

HF118FK

MINIATURE HIGH POWER RELAY



File No.: E134517



File No.: 40010480



Features

- 8A switching capability
- 5kV dielectric strength (between coil and contacts)
- Low height: 12.5 mm
- Creepage distance >8mm
- Meeting VDE 0700, 0631 reinforce insulation
- Product in accordance to IEC 60335-1 available
- Flux proofed types
- UL insulation system: Class F
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (28.5 x 10.1 x 12.5) mm

CONTACT DATA

Contact arrangement	1A, 1C (special:1A(5 version))
Contact material	AgSnO ₂
Contact resistance	100mΩ max.(at 1A 6VDC)
Contact rating (Res. load)	8A 250VAC/30VDC
Max. switching voltage	440VAC / 125VDC
Max. switching current	8A
Max. switching power	2000VA / 240W
Mechanical endurance	1 x 10 ⁷ OPS
Electrical endurance	1 x 10 ⁵ OPS (NO: 8A 250VAC, Resistive load, Room temp., 5s on 5s off)

CHARACTERISTICS

Insulation resistance	1000MΩ (at 500VDC)	
Dielectric strength	Between coil & contacts	5000VAC 1min
	Between open contacts	1000VAC 1min
Surge voltage (between coil & contacts)	10kV (1.2 / 50μs)	
Operate time (at nomi. vot.)	10ms max.	
Release time (at nomi. vot.)	5ms max.	
Temperature rise (at nomi. Volt.)	55K max.	
Shock resistance *	Functional	NC: 49m/s ² NO: 98m/s ²
	Destructive	980m/s ²
Vibration resistance *	NC (no coil voltage)	10Hz to 55Hz 0.8mm DA
	NO	10Hz to 55Hz 1.65mm DA
Ambient temperature	-40°C to 85°C	
Humidity	5% to 85% RH	
Termination	PCB	
Unit weight	Approx. 8g	
Construction	Flux proofed	

Notes: 1) The data shown above are initial values.
2) * Index is not in relay length direction.

COIL

Coil power	Approx. 220mW to 290mW
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COIL DATA

at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	Max. Voltage VDC *	Coil Resistance Ω
5	3.50	0.5	7.5	113 x (1±10%)
6	4.20	0.6	9.0	164 x (1±10%)
9	6.30	0.9	13.5	360 x (1±10%)
12	8.40	1.2	18.0	620 x (1±10%)
18	12.60	1.8	27.0	1295 x (1±10%)
24	16.80	2.4	36.0	2350 x (1±15%)
48	33.60	4.8	72.0	8000 x (1±15%)
60	42.00	6.0	90.0	12500 x (1±15%)

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

SAFETY APPROVAL RATINGS

UL/CUL	NO: 8A 125VAC at 85°C NO/NC: 8A 125VAC at 85°C
VDE	NO: 8A 250VAC at 85°C NO: AC-15 15A/1.5A 230VAC NO/NC: 8A 250VAC at 85°C

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, ISO/TS16949, ISO14001, OHSAS18001, IECQ QC 080000 CERTIFIED

2017 Rev. 1.00T

ORDERING INFORMATION

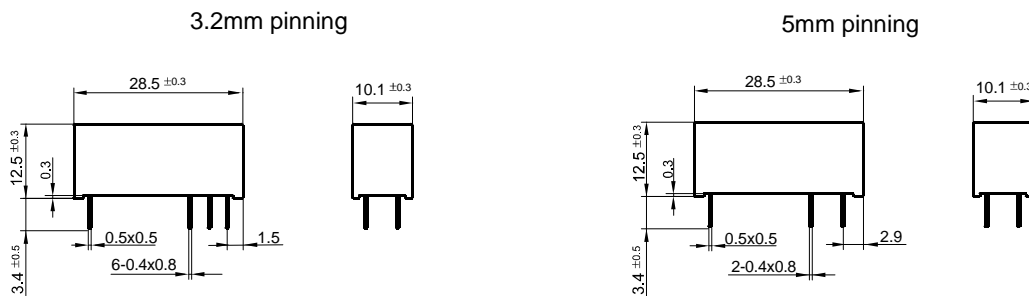
Type	HF118FK /	12	-H	1	T	(XXX)
Coil voltage	5, 6, 9, 12, 18, 24, 48, 60VDC					
Contact arrangement	H: 1 Form A Z: 1 Form C					
Version	1: 3.2mm 1 pole 8A (See Wiring Diagram below) 5: 5mm 8A, only 1 Form A					
Contact material	T: AgSnO ₂					
Customer special code	e.g. (335) stands for product in accordance to IEC 60335-1 (GWT).					

- Notes:** 1) Flux-proofed relays can not be used in the environment with pollutants like H₂S, SO₂, NO₂, dust, etc.
 2) Water cleaning or surface process is not suggested after the flux-proofed relays are assembled on PCB.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Outline Dimensions



Wiring Diagram (Bottom view)

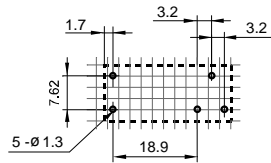


OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

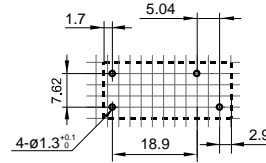
Unit: mm

PCB Layout (Bottom view)

Version 1



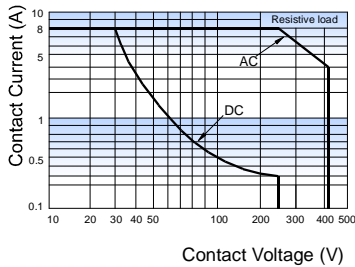
Version 5



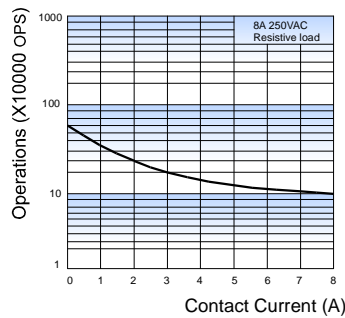
- Remark: 1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$.
 2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.
 3) The width of the gridding is 2.54mm.

CHARACTERISTIC CURVES

MAXIMUM SWITCHING POWER



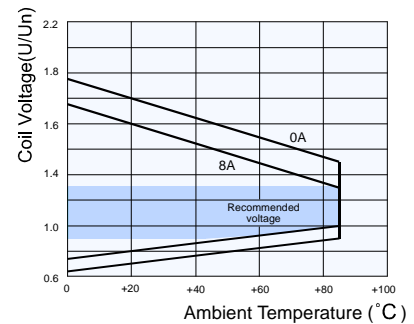
ENDURANCE CURVE



Remark:

1. Curve: Z1T type
2. Test conditions:
 NO, Flux proofed type,
 Room temp., 1s on 9s off

COIL OPERATING RANGE (DC) *



- Notes:** * The use of a relay with an energising voltage other than the rated coil voltage may lead to reduced electrical life.
 An energising voltage over the above range may damage the insulation of relay coil.

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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