

HF102F

MINIATURE HIGH POWER RELAY



File No.:E134517



File No.:40024142



File No.:CQC08002028081



Features

- 4.5kV dielectric strength (between coil and contacts)
- Heavy load up to 5000VA
- Ideal for motor switching
- PCB & QC layouts available
- UL insulation system: Class F
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (30.5 x 16.0 x 23.5) mm

CONTACT DATA

| | |
|------------------------|--|
| Contact arrangement | 1A |
| Contact resistance | 100mΩ max.(at 1A 6VDC) |
| Contact material | AgSnO ₂ , AgCdO |
| Contact rating | Resistive: 20A 250VAC Motor: 2HP 240VAC |
| Max. switching voltage | 250VAC |
| Max. switching current | Resistive: 25A |
| Max. switching power | 6250VA |
| Mechanical endurance | 2 x 10 ⁶ OPS |
| Electrical endurance | 1 x 10 ⁵ OPS (See approval reports for more details) |

COIL

| | |
|------------|---------------|
| Coil power | Approx. 900mW |
|------------|---------------|

COIL DATA

at 23°C

| Nominal Voltage VDC | Pick-up Voltage VDC max. | Drop-out Voltage VDC min. | Max. Allowable Voltage VDC | Coil Resistance Ω |
|---------------------|--------------------------|---------------------------|----------------------------|-------------------|
| 5 | 3.5 | 0.5 | 6.0 | 27.8 x (1±10%) |
| 12 | 8.4 | 1.2 | 14.4 | 160 x (1±10%) |
| 24 | 16.8 | 2.4 | 28.8 | 640 x (1±10%) |
| 48 | 33.6 | 4.8 | 57.6 | 2560 x (1±10%) |

CHARACTERISTICS

| | | |
|-----------------------------------|-----------------------------------|---------------------|
| Insulation resistance | 1000MΩ (at 500VDC) | |
| Dielectric strength | Between coil & contacts | 4500VAC 1min |
| | Between open contacts | 1000VAC 1min |
| Operate time (at nomi. volt.) | 20ms max. | |
| Release time (at nomi. volt.) | 10ms max. | |
| Temperature rise (at nomi. volt.) | 60K max. | |
| Shock resistance | Functional | 196m/s ² |
| | Destructive | 980m/s ² |
| Vibration resistance | 10Hz to 55Hz 1.5mm DA | |
| Ambient temperature | -25°C to 85°C | |
| Humidity | 5% to 85% RH | |
| Termination | HF102F: PCB & QC HF102F-P: PCB | |
| Unit weight | Approx. 23g | |
| Construction | Dust protected | |

Notes: The data shown above are initial values.

SAFETY APPROVAL RATINGS

| | |
|--------|--------------------|
| UL/CUL | 25A 250VAC |
| | 20A 250VAC |
| | 1HP 120VAC |
| | 2HP 240VAC |
| VDE | 25A 250VAC at 55°C |
| | 20A 250VAC at 85°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

2012 Rev. 1.01

ORDERING INFORMATION

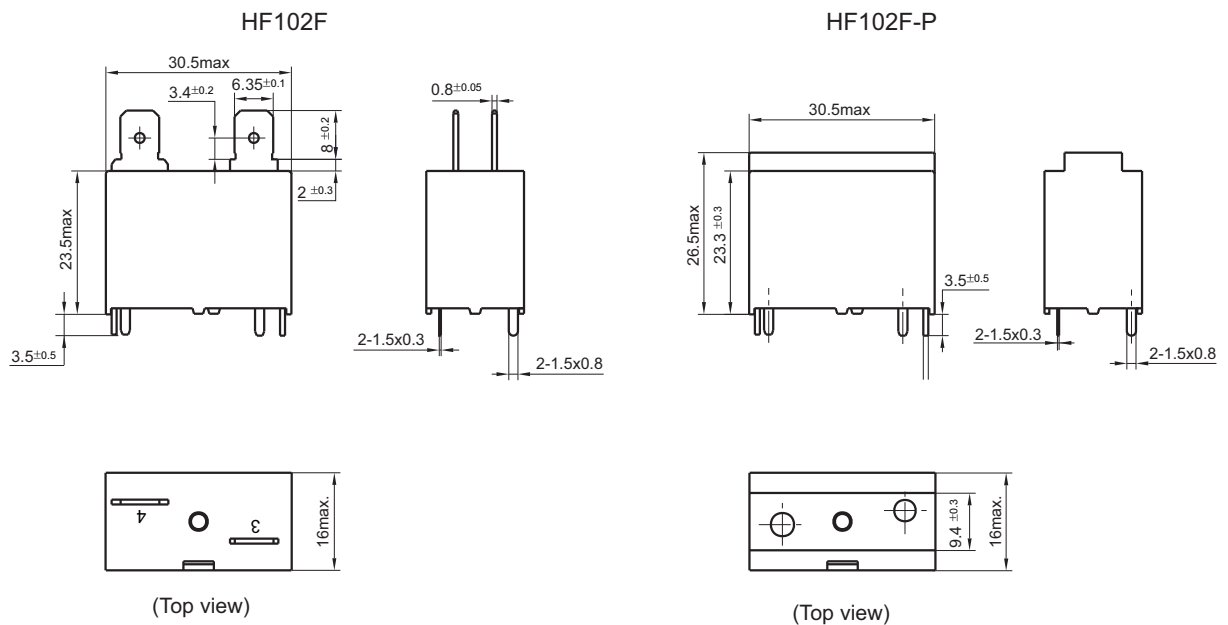
| | | | | |
|------------------------------|-----------------------------------|----------|--------------|--------------|
| | HF102F / | T | 12VDC | (XXX) |
| Type | HF102F-P: PCB HF102F: PCB & QC | | | |
| Contact material | T: AgSnO ₂ Nil: AgCdO | | | |
| Coil voltage | 5, 12, 24, 48VDC | | | |
| Customer special code | | | | |

Notes: HF102F is dust protected version which cannot be washed.

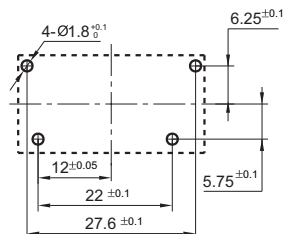
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

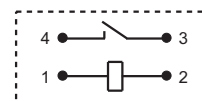
Outline Dimensions



PCB Layout (Bottom view)



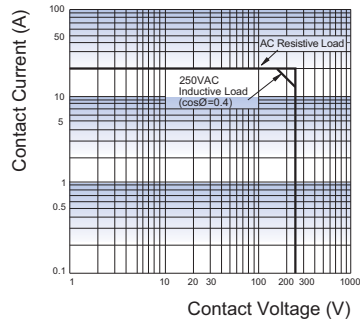
Wiring Diagram



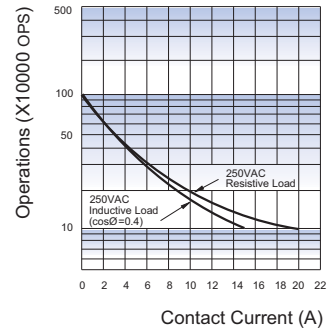
- Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤ 1 mm, tolerance should be ± 0.2 mm; outline dimension > 1 mm and ≤ 5 mm, tolerance should be ± 0.3 mm; outline dimension > 5 mm, tolerance should be ± 0.4 mm.
2) The tolerance without indicating for PCB layout is always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

CHARACTERISTIC CURVES

MAXIMUM SWITCHING POWER



ENDURANCE CURVE



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.