

HF141FH/HF141FD**MINIATURE HIGH POWER RELAY****Features**

- 16A switching capability(HF141FH)
- 5kV dielectric strength (between coil and contacts)
- Low height: 20.6mm
- 1 pole (HF141FH), 2 poles (HF141FD) configurations available
- Sockets available
- Wash tight and flux proofed types available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (29.0 x 12.6 x 20.6) mm

CONTACT DATA

| | | |
|---------------------------|----------------------------------|-----------------|
| Contact arrangement | 1H, 1Z | 2H, 2Z |
| Contact resistance | 100mΩ (at 1A 6VDC) | |
| Contact material | AgSnO ₂ , AgNi, AgCdO | |
| Contact rating (Res.load) | 16A 240VAC/30VDC | 5A 240VAC/30VDC |
| Max. switching power | 3840VA / 480W | 1200VA / 150W |
| Max. switching current | 16A | 5A |
| Max. switching voltage | 240VAC/30VDC | |
| Mechanical endurance | 1 x 10 ⁷ OPS | |
| Electrical endurance | 1 x 10 ⁵ OPS | |

CHARACTERISTICS

| | | |
|---|--|-----------------------------|
| Insulation resistance | 1000MΩ (at 500VDC) | |
| Dielectric strength | Between coil & contacts | 5000VAC 1min |
| | Between open contacts | 1000VAC 1min |
| | Between contact sets | 3000VAC 1min (HF141FD) |
| Surge voltage (between coil & contacts) | 10000VAC (1.2/50μs) | |
| Operate time (at nomi. volt.) | 15ms max. | |
| Release time (at nomi. volt.) | 8ms max. | |
| Vibration resistance | 10Hz to 55Hz 1.5mm DA | |
| Shock resistance | Functional | 100m/s ² (10g) |
| | Destructive | 1000m/s ² (100g) |
| Humidity | HF141FH: 35% to 80% RH HF141FD: 20% to 80% RH | |
| Ambient temperature | -40°C to 70°C | |
| Termination | PCB | |
| Unit weight | Approx. 13g | |
| Construction | Wash tight, Flux proofed | |

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

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

COIL

| | |
|------------|-----------------------------------|
| Coil power | Standard: 720mW; Sensitive: 540mW |
|------------|-----------------------------------|

COIL DATA

at 23°C

HF141FD Standard Type (720mW)

| Nominal Voltage VDC | Pick-up Voltage VDC | Drop-out Voltage VDC | Max. Allowable Voltage VDC | Coil Resistance Ω |
|---------------------|---------------------|----------------------|----------------------------|-------------------|
| 3 | 2.25 | 0.3 | 3.9 | 12.5 x (1±10%) |
| 5 | 3.75 | 0.5 | 6.5 | 36 x (1±10%) |
| 6 | 4.50 | 0.6 | 7.8 | 50 x (1±10%) |
| 9 | 6.75 | 0.9 | 11.7 | 115 x (1±10%) |
| 12 | 9.00 | 1.2 | 15.6 | 200 x (1±10%) |
| 24 | 18.0 | 2.4 | 31.2 | 820 x (1±10%) |
| 48 | 36.0 | 4.8 | 62.4 | 3300 x (1±10%) |

HF141FD Sensitive Type (540mW)

| Nominal Voltage VDC | Pick-up Voltage VDC | Drop-out Voltage VDC | Max. Allowable Voltage VDC | Coil Resistance Ω |
|---------------------|---------------------|----------------------|----------------------------|-------------------|
| 3 | 2.4 | 0.3 | 3.9 | 17 x (1±10%) |
| 5 | 4.0 | 0.5 | 6.5 | 47 x (1±10%) |
| 6 | 4.8 | 0.6 | 7.8 | 68 x (1±10%) |
| 9 | 7.2 | 0.9 | 11.7 | 155 x (1±10%) |
| 12 | 9.6 | 1.2 | 15.6 | 270 x (1±10%) |
| 24 | 19.2 | 2.4 | 31.2 | 1100 x (1±10%) |
| 48 | 38.4 | 4.8 | 62.4 | 4400 x (1±10%) |



HONGFA RELAY

ISO9001、ISO/TS16949、ISO14001、OHSAS18001 CERTIFIED

2007 Rev. 2.00

COIL DATA

at 23°C

HF141FH Standard Type (720mW)

| Nominal Voltage VDC | Pick-up Voltage VDC | Drop-out Voltage VDC | Max. Allowable Voltage VDC | Coil Resistance Ω |
|---------------------|---------------------|----------------------|----------------------------|-------------------|
| 3 | 2.4 | 0.3 | 3.9 | 12.5 x (1±10%) |
| 5 | 4.0 | 0.5 | 6.5 | 36 x (1±10%) |
| 6 | 4.8 | 0.6 | 7.8 | 50 x (1±10%) |
| 9 | 7.2 | 0.9 | 11.7 | 115 x (1±10%) |
| 12 | 9.6 | 1.2 | 15.6 | 200 x (1±10%) |
| 18 | 14.4 | 1.8 | 23.4 | 460 x (1±10%) |
| 24 | 19.2 | 2.4 | 31.2 | 820 x (1±10%) |
| 48 | 38.4 | 4.8 | 62.4 | 3300 x (1±10%) |

HF141FH Sensitive Type (540mW)

| Nominal Voltage VDC | Pick-up Voltage VDC | Drop-out Voltage VDC | Max. Allowable Voltage VDC | Coil Resistance Ω |
|---------------------|---------------------|----------------------|----------------------------|-------------------|
| 3 | 2.4 | 0.3 | 3.9 | 17 x (1±10%) |
| 5 | 4.0 | 0.5 | 6.5 | 47 x (1±10%) |
| 6 | 4.8 | 0.6 | 7.8 | 68 x (1±10%) |
| 9 | 7.2 | 0.9 | 11.7 | 155 x (1±10%) |
| 12 | 9.6 | 1.2 | 15.6 | 270 x (1±10%) |
| 18 | 14.4 | 1.8 | 23.4 | 620 x (1±10%) |
| 24 | 19.2 | 2.4 | 31.2 | 1100 x (1±10%) |
| 48 | 38.4 | 4.8 | 62.4 | 4400 x (1±10%) |

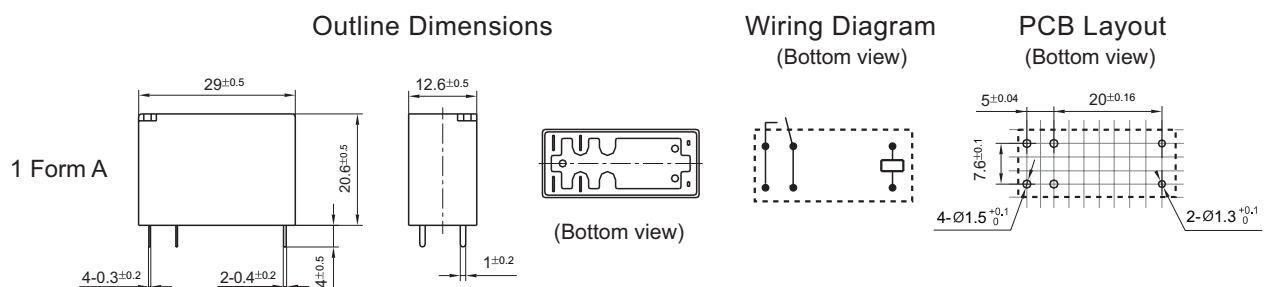
ORDERING INFORMATION

| | | | | | | | |
|--|--|------------|-----------|----------|----------|----------|--------------|
| HF141FH / HF141FD | | 012 | -H | S | T | P | (XXX) |
| Type | HF141FH: 1 pole HF141FD: 2 poles | | | | | | |
| Coil voltage | HF141FH: 3, 5, 6, 9, 12, 18, 24, 48VDC HF141FD: 3, 5, 6, 9, 12, 24, 48VDC | | | | | | |
| Contact arrangement | H: 1 Form A Z: 1 Form C 2H: 2 Form A 2Z: 2 Form C | | | | | | |
| Construction ¹⁾ | S: Wash tight Nil: Flux proofed | | | | | | |
| Contact material | T: AgSnO ₂ Nil: AgCdO, AgNi | | | | | | |
| Coil power | P: Standard Nil: Sensitive | | | | | | |
| Customer special code ²⁾ | e.g. (551) stands for RoHS compliant (Cadmium containing contacts) (Only for special requirements) (555) stands for RoHS compliant (Cadmium-free contacts) | | | | | | |

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) HF141FH/HF141FD 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.

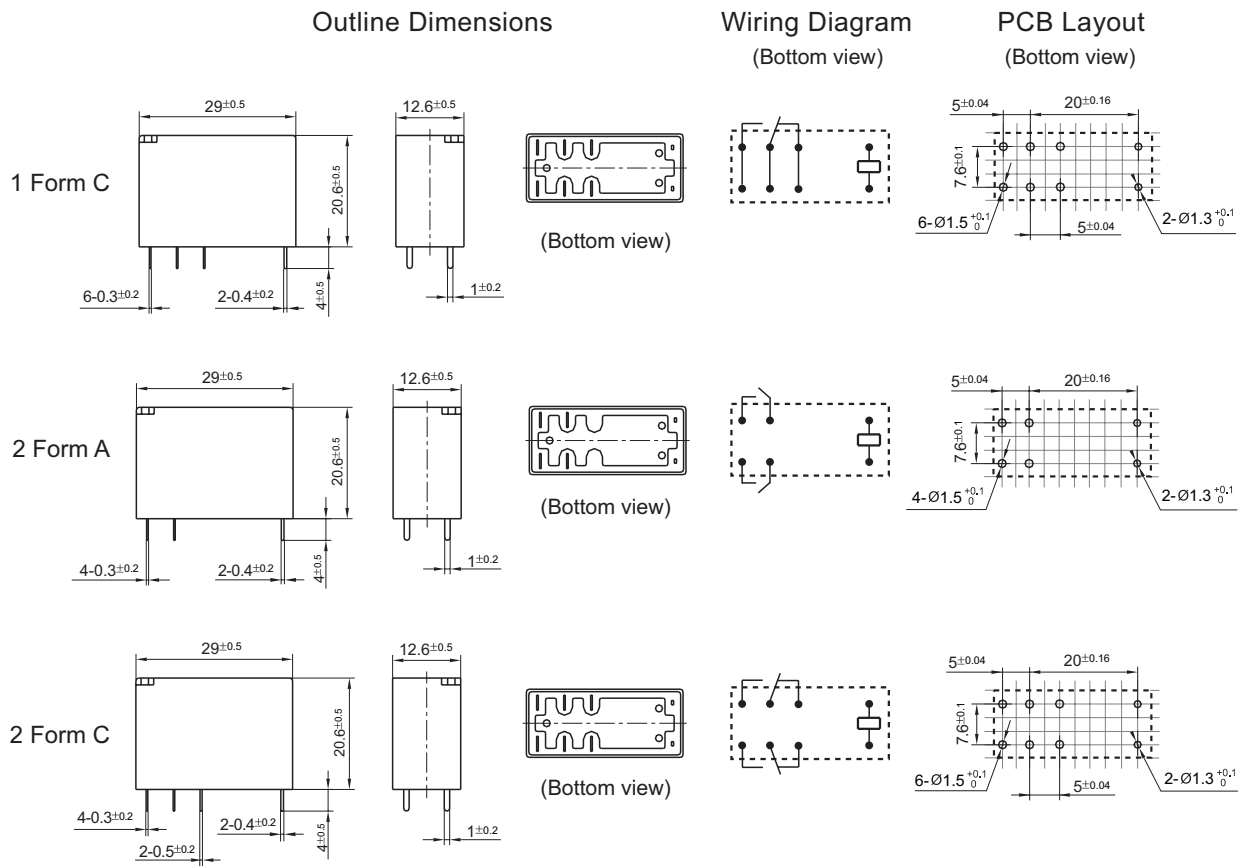
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB BOARD LAYOUT

Unit: mm



OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

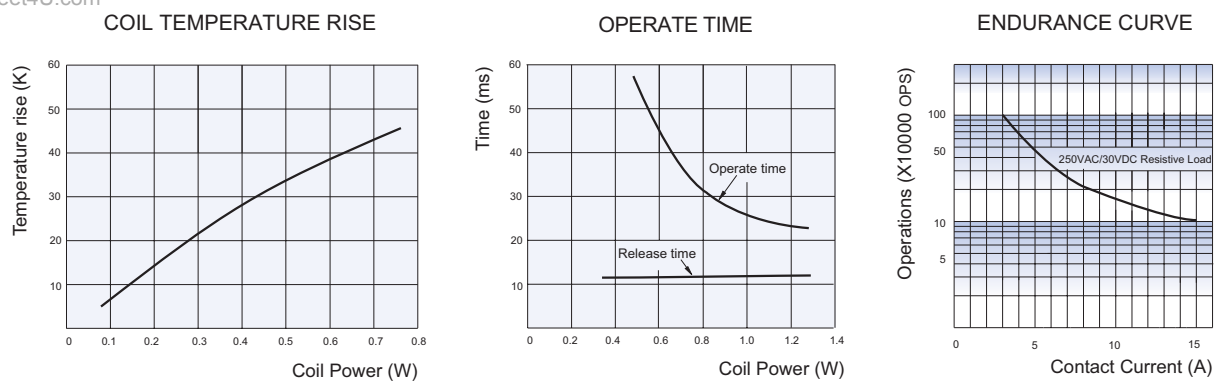
Unit: mm



Remark: The width of the gridding is 2.5mm.

CHARACTERISTIC CURVES

www.DataSheet4U.com



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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