

HF36FD

SUBMINIATURE INTERMEDIATE POWER RELAY



File No.:E134517



File No.:R50356444



File No.:CQC18002199980
CQC16002159846



Features

- 10A switching capability
- TV-8 125VAC approved by UL standard (117A inrush current)
- Ideal for device power reduction

RoHS compliant

CONTACT DATA

| | |
|----------------------------------|---|
| Contact arrangement | 1A |
| Contact resistance ¹⁾ | 100mΩ max.(at 1A 6VDC) |
| Contact material | AgSnO ₂ |
| Contact rating | 10A 250VAC 5A 250VAC 5A 30VDC TV-8 125VAC |
| Max. switching voltage | 250VAC / 30VDC |
| Max. switching current | 10A |
| Max. switching power | 2500VA / 150W |
| Mechanical endurance | 1 x 10 ⁶ ops 5 x 10 ⁴ ops |
| Electrical endurance | (10A 250VAC, Resistive load, Room temp., 1s on 9s off) |

Notes: 1) The data shown above are initial values.

CHARACTERISTICS

| | | |
|--------------------------------|-------------------------|---------------------|
| Insulation resistance | 1000MΩ (at 500VDC) | |
| Dielectric strength | Between coil & contacts | 4000VAC 1min |
| | Between open contacts | 1000VAC 1min |
| Surge voltage | 10kV (1.2 / 50μs) | |
| Operate time (at rated. volt.) | 15ms max. | |
| Release time (at rated. volt.) | 5ms max. | |
| Humidity | 5% to 85% RH | |
| Ambient temperature | -40°C to 70°C | |
| Shock resistance | Functional | 196m/s ² |
| | Destructive | 980m/s ² |
| Vibration resistance | 10Hz to 55Hz 1.5mm DA | |
| Termination | PCB | |
| Unit weight | Approx.12g | |
| Construction | Flux proofed | |

Notes: 1) The data shown above are initial values.

2) Please find coil temperature curve in the characteristic curves below.

3) UL insulation system: Class A

COIL

| | |
|------------|---|
| Coil power | Standard: Approx. 530mW Sensitive: Approx. 250mW |
|------------|---|

COIL DATA

at 23°C

Standard type

| Nominal Voltage VDC | Pick-up Voltage VDC max. 1) | Drop-out Voltage VDC min. 1) | Max. Voltage VDC *2) | Coil Resistance Ω |
|---------------------|-----------------------------|------------------------------|----------------------|-------------------|
| 5 | 3.75 | 0.25 | 6.5 | 47 x (1±10%) |
| 6 | 4.50 | 0.30 | 7.8 | 68 x (1±10%) |
| 9 | 6.75 | 0.45 | 11.7 | 155 x (1±10%) |
| 12 | 9.00 | 0.60 | 15.6 | 270 x (1±10%) |
| 18 | 13.5 | 0.90 | 23.4 | 620 x (1±10%) |
| 24 | 18.0 | 1.20 | 31.2 | 1080 x (1±10%) |
| 48 | 36.0 | 2.40 | 62.4 | 4400 x (1±10%) |

Sensitive type

| Nominal Voltage VDC | Pick-up Voltage VDC max. 1) | Drop-out Voltage VDC min. 1) | Max. Voltage VDC *2) | Coil Resistance Ω |
|---------------------|-----------------------------|------------------------------|----------------------|-------------------|
| 5 | 4.00 | 0.25 | 6.5 | 100 x (1±10%) |
| 6 | 4.80 | 0.30 | 7.8 | 145 x (1±10%) |
| 9 | 7.20 | 0.45 | 11.7 | 325 x (1±10%) |
| 12 | 9.60 | 0.60 | 15.6 | 575 x (1±10%) |
| 18 | 14.4 | 0.90 | 23.4 | 1300 x (1±10%) |
| 24 | 19.2 | 1.20 | 31.2 | 2310 x (1±10%) |

Notes: 1) The data shown above are initial values.

2)*Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time.

SAFETY APPROVAL RATINGS

| | |
|--------|--|
| UL/CUL | 10A 250VAC 5A 250VAC TV-8 125VAC |
| TÜV | 10A 250VAC 5A 250VAC/30VDC |

Notes: 1) All values unspecified are at room temperature.

2) Only typical loads are listed above. Other load specifications can be available upon request.



HONGFA RELAY

ISO9001, IATF16949, ISO14001, ISO45001, IECQ QC 080000 CERTIFIED

2023 Rev. 1.00

ORDERING INFORMATION

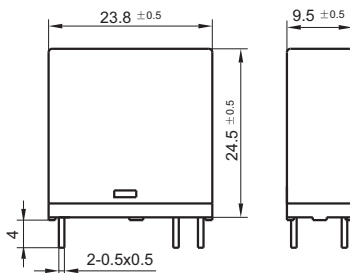
| | |
|----------------------------|---|
| Type | HF36FD / 012 -H L T (XXX) |
| Coil voltage | 5, 6, 9, 12, 18, 24, 48VDC |
| Contact arrangement | H: 1 Form A |
| Coil power | L: Sensitive Nil: Standard |
| Contact material | T: AgSnO ₂ |
| Special code ³⁾ | XXX: Customer special requirement Nil: Standard |

- Notes: 1) Water cleaning or surface process is not suggested after the flux-proofed relays are assembled on PCB.
 2) Flux-proofed relays can not be used in the environment with pollutants like H₂S, SO₂, NO₂, dust, etc.
 3) The customer special requirement express as special code after evaluating by Hongfa.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

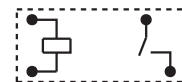
Unit: mm

Outline Dimensions

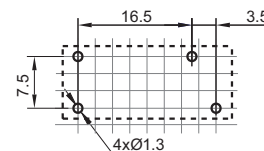


(Bottom view)

Wiring Diagram (Bottom view)



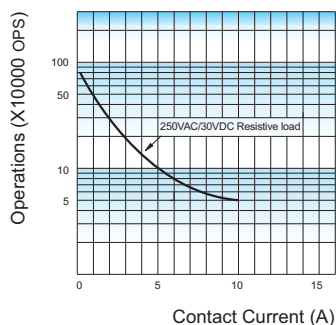
PCB Layout (Bottom view)



- 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 2.5mm.

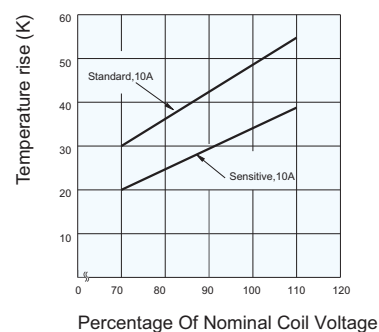
CHARACTERISTIC CURVES

ENDURANCE CURVE



Test conditions:
 10A 250VAC, Resistive load,
 Room temp., 1s on 9s off.

COIL TEMPERATURE RISE



Disclaimer

The specification is for reference only. See to "Terminology and Guidelines" for more information. Specifications 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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