

HF68F

MINIATURE HIGH POWER RELAY



File No.:E134517



File No.:129371



File No.:CQC02001001945



Features

- Low height 12.3 mm
- 8A switching capability
- 5kV dielectric strength (between coil and contacts)
- Creepage distance >8mm
- Wash tight and flux proofed types available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (28.5 x 10.1 x 12.3) mm

CONTACT DATA

| | |
|----------------------------|--|
| Contact arrangement | 1A, 1C |
| Contact resistance | 100mΩ (at 1A 6VDC) |
| Contact material | See ordering info. |
| Contact rating (Res. load) | 8A 250VAC/30VDC |
| Max. switching voltage | 440VAC / 125VDC |
| Max. switching current | 10A |
| Max. switching power | 2000VA / 240W (at 0.5HP 250VAC) |
| Mechanical endurance | 1 x 10 ⁷ ops |
| Electrical endurance | 1 x 10 ⁵ ops (See approval reports for more details) |

CHARACTERISTICS

| | | |
|---|-----------------------------|---------------------|
| Insulation resistance | 1000MΩ (at 500VDC) | |
| Dielectric strength | Between coil & contacts | 5000VAC 1min |
| | Between open contacts | 1000VAC 1min |
| Surge voltage (between coil & contacts) | 10kV (1.2X50μs) | |
| Operate time (at nomi. volt.) | 15ms max. | |
| Release time (at nomi. volt.) | 8ms max. | |
| Temperature rise (at nomi. volt.) | 55K max. | |
| Humidity | 35% to 85% RH | |
| Ambient temperature | -40°C to 85°C | |
| Shock resistance | Functional | 98m/s ² |
| | Destructive | 980m/s ² |
| Vibration resistance | 10Hz to 500Hz 20g/5g | |
| Termination | PCB | |
| Unit weight | Approx. 8.2g | |
| Construction | Wash tight, Flux proofed | |

Notes: The data shown above are initial values.

COIL

Coil power | 5 to 24VDC: 220mW; 48 to 60VDC: 290mW

COIL DATA

at 23°C

| Nominal Voltage VDC | Pick-up Voltage VDC | Drop-out Voltage VDC | Max. Allowable Voltage VDC | Coil Resistance Ω |
|---------------------|---------------------|----------------------|----------------------------|-------------------|
| 5 | 3.75 | 0.50 | 11.8 | 113 x (1±10%) |
| 6 | 4.50 | 0.60 | 14.1 | 164 x (1±10%) |
| 12 | 9.00 | 1.20 | 28.2 | 620 x (1±10%) |
| 18 | 13.50 | 1.80 | 42.3 | 1295 x (1±10%) |
| 24 | 18.00 | 2.40 | 56.4 | 2350 x (1±10%) |
| 48 | 36.00 | 4.80 | 112.8 | 9600 x (1±15%) |
| 60 | 45.00 | 6.00 | 141.0 | 12500 x (1±15%) |

Notes: The max. allowable voltage in the COIL DATA is coil overdrive voltage, it is the instantaneous max. voltage which the relay coil could endure in a very short time.

SAFETY APPROVAL RATINGS

| UL & CUL | AgCdO | 8A 250VAC/30VDC 10A/250VAC B300, R300 Pilot duty | |
|----------|--------------------|--|---|
| | | AgSnO ₂ 8A 250VAC/30VDC | |
| VDE | | Specifications | Ratings |
| | AgCdO | HF68F...1 (H;Z)(S)(G)(F) | 8A 250VAC COSØ =1 at 70°C |
| | AgNi | HF68F...1 (H;Z)(S)(B)(G)(F) | 8A 250VAC COSØ =1 at 85°C 5A 400VAC COSØ =1 at 85°C |
| | AgSnO ₂ | HF68F...1 (H;Z)(S)(T)(G)(F) | 8A 250VAC COSØ =1 at 85°C 10A/4A 250VAC COSØ =1 at 50°C |

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



HONGFA RELAY

ISO9001, ISO/TS16949, ISO14001, OHSAS18001, IECQ QC 080000 CERTIFIED

2008 Rev. 1.00

ORDERING INFORMATION

| | |
|---------------------------------------|---|
| HF68F / 012 -1H S G F (XXX) | |
| Type | |
| Coil voltage | 5, 6, 12, 18, 24, 48, 60VDC |
| Contact arrangement | 1H: 1 Form A 1Z: 1 Form C |
| Construction ¹⁾ | S: Wash tight Nil: Flux proofed |
| Contact material ²⁾ | G: AgCdO+ Au plated T: AgSnO ₂ B: AgNi BG: AgNi+ Au plated Nil: AgCdO |
| Insulation standard | F: Class F Nil: Class B |
| Customer special code | |

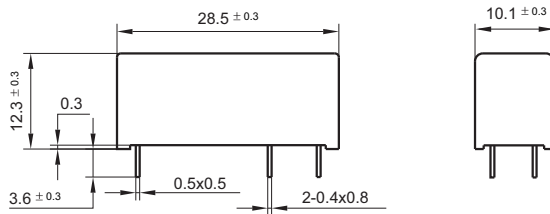
Notes: 1) Under the ambience with dangerous gas like H₂S, SO₂ or NO₂, wash tight type is recommended; please test the relay in real applications. If the ambience allows, flux proofed is preferentially recommended.
2) For gold plated type, the min. switching current and min. switching voltage is 10mA 5VDC.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

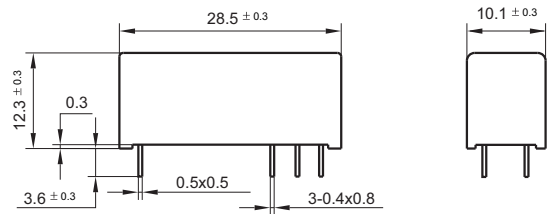
Unit: mm

Outline Dimensions

1 Form A (5mm Pinning)

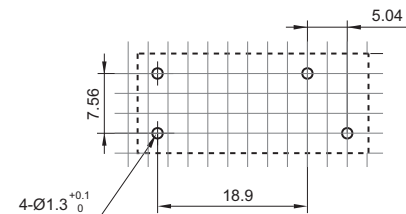


1 Form C (3.2mm Pinning)

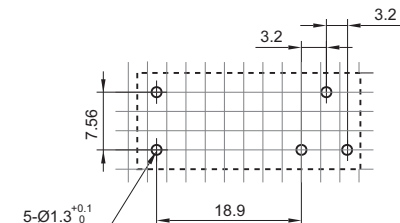


PCB Layout (Bottom view)

1 Form A (5mm Pinning)



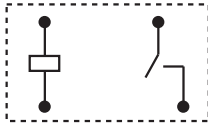
1 Form C (3.2mm Pinning)



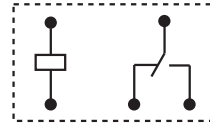
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤ 1 mm, tolerance should be ± 0.2 mm; outline dimension > 1 mm and ≤ 5 mm, tolerance should be ± 0.3 mm; outline dimension > 5 mm, tolerance should be ± 0.4 mm.
2) The tolerance without indicating for PCB layout is always ± 0.1 mm.
3) The width of the gridding is 2.52mm.

Wiring Diagram
(Bottom view)

1 Form A

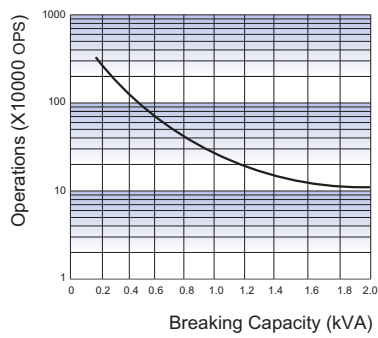


1 Form C

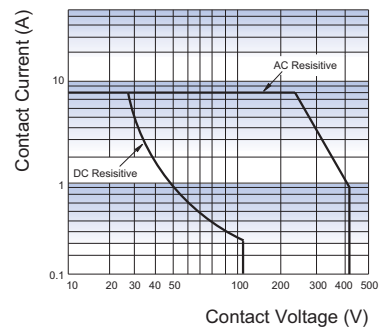


CHARACTERISTIC CURVES

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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