

# HF10FF (JQX-10FF)

# MINIATURE HIGH POWER RELAY

**CRUS**

File No.:134517



File No.:CQC02001001955



### Features

- 10A switching capability
- Long life (Min. 100,000 electrical operations)
- Industry standard 8 or 11 round terminals
- Sockets available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (35.0 x 35.0 x 55.0) mm

### CONTACT DATA

|                            |  |
|----------------------------|--|
| Contact arrangement        | 2C, 3C   |
| Contact resistance         | 100mΩ (at 1A 24VDC)  |
| Contact material           | AgSnO <sub>2</sub> , AgCdO   |
| Contact rating (Res. load) | 2C: 10A 250VAC/30VDC<br>3C: (NO)10A 250VAC/30VDC<br>(NC) 5A 250VAC/30VDC |
| Max. switching voltage     | 250VAC / 30VDC   |
| Max. switching current     | 10A  |
| Max. switching power       | 2500VA / 300W  |
| Mechanical endurance       | 1 x 10 <sup>7</sup> OPS  |
| Electrical endurance       | 1 x 10 <sup>5</sup> OPS  |

### CHARACTERISTICS

|                                   |                             |                             |
|-----------------------------------|-----------------------------|-----------------------------|
| Insulation resistance             | 500MΩ (at 500VDC)           |                             |
| Dielectric strength               | Between coil & contacts     | 1500VAC 1min                |
|                                   | Between open contacts       | 1000VAC 1min                |
| Operate time (at nomi. volt.)     | 30ms max.                   |                             |
| Release time (at nomi. volt.)     | 30ms max.                   |                             |
| Temperature rise (at nomi. volt.) | 70K max.                    |                             |
| Shock resistance                  | Functional                  | 100m/s <sup>2</sup> (10g)   |
|                                   | Destructive                 | 1000m/s <sup>2</sup> (100g) |
| Vibration resistance              | 10Hz to 55Hz 1.5mm DA       |                             |
| Humidity                          | 98% RH, 40°C                |                             |
| Ambient temperature               | -40°C to 55°C               |                             |
| Termination                       | Octal and Undecal Type Plug |                             |
| Unit weight                       | Approx. 100g                |                             |
| Construction                      | Dust protected              |                             |

**Notes:** The data shown above are initial values.

### COIL

|            |                               |
|------------|-------------------------------|
| Coil power | DC type: 1.5W; AC type: 2.7VA |
|------------|-------------------------------|

### COIL DATA

at 23°C

| Nominal Voltage VDC | Pick-up Voltage VDC | Drop-out Voltage VDC | Max. Allowable Voltage VDC | Coil Resistance Ω |
|---------------------|---------------------|----------------------|----------------------------|-------------------|
| 6                   | 4.80                | 0.60                 | 7.20                       | 23.5 x (1±10%)    |
| 12                  | 9.60                | 1.20                 | 14.4                       | 95 x (1±10%)      |
| 24                  | 19.2                | 2.40                 | 28.8                       | 430 x (1±10%)     |
| 48                  | 38.4                | 4.80                 | 57.6                       | 1630 x (1±10%)    |
| 100                 | 80.0                | 10.0                 | 120                        | 6800 x (1±10%)    |
| 110                 | 88.0                | 11.0                 | 132                        | 7300 x (1±10%)    |

| Nominal Voltage VAC | Pick-up Voltage VAC | Drop-out Voltage VAC | Max. Allowable Voltage VAC | Coil Resistance Ω |
|---------------------|---------------------|----------------------|----------------------------|-------------------|
| 6                   | 4.80                | 1.80                 | 7.20                       | 3.9 x (1±10%)     |
| 12                  | 9.60                | 3.60                 | 14.4                       | 16.9 x (1±10%)    |
| 24                  | 19.2                | 7.20                 | 28.8                       | 70 x (1±10%)      |
| 48                  | 38.4                | 14.4                 | 57.6                       | 315 x (1±10%)     |
| 110/120             | 88.0                | 36.0                 | 132                        | 1600 x (1±10%)    |
| 220/240             | 176                 | 72.0                 | 264                        | 6800 x (1±10%)    |

### SAFETY APPROVAL RATINGS

|                   |                  |
|-------------------|------------------|
| <b>UL&amp;CUR</b> | 10A 250VAC/30VDC |
|                   | 1/3HP 120VAC     |
|                   | 1/3HP 240VAC     |
|                   | 1/2HP 277VAC     |

**Notes:** Only some typical ratings are listed above. If more details are required, please contact us.



HONGFA RELAY

ISO9001、ISO/TS16949、ISO14001、OHSAS18001 CERTIFIED

2007 Rev. 2.00

## ORDERING INFORMATION

|  |  |
|--|--|
| <b>HF10FF / 012 A -2Z D T G (XXX)</b>      |  |
| <b>Type</b> <sup>1)</sup>                  | HF10FF<br>JQX-10FF (Old type)  |
| <b>Coil voltage</b>                        | <b>DC:</b> 6, 12, 24, 48, 100, 110<br><b>AC:</b> 6, 12, 24, 48, 110/120, 220/240   |
| <b>Coil voltage form</b>                   | <b>A:</b> AC <b>D:</b> DC  |
| <b>Contact arrangement</b>                 | <b>2Z:</b> 2 Form C <b>3Z:</b> 3 Form C<br><b>3Z-1:</b> 3 Form C (Different Wiring Diagram)  |
| <b>LED</b>                                 | <b>D:</b> With LED <b>Nil:</b> Without LED   |
| <b>Contact material</b>                    | <b>T:</b> AgSnO <sub>2</sub> <b>Nil:</b> AgCdO   |
| <b>Contact plating</b>                     | <b>G:</b> Gold plated <b>Nil:</b> No gold plated   |
| <b>Customer special code</b> <sup>2)</sup> | e.g. (551) stands for RoHS compliant (Cadmium containing contacts)<br>(Only for special requirements)    (555) stands for RoHS compliant (Cadmium-free contacts) |

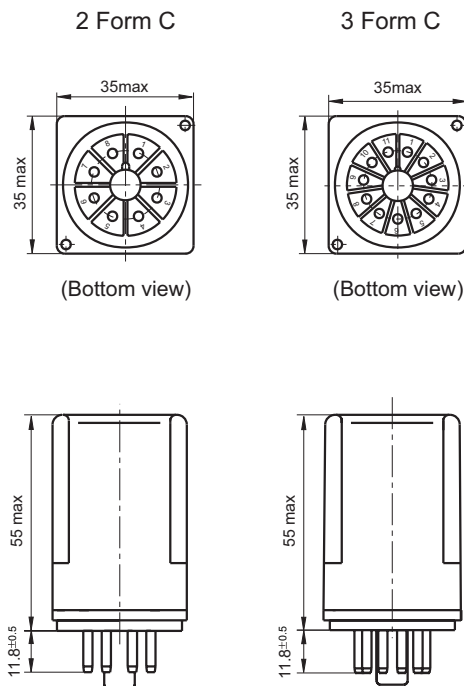
**Notes:** 1) We have now gradually updated our ordering information. We suggest new type should be selected. If necessary, old type can be kept for some period for the old customers.

2) HF10FF is an environmental friendly product. Please mark a special code (555) or (551) when ordering. (551) stands RoHS compliant with Cadmium contact; (555) stands for RoHS compliant with Cadmium-free contact.

## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

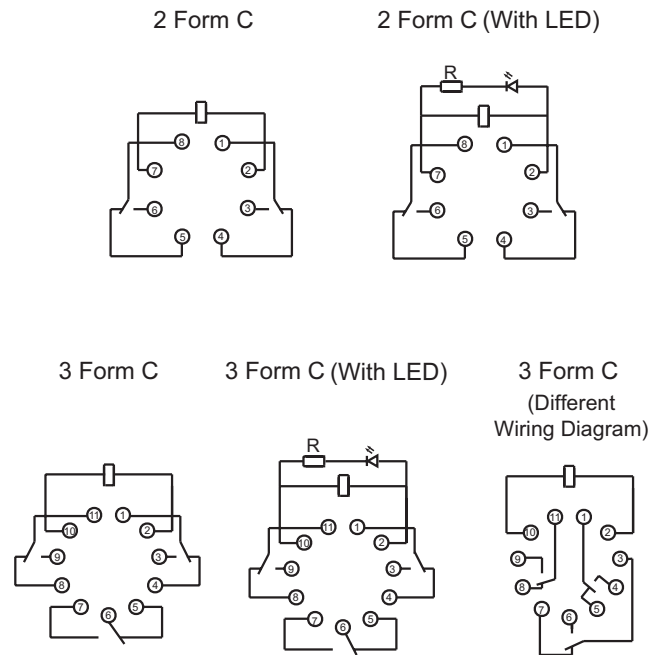
Unit: mm

### Outline Dimensions



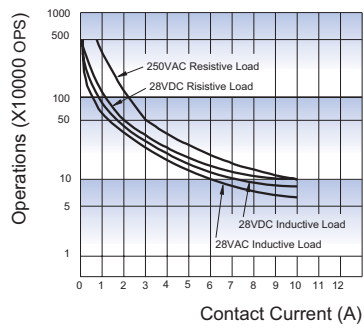
### Wiring Diagram

(Bottom view)

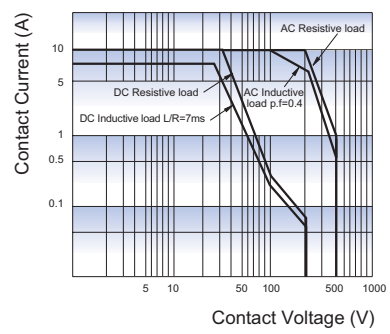


## CHARACTERISTIC CURVES

ENDURANCE CURVE



MAXIMUM SWITCHING POWER



### Disclaimer

This datasheet is for the customers' reference. All the specifications are subject to change without notice.

We could not evaluate all the performance and all the parameters for every possible application. Thus the user should be in a right position to choose the suitable product for their own application. If there is any query, please contact Hongfa for the technical service. However, it is the user's responsibility to determine which product should be used only.

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