

HF13F/3Z, 4Z

MINIATURE HIGH POWER RELAY



c **us**

File No.: E133481

Features

- 15A contact switching capability
- With 3Z、4Z contact structure
- QC terminal
- LED available, Sockets available
- Impulse voltage up to 4kV (Between contact & coil)
- UL insulation system: Class F

RoHS compliant

CONTACT DATA

Contact arrangement	3Z, 4Z
Contact resistance ¹⁾	≤50mΩ(6VDC 100mA)
Contact material	AgSnO ₂ In ₂ O ₃
Contact gap	≥0.5mm
Contact rating (Res.load)	NO: 15A 250VAC, 15A 28VDC NC: 7.5A 250VAC, 7.5A 28VDC
Max. switching voltage	250VAC
Max. switching current	15A
Max. switching power	3750VA 420W
Min. Capacity ²⁾	5VDC 100mA
Mechanical endurance	1×10 ⁷ OPS
Electrical endurance	1×10 ⁵ OPS (55℃)

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

2) Min. contact load is reference value. Please perform the confirmation test with the actual load before usage since reference value may change according to switching frequencies, environmental conditions and expected life cycles..

CHARACTERISTICS

Insulation resistance		1000MΩ(500VDC)
Dielectric strength	Between coil & contacts	2000VAC 1min
	Between open contacts	1500VAC 1min
	Between contacts sets	2000VAC 1min
Impulse voltage (Between contact & coil)		4kV(1.2/50μs)
Operate time(at nomi. volt.)		≤20ms
Release time(at nomi. volt.)		≤20ms
Temperature rise		≤100K(at 55℃)
Shock resistance	Functional	10g
	Destructive	30g
Vibration resistance		10Hz ~ 35Hz DA 1mm
Humidity		5% ~ 85%RH
Ambient temperature		-40℃ ~ 55℃
Termination		QC terminal
Unit weight		3Z: Approx.54g 4Z: Approx.71g
Construction		Dust protected

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

COIL DATA

23℃

3Z

Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	Max. Voltage VDC	Coil Resistance Ω
12	9.6	1.2	13.2	80×(1±10%)
24	19.2	2.4	26.4	320×(1±10%)
48	38.4	4.8	52.8	1280×(1±10%)
110	88	11	121	6720×(1±10%)

Nominal Voltage VAC	Pick-up Voltage VAC max.	Drop-out Voltage VAC min.	Max. Voltage VAC	Coil Resistance Ω
12	9.6	3.6	13.2	30×(1±10%)
24	19.2	7.2	26.4	110×(1±10%)
48	38.4	14.4	52.8	460×(1±10%)
120	96	36	132	2880×(1±10%)
230	184	69	253	9600×(1±15%)
240	192	72	264	11300×(1±15%)

4Z

Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	Max. Voltage VDC	Coil Resistance Ω
12	9.6	1.2	13.2	75.8×(1±10%)
24	19.2	2.4	26.4	303×(1±10%)
48	38.4	4.8	52.8	1210×(1±10%)
110	88	11	121	6370×(1±10%)

Nominal Voltage VAC	Pick-up Voltage VAC max.	Drop-out Voltage VAC min.	Max. Voltage VAC	Coil Resistance Ω
12	9.6	3.6	13.2	20×(1±10%)
24	19.2	7.2	26.4	80×(1±10%)
48	38.4	14.4	52.8	310×(1±10%)
120	96	36	132	2100×(1±10%)
230	184	69	253	7350×(1±15%)
240	192	72	264	8000×(1±15%)

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

2) Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time.



HONGFA RELAY

ISO9001,IATF16949,ISO14001,ISO45001,IECQ QC 080000,ISO/EC 27001 CERTIFIED

2023 Rev. 1.00

COIL		
Coil power	3Z	DC: Approx. 1.7 W, AC: Approx. 1.7 W
	4Z	DC: Approx. 2.0 W, AC: Approx. 2.9VA

SAFETY APPROVAL RATINGS		
UL/CUL	3Z、4Z	NO: 15A 250VAC/28VDC
		NC: 7.5A 250VAC/28VDC
Notes: 1) All values unspecified are at room temperature.		

ORDERING INFORMATION							
Type	HF13F	/A	012	-4Z	1	5	D
Coil form	A: AC Nil: DC						
Coil voltage	DC: 012, 024, 048, 110						
	AC: 012, 024, 048, 120, 230, 240						
Contact arrangement	3Z: 3 Form C 4Z: 4 Form C						
Terminals	1: QC						
Contact material	5: AgSnO ₂ In ₂ O ₃						
Component	D: LED						

Notes: 1) The customer special requirement express as special code after evaluating by Hongfa.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

3Z: 3 Form C

Outline Dimensions

Wiring Diagram

(Bottom view)

With LED

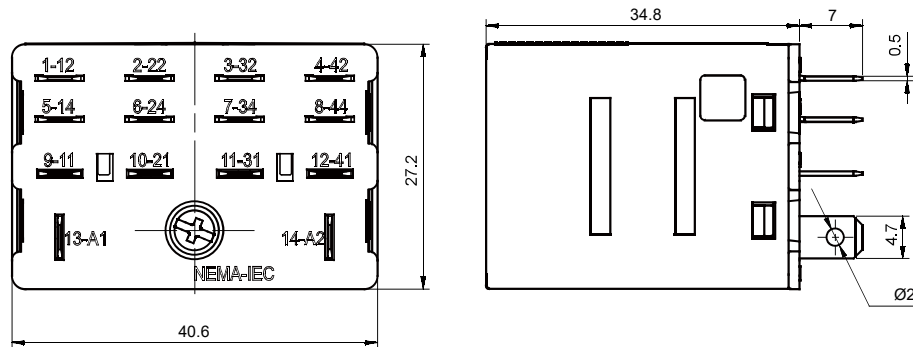
No LED

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

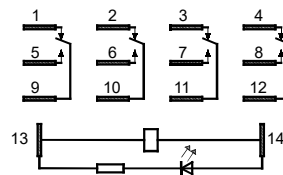
4Z: 4 Form C

Outline Dimensions

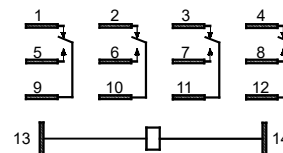


Wiring Diagram (Bottom view)

With LED



No LED



Notes: 1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 3\text{mm}$; outline dimension $\geq 5\text{mm}$, tolerance should be $\pm 4\text{mm}$.

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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