

HF141FH / HF141FD

MINIATURE HIGH POWER RELAY



HF141FH
024-ZS
20A 120VAC
16A 250VAC
16A 30VDC
CHINA

Features

- 16A switching capability(HF141FH)
- 5KV dielectric strength (between coil and contacts)
- Low height: 20.6mm
- 1 pole (HF141FH) & 2 poles (HF141FD) configurations available
- Sealed and flux proof types available
- Environmental friendly product available (RoHS compliant)
- Outline Dimensions: 29.0 x 12.6 x 20.6 mm



Pending

CONTACT DATA

Contact arrangement	1H, 1Z	2H, 2Z
Initial contact resistance Max.	100mΩ (at 1A 6VDC)	
Contact material	AgSnO ₂ , AgCdO	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 life	1 x 10 ⁷ OPS	
Electrical life	1 x 10 ⁵ OPS	

CHARACTERISTICS

Initial insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	5000VAC 1min.
	Between open contacts	1000VAC 1min.
Surge voltage (between coil & contacts)		10000VAC (1.2/50μs)
Operate time (at nomi. volt.)		Max. 15ms
Release time (at nomi. volt.)		Max. 8ms
Vibration resistance		10 to 55Hz, 1.5mm
Shock resistance	Functional	100m/s ²
	Destructive	1000m/s ²
Temperature rise		HF141FH: 55°C
Humidity		HF141FH: 35 to 80% RH HF141FD: 20 to 80% RH
Ambient temperature		-40°C to +70°C
Termination		PCB
Unit weight		13g
Construction		Sealed , Flux proof

COIL

Coil power	Standard: 720mW; Sensitive: 540mW
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COIL DATA

Standard Type (720mW)				HF141FD
Nominal Voltage (VDC)	Pick-up Voltage (VDC)	Drop-out Voltage (VDC)	Max. Allowable Voltage (VDC) 20°C	Coil Resistance (Ω)
3	2.4	0.3	3.9	12.5 ± 10%
5	4.0	0.5	6.5	36 ± 10%
6	4.8	0.6	7.8	50 ± 10%
9	7.2	0.9	11.7	115 ± 10%
12	9.6	1.2	15.6	200 ± 10%
24	19.2	2.4	31.2	820 ± 10%
48	38.4	4.8	62.4	3300 ± 10%

Sensitive Type (540mW)				HF141FD
Nominal Voltage (VDC)	Pick-up Voltage (VDC)	Drop-out Voltage (VDC)	Max. Allowable Voltage (VDC) 20°C	Coil Resistance (Ω)
3	2.25	0.3	3.9	17 ± 10%
5	3.75	0.5	6.5	47 ± 10%
6	4.50	0.6	7.8	68 ± 10%
9	6.75	0.9	11.7	155 ± 10%
12	9.00	1.2	15.6	270 ± 10%
24	18.0	2.4	31.2	1100 ± 10%
48	36.0	4.8	62.4	4400 ± 10%



HONGFA RELAY

ISO9001、ISO/TS16949、ISO14001、OHSAS18001 CERTIFIED

2005 Rev. 1.01

COIL DATA

Standard Type (720mW)					Sensitive Type (540mW)				
HF141FH					HF141FH				
Nominal Voltage (VDC)	Pick-up Voltage (VDC)	Drop-out Voltage (VDC)	Max. Allowable Voltage (VDC) 20°C	Coil Resistance (Ω)	Nominal Voltage (VDC)	Pick-up Voltage (VDC)	Drop-out Voltage (VDC)	Max. Allowable Voltage (VDC) 20°C	Coil Resistance (Ω)
3	2.4	0.3	3.9	12.5 ± 10%	3	2.4	0.3	3.9	17 ± 10%
5	4.0	0.5	6.5	36 ± 10%	5	4.0	0.5	6.5	47 ± 10%
6	4.8	0.6	7.8	50 ± 10%	6	4.8	0.6	7.8	68 ± 10%
9	7.2	0.9	11.7	115 ± 10%	9	7.2	0.9	11.7	155 ± 10%
12	9.6	1.2	15.6	200 ± 10%	12	9.6	1.2	15.6	270 ± 10%
18	14.4	1.8	23.4	460 ± 10%	18	14.4	1.8	23.4	620 ± 10%
24	19.2	2.4	31.2	820 ± 10%	24	19.2	2.4	31.2	1100 ± 10%
48	38.4	4.8	62.4	3300 ± 10%	48	38.4	4.8	62.4	4400 ± 10%

SAFETY APPROVAL RATINGS (pending)

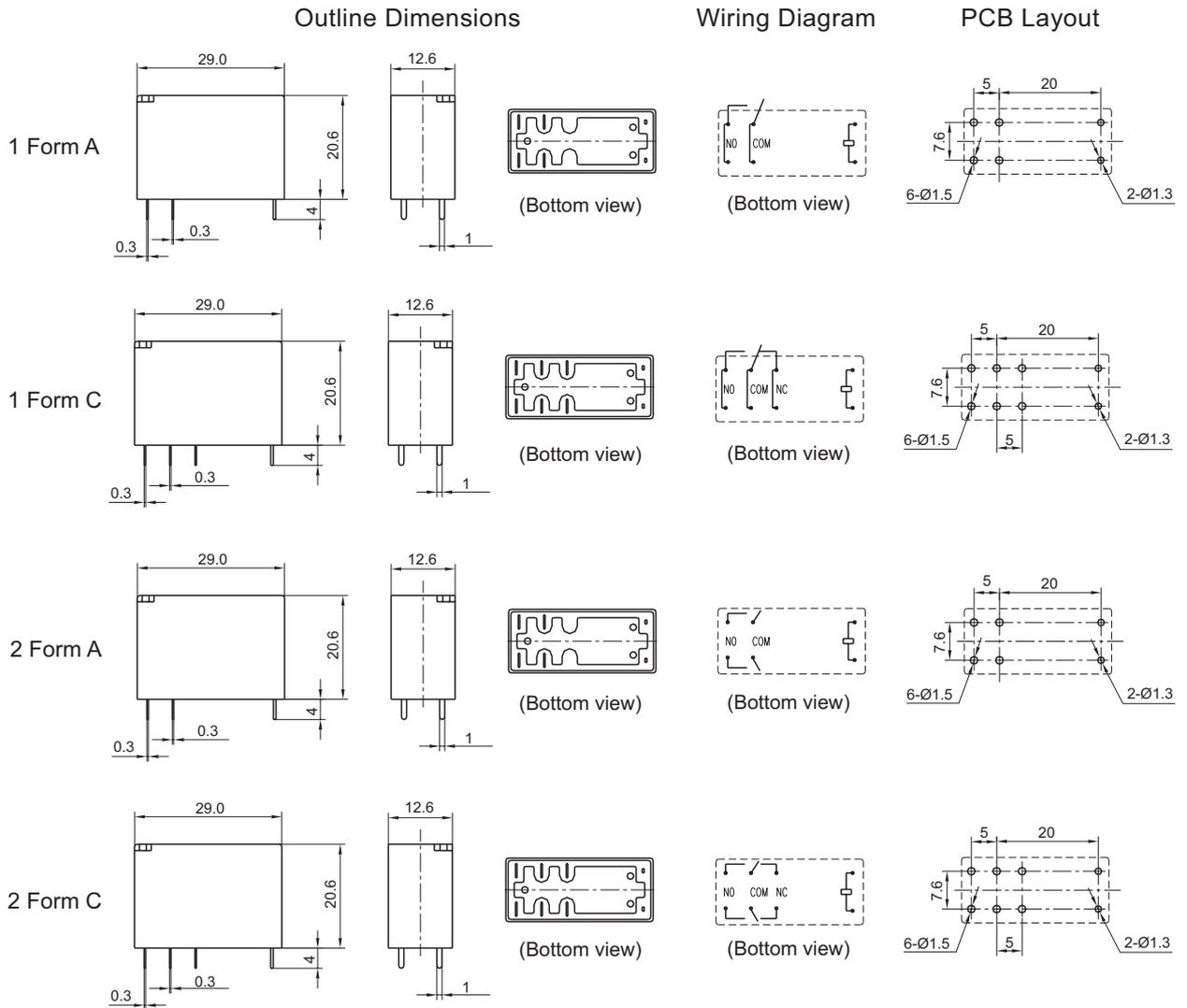
Tüv	HF141FH(1H,1Z)	16A 240VAC/30VDC TV-8 120VAC
	HF141FD(2H,2Z)	5A 240VAC/30VDC 1/8HP 250VAC

ORDERING INFORMATION

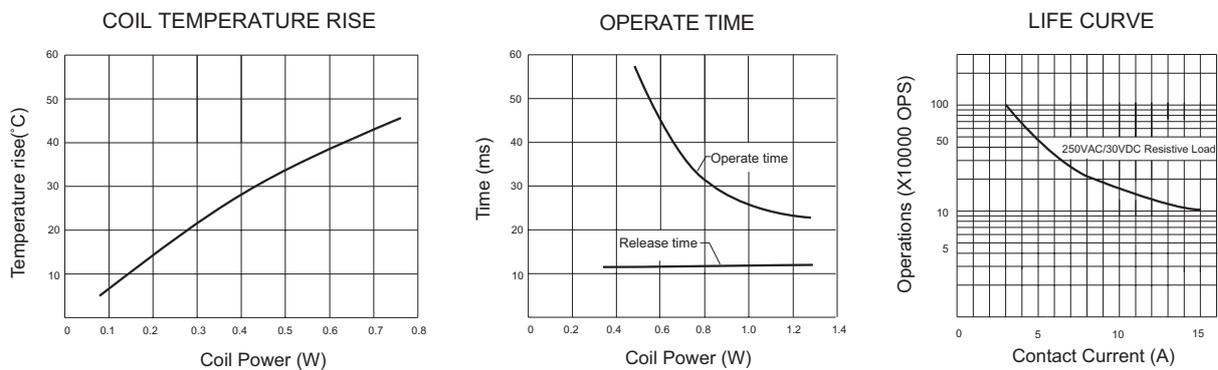
HF141FH / HF141FD		012	H	S	T	P	XXX
Type	HF141FH: 1 pole HF141FD: 2 poles						
Coil voltage	HF141FH: 3, 5, 6, 9, 12, 18, 24, 48VDC HF141FD: 3, 5, 6, 9, 12, 24, 48VDC						
Contact arrangement	H: 1 Form A Z: 1 Form C 2H: 2 Form A 2Z: 2 Form C						
Construction	S: Sealed Nil: Flux proof						
Contact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

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm



CHARACTERISTIC CURVES



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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