

HF18FA

MINIATURE INTERMEDIATE POWER RELAY



File No.: E133481



Features

- 10A switching capability (2C type)
- 2kV dielectric strength (between coil and contacts)
- 2 & 4 pole configurations
- Various terminals, test button available
- Gold plated contact available
- Sockets available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (28.0 x 21.5 x 36.0) mm

CONTACT DATA

Contact arrangement	2C	4C
Contact resistance	100mΩ max.(at 1A 6VDC)	
Contact material	See ordering info.	
Contact rating (Res. load)	10A 250VAC/30VDC	6A 250VAC/30VDC
Max. switching voltage	250VAC / 30VDC	
Max. switching current	10A	6A
Max. switching power	2500VA / 300W	1500VA / 180W
Mechanical endurance	1 x 10 ⁷ OPS	
Electrical endurance	1 x 10 ⁵ OPS	

CHARACTERISTICS

Insulation resistance	1000MΩ (at 500VAC)	
Dielectric strength	Between coil & contacts	2000VAC 1min
	Between open contacts	1000VAC 1min
	Between contact sets	2000VAC 1min
Operate time (at nomi. volt.)	DC type: 20ms max.	
Release time (at nomi. volt.)	DC type: 20ms max.	
Temperature rise (no-load, at nomi.volt.)	60K max.	
Shock resistance	Functional	98m/s ²
	Destructive	980m/s ²
Vibration resistance	10Hz to 55Hz 1mm DA	
Humidity	5% to 85% RH	
Ambient temperature	-40°C to 70°C	
Termination	PCB, Plug-in	
Unit weight	Approx. 37g	
Construction	Dust protected	

Notes: 1) The data shown above are initial values.
2) UL insulation system: Class A.

COIL

Coil power	DC type: Approx. 0.9W to 1.1W; AC type: Approx. 1.2VA to 1.8VA
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COIL DATA

at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	Max. Allowable Voltage VDC	Coil Resistance Ω
5	4.0	0.50	5.5	27.5 x (1±10%)
6	4.8	0.60	6.6	40 x (1±10%)
12	9.6	1.20	13.2	160 x (1±10%)
24	19.2	2.40	26.4	650 x (1±10%)
48	38.4	4.80	52.8	2600 x (1±15%)
110/120	88.0	12.0	132	11000 x (1±15%)

Nominal Voltage VAC	Pick-up Voltage VAC max.	Drop-out Voltage VAC min.	Max. Allowable Voltage VAC	Coil Resistance Ω
6	4.80	1.80	6.6	11.5 x (1±10%)
12	9.60	3.60	13.2	46 x (1±10%)
24	19.2	7.20	26.4	184 x (1±10%)
48	38.4	14.4	52.8	735 x (1±10%)
100/110	80.0	33.0	121	3750 x (1±15%)
110/120	88.0	36.0	132	4550 x (1±15%)
200/220	160	66.0	242	12950 x (1±15%)
220/240	176	72.0	264	18790 x (1±15%)

SAFETY APPROVAL RATINGS

UL/CUL	AgNi	2 Form C	10A 250VAC/30VDC
		4 Form C	7A 250VAC/30VDC
	AgSnO ₂	2 Form C	10A 250VAC/30VDC
		4 Form C	7A 250VAC/30VDC
	AgCdO	2 Form C	10A 250VAC/30VDC
		4 Form C	7A 250VAC/30VDC

Notes: Only some typical ratings are listed above. If more details are required, please contact us.



HONGFA RELAY

ISO9001, ISO/TS16949, ISO14001, OHSAS18001, IECQ QC 080000 CERTIFIED

2012 Rev. 1.00

ORDERING INFORMATION

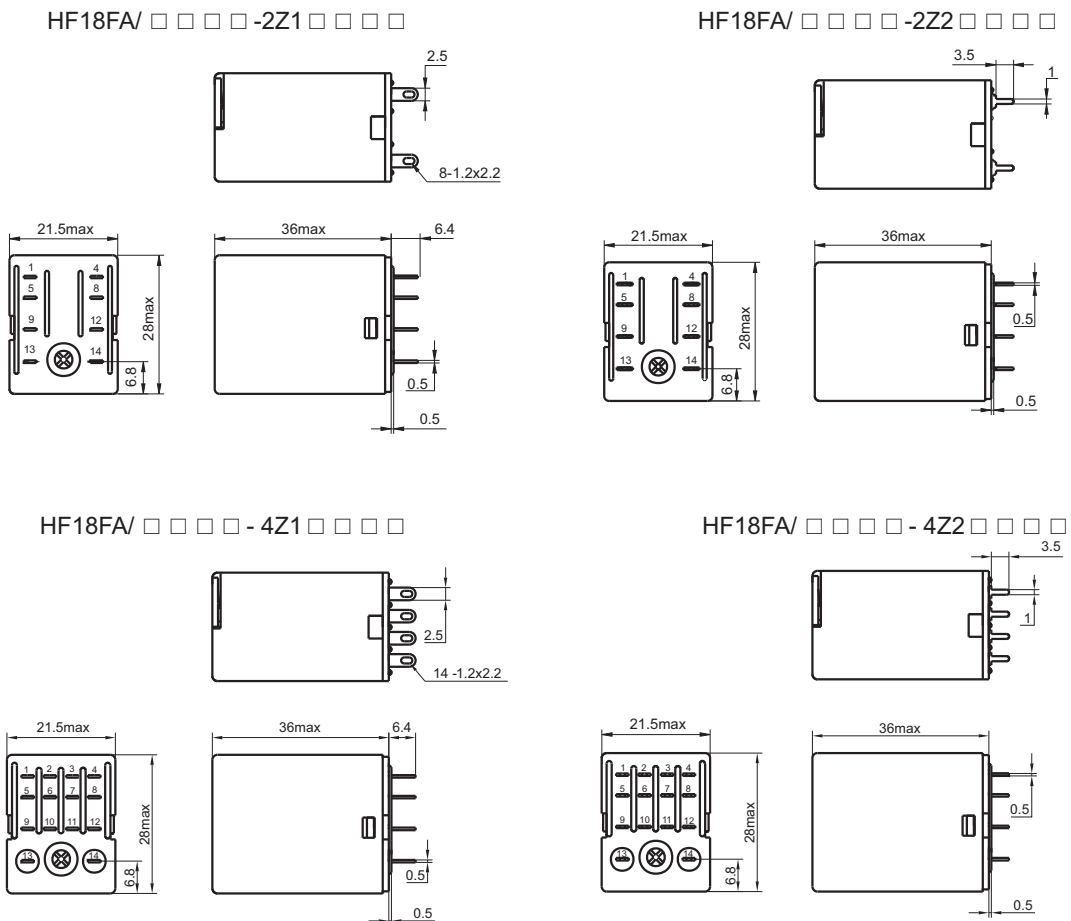
Type		HF18FA /		A	24	-2Z	1	G	D	J	(XXX)
Coil voltage form	A: AC Nil: DC										
Coil voltage	DC: 5VDC to 110VDC AC: 6VAC to 240VAC										
Contact arrangement	2Z: 2 Form C 4Z: 4 Form C										
Mounting Termination (See the following)	1: Socket 2: PCB										
Contact material	Nil: AgCdO G: AgCdO + Au plated 3: AgNi T: AgSnO ₂ TG: AgSnO ₂ + Au plated 3G: AgNi + Au plated										
LED	D: With LED Nil: Without LED										
Fly-wheel diode	J: With fly-wheel diode ¹⁾ (Only for DC type) Nil: Without fly-wheel diode										
Customer special code											

Notes: 1) There is no UL approval for J type.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Outline Dimensions

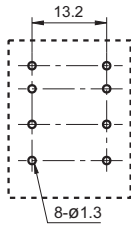


OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

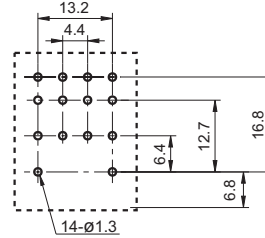
Unit: mm

PCB Layout (Bottom view)

2 Form C

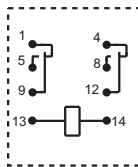


4 Form C

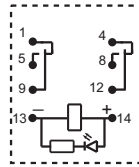


Wiring Diagram (Bottom view)

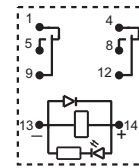
2 Form C



2 Form C (With LED)

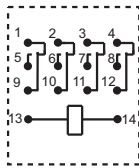


2 Form C
(DC, With fly-wheel diode)

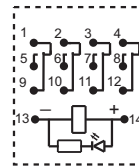


Remark: For AC parts with diode, the positive and negative pole markings on wiring diagram are not applicable.

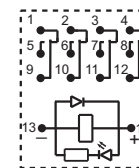
4 Form C



4 Form C (With LED)



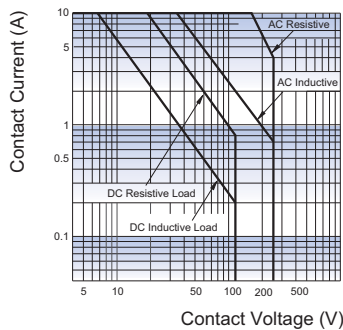
4 Form C
(DC, With fly-wheel diode)



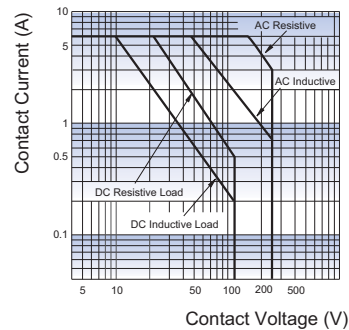
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$.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

CHARACTERISTIC CURVES

MAXIMUM SWITCHING POWER
(2 Form C)



MAXIMUM SWITCHING POWER
(4 Form C)



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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