

# HF41F

# SUBMINIATURE POWER RELAY



File No.:E133481

## Features

- Slim size (width 5mm)
- High breakdown voltage 4kV (between coil and contacts)
- Surge voltage up to 6kV (between coil and contacts)
- Clearance/creepage distance: 8mm
- High sensitive: 170mW
- 1 Form A and 1 Form C configurations
- Environmental friendly product available (RoHS compliant)
- Outline Dimensions: 28.0 x 5.0 x 15.0mm

## CONTACT DATA

Contact arrangement	1A, 1C
Initial contact Resistance Max.	100mΩ (at 1A 6VDC) Gold plated: 30mΩ (at 1A 6VDC)
Contact material	AgNi
Contact rating (Res. load)	6A 250VAC/30VDC
Max. switching voltage	400VAC / 125VDC
Max. switching current	6A
Max. switching power	1500VA / 180W
Mechanical life	1 x10 <sup>7</sup> OPS
Electrical life	NO/NC: 1x10 <sup>4</sup> OPS (at 85°C)

## CHARACTERISTICS

Initial insulation resistance	1000MΩ (at 500VDC)	
Dielectric strength	Between coil & contacts	4000VAC 1 min.
	Between open contacts	1000VAC 1 min.
Operate time (at nomi.volt.)	Max. 8ms	
Release time (at nomi.volt.)	Max. 4ms	
Shock resistance	Functional	49m/s <sup>2</sup>
	Destructive	980m/s <sup>2</sup>
Vibration resistance	10 to 55Hz 1mm DA	
Humidity	5 to 85% RH	
Ambient temperature	-40°C to +85°C	
Termination	PCB	
Unit weight	5.4g	
Construction	Sealed IP67, Flux proof	

## COIL

Coil power	5 to 24VDC: 170mW
	48VDC, 60VDC: 210mW

## COIL DATA

at 20°C

Nominal Voltage (VDC)	Pick-up Voltage (VDC)	Drop-out Voltage (VDC)	Max. Allowable Voltage (VDC) 85°C	Coil Resistance (Ω)
5	3.75	0.25	6.50	147 ± 10%
6	4.50	0.30	7.80	212 ± 10%
9	6.75	0.45	11.7	476 ± 10%
12	9.00	0.60	15.6	848 ± 10%
18	13.5	0.90	23.4	1906 ± 15%
24	18.0	1.20	31.2	3390 ± 15%
48	36.0	2.40	62.4	10600 ± 15%
60	45.0	3.00	78.0	16600 ± 15%

Notes: 1) When require pick-up voltage=70% nominal voltage, special order allowed .

2) When install 1 Form C type of HF41F, please do not make the relay side with 5mm width down.

## SAFETY APPROVAL RATINGS

UL&CUR	6A 30VDC
	Resistive: 6A 277VAC
	Pilot duty: R300



HONGFA RELAY

ISO9001 • ISO/TS16949 • ISO14001 • OHSAS18001 CERTIFIED

2006 Rev. 1.30

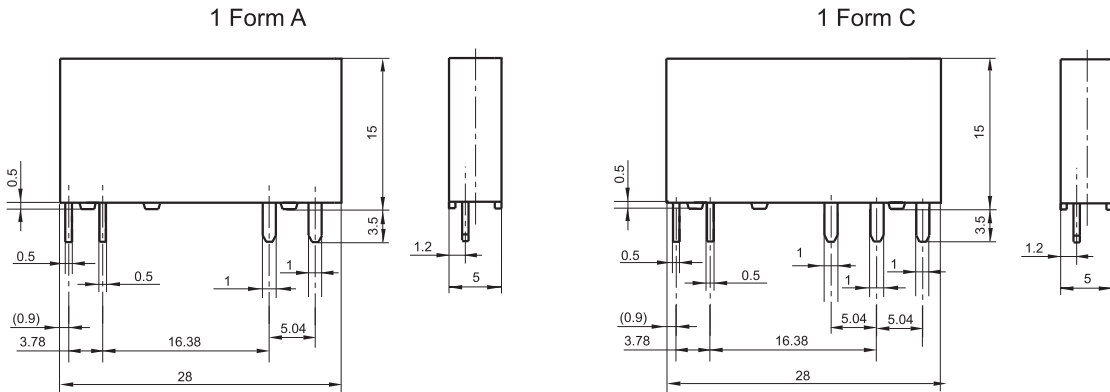
## ORDERING INFORMATION

Type	HF41F /	12	H	S	G	XXX
Coil voltage	5, 6, 9, 12, 18, 24, 48, 60VDC					
Contact arrangement	H: 1 Form A    Z: 1 Form C					
Construction	S: Sealed IP67    Nil: Flux proof					
Contact plating	G: Gold plated    Nil: No gold plated					
Customer special code	Only for special requirements, e.g. 555 stands for RoHS compliant					

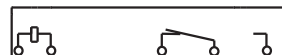
## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

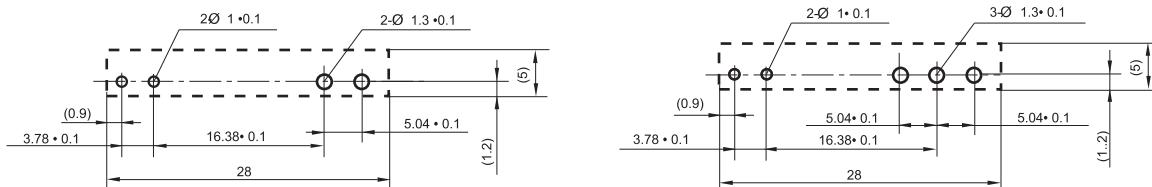
### Outline Dimensions



### Wiring Diagram

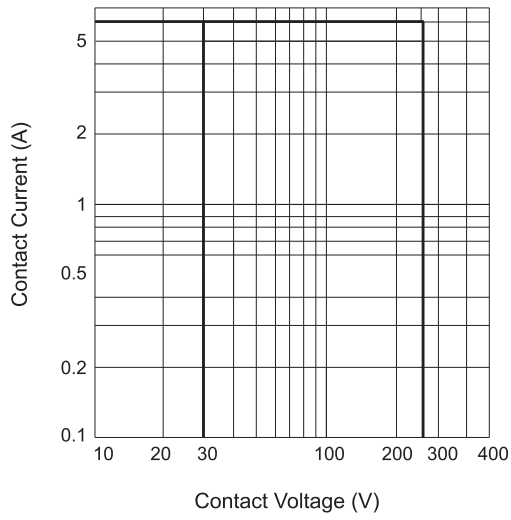


### PCB Layout

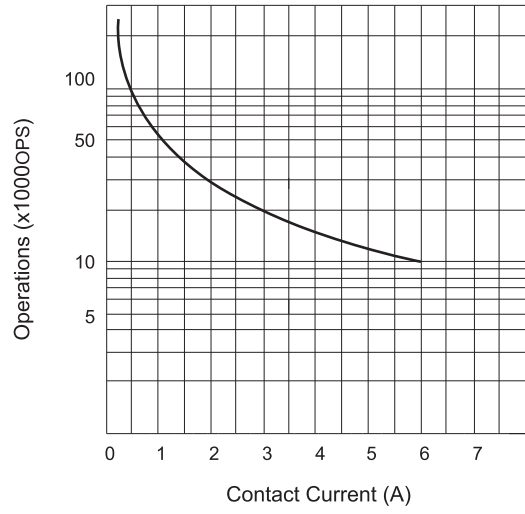


# CHARACTERISTIC CURVE

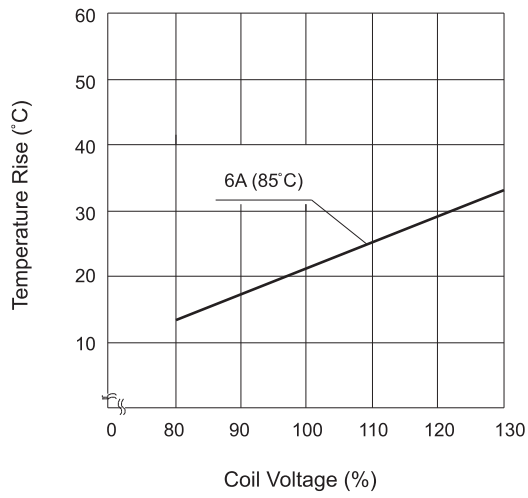
MAX. SWITCHING POWER



LIFE CURVE



COIL TEMPERATURE RISE



## 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.