

HFA2B

Forcibly Guided RELAY



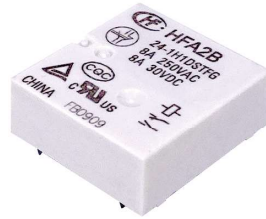
File No.:E133481



File No.:R50507878



File No.:CQC21002290220



Features

- Forcibly guided contacts according to IEC 61810-3 (EN50205)
- 8A switching capability
- Mechanical life: 4×10^7 cycles
- 4kV dielectric strength (Contact - Coil; Contact - Contact)
- UL insulation system: Class F available
- Outline dimensions: (26.6×25×10.2) mm

RoHS compliant

CONTACT DATA

Contact arrangement	1NO+1NC
Forcibly guided contacts Type (according to EN50205)	Type A
Contact resistance ¹⁾	$\leq 100\text{m}\Omega$ (at 6VDC 100mA)
Contact material	AgSnO ₂ +Au plated
Contact rating (Res. load)	8A 250VAC/ 30VDC
Max.switching voltage	400VAC(at 3.5A Res. Load)
Max.switching current	8A
Max.switching capacity	2000VA / 240W
Contact rating DC-13	NO:4A 24VDC (1sON:9sOFF)
Contact rating AC-15	NO:3A 250VAC (1sON:9sOFF)
Mechanical endurance	4×10^7 cycles
Electrical endurance	5×10^4 OPS(1NO:85°C, 1s ON 9s OFF, 8A 250VAC, Resistive load)

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

CHARACTERISTICS

Insulation resistance	1000MΩ(500VDC)	
Dielectric strength	Between open contacts	1500VAC 1min
	Between contact sets	4000VAC 1min
	Between coil & contacts	4000VAC 1min
Surge voltage	Between contact sets	6kV(1.2/50μs)
	Between coil & contacts	6kV(1.2/50μs)
Operate time(at rated voltage)	20ms max.	
Release time(at rated voltage)	10ms max.	
Temperature rise (at rated voltage)	70K max (NO Contact load current 8A, rated voltage excitation, at 85°C)	
Shock resistance	Functional	10g(NO)
	Destructive	100g
Vibration resistance	10Hz ~ 200Hz 5g(NO)	
Humidity	5% ~ 85%RH	
Ambient temperature	-40°C ~ 85°C	
Termination	PCB	
Unit weight	Approx. 12g	
Construction	Plastic sealed	

Notes: The data shown above are initial values.

COIL

Coil power	Approx. 0.4W
Holding Voltage ¹⁾	50% to 100%UN(at 23°C)
	60% to 100%UN(at 85°C)

Notes: 1) The coil holding voltage is the voltage applied to coil 100ms after the rated voltage.

COIL DATA

at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC ⁽¹⁾	Drop-out Voltage VDC	Max. Voltage ⁽¹⁾ VDC	Coil Resistance Ω
5	≤ 3.5	≥ 0.5	6.5	65 ×(1±10%)
6	≤ 4.2	≥ 0.6	7.8	90 ×(1±10%)
9	≤ 6.3	≥ 0.9	11.7	210 ×(1±10%)
12	≤ 8.4	≥ 1.2	15.6	370 ×(1±10%)
15	≤ 10.5	≥ 1.5	19.5	570 ×(1±10%)
18	≤ 12.6	≥ 1.8	23.4	810 ×(1±10%)
21	≤ 14.7	≥ 2.1	27.3	1050 ×(1±10%)
24	≤ 16.8	≥ 2.4	31.2	1450 ×(1±10%)
36	≤ 25.2	≥ 3.6	46.8	3250 ×(1±10%)
48 ⁽³⁾	≤ 33.6	≥ 4.8	62.4	6000 ×(1±10%)
60 ⁽³⁾	≤ 42	≥ 6	78	9250 ×(1±10%)
110 ⁽³⁾	≤ 77	≥ 11	143	31000 ×(1±10%)

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.

3) For products with rated voltage $\geq 48\text{V}$, measures should be taken to prevent coil overvoltage in order to protect coil in test and application(eg. Connect diodes in parallel).

SAFETY APPROVAL RATINGS

UL/CUL	8A 250/277VAC cos(phi)=1 85°C
	8A 30VDC L/R=0 85°C NO: B300 Q300 85°C NC: Q300 85°C NO: 3.5A 400VAC cos(phi)=1 85°C
TUV	8A 250/277VAC cos(phi)=1 85°C
	8A 30VDC L/R=0 85°C NO: 3A 250VAC(AC-15) 85°C 4A 24VDC(DC-13) 85°C

Notes: Only typical loads are listed above. Other load specifications can be available upon request.



HONGFA RELAY

ISO9001,IATF16949,ISO14001,OHSAS18001,IECQ QC 080000 CERTIFIED

2021 Rev. 1.00

ORDERING INFORMATION

Type	HFA2B/	12	-1H1D	S	T	F	G	(XXX)
Coil voltage	5,6,9,12,15,18,21, 24,36,48,60,110 VDC							
Contact arrangement	1H1D: 1NO+1NC							
Construction	S: Plastic sealed							
Contact material	T: AgSnO ₂							
Insulation class	F: Class F							
Contact plating	G: Au plated							
Special code	XXX: Customer special requiremen; Nil: Standard							

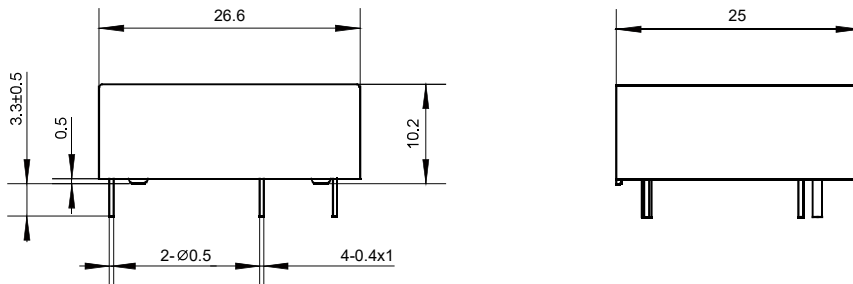
Notes: 1) Contact is recommended for suitable condition and specifications if water cleaning or surface precess is involved in assembling relays on PCB.
2) The customer special requirement express as special code after evaluating by Hongfa.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

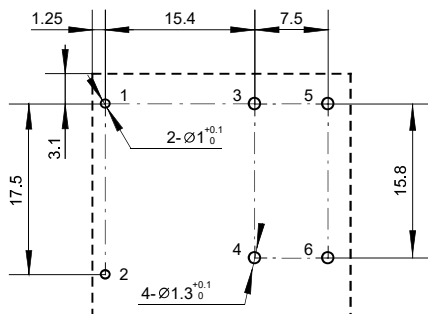
Unit: mm

HFA2B/□□-1H1DSTFG

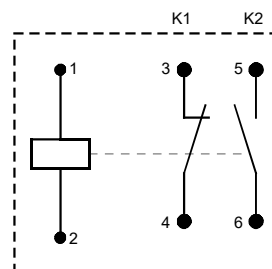
Outline Dimensions



PCB Layout (Bottom view)



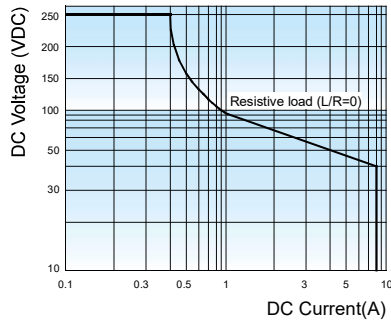
Wiring Diagram (Bottom view)



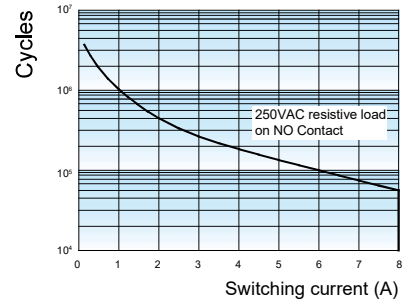
- Notes: 1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $>1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $>5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;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

CHARACTERISTIC CURVES

Max.DC load breaking capacity



Electrical Endurance



Test condition:
 250VAC, 85°C, 1s on 9s off

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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