



## HJR3FF-12V

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



08002028071



40005471



US E173485



R50116163

### ■ ORDERING CODE

| <u>HJR3FF (S — H F (TBF-1) ) 12VDC</u> |   |   |   |                            |                         |   |
|----------------------------------------|---|---|---|----------------------------|-------------------------|---|
| 1                                      | 2 | 3 | 4 | 5                          | 6                       | 7 |
| 1. Relay Model                         |   |   |   | 4. Temperature Range       | 5. Insulated Level      |   |
| 2. S                                   |   |   |   | F:CQC/ UL/TUV 105℃         | TBF-1: Class F          |   |
| 3.                                     |   |   |   | VDE 85℃                    | Nil:                    |   |
| H: Form A                              |   |   |   | Nil: CQC/UL/TUV 85℃        | 6. Coil Nominal Voltage |   |
| Z: Form C                              |   |   |   | VDE 70℃                    | 3,5,6,9,12,18,24,48VDC  |   |
|                                        |   |   |   | 7. IT: GWIT 750℃ (at≤ 2 s) |                         |   |

### ■ COIL DATA (at 20°C)

|                           |                    |      |     |      |     |      |      |      |       |
|---------------------------|--------------------|------|-----|------|-----|------|------|------|-------|
| Nominal Voltage(VDC)      | 3                  | 5    | 6   | 9    | 12  | 18   | 24   | 48   | 0.36W |
| Coil Resistance ( Ω ±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 ApplicableVoltage     | 70℃ 130%, 23℃ 170% |      |     |      |     |      |      |      |       |

### ■ CONTACT DATA

|                       |                                                             |                             |
|-----------------------|-------------------------------------------------------------|-----------------------------|
| Contact Form          | 1H/1Z                                                       |                             |
| Contact Material      | Silver Alloy                                                |                             |
| Load                  | Resistive load(COS $\Phi$ =1)                               |                             |
| Contact Rating        | 1H: 10A 240VAC<br>12A 120VAC<br>15A 125VAC                  | 1Z: 7A 240VAC<br>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(at30Operations/minute)      |                             |
|                       | Mechanical: 10, 000, 000 Operations(at300Operations/minute) |                             |

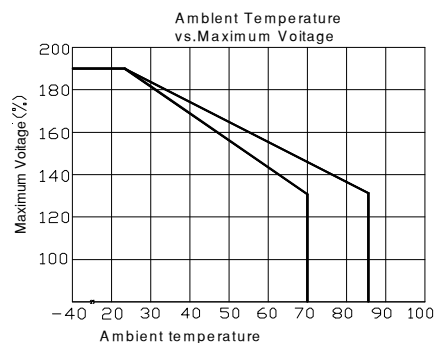
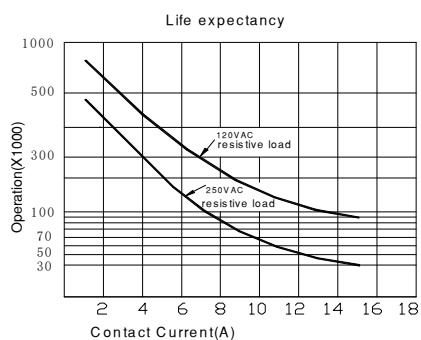
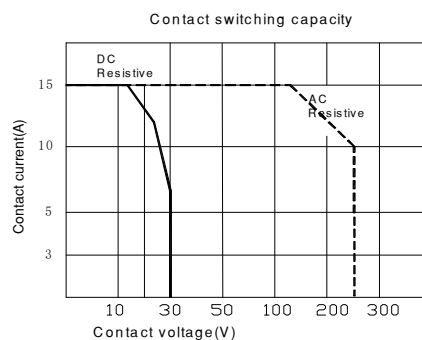
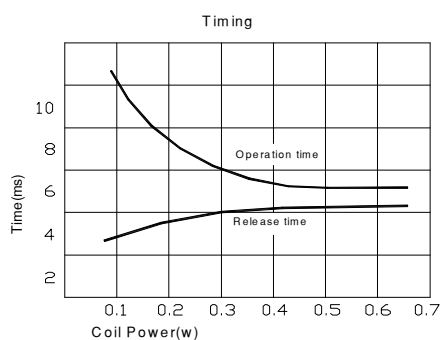
## ■ CHARACTERISTICS DATA

|                                           |                                  |
|-------------------------------------------|----------------------------------|
| Insulation Resistance                     | 100M $\Omega$ Min 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 (or 105°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   | Coiling 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  |
|         |                |                 | 1HF: 15A 125VAC            |
|         |                |                 | 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

