV	H: 15A 125VAC 12A 240VAC
			Z: 15A 125VAC 10A 240VAC
		CQC	10A: 240VAC
			H: 12A 240VAC

■ Engineering Data

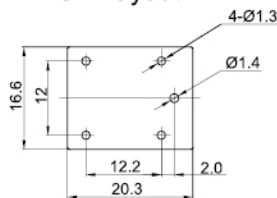




■ Overall and Mounting Dimensions

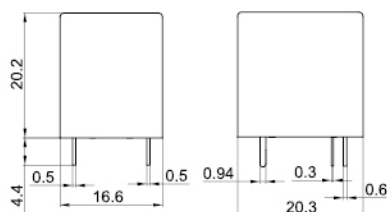
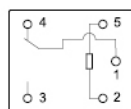


PCB Layout

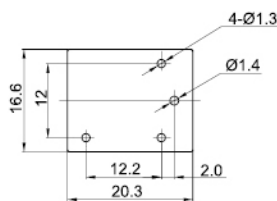


Wiring Diagram

Form C

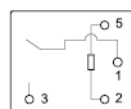


PCB Layout



Wiring Diagram

Form A



Remark:

- 1). In case the tolerance is not shown in outline dimension, the tolerance should be $\pm 0.2\text{mm}$ for outline dimension $\leq 1\text{mm}$; $\pm 0.3\text{mm}$ for outline dimension: 1~5mm 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.