

HFE62

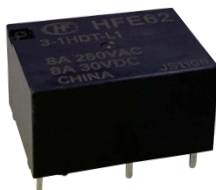
SUBMINIATURE INTERMEDIATE POWER RELAY



File No.: E133481



FILE NO.:B0532860032



Features

- High switching capacity
1A, 1B: 10A 250VAC/30VDC;
- 4kV dielectric strength (between coil & contacts)
- 1 Form A, 1 Form B, 2 Form A, 2 Form B and 1A + 1B contact arrangement
- Single side stable and latching types available
- Suffix (803): TV5 compliant
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: 20.0mm X 15.0mm X 10.2mm

CONTACT DATA

Contact arrangement	1A, 1B	2A, 2B, 1A + 1B
Contact resistance ¹⁾	²⁾ gold-plated: ≤30mΩ(1A 6VDC) No gold-plated : ≤50mΩ(1A 6VDC)	
Contact material	AgSnO ₂	
Contact rating	10A 250VAC, 10 x 10 ⁴ ops(Res. load) 400W 220VAC, 3 x 10 ⁴ ops(led) 400W 220VAC, 3 x 10 ⁴ ops (Fluorescent lamps)	8A 250VAC, 10 x 10 ⁴ ops (Res. load)
Max. switching voltage	380VAC/250VDC	
Max. switching current	10A	8A
Max. switching power	2500W	2000W
Mechanical endurance	1 x 10 ⁷ ops	
Electrical endurance	See "Contact rating"	

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

2) Typical value: Sampling quantity for contact resistance shall not less than 20 pcs, take the average value from 5 continuous measurements for each sample.

CHARACTERISTICS

Insulation resistance	1000MΩ(500VDC)	
Dielectric strength	Between coil & contacts	4000VAC 1min
	Between Contacts	4000VAC 1min
	Between open contacts	1000VAC (50/60 Hz 1min)
Operate time	≤6ms	
Release time	≤6ms	
Vibration resistance	10Hz~55Hz 1.5mm DA	
Shock resistance	Functional	98m/s ²
	Destructive	980m/s ²
Humidity	5% ~85% RH	
Ambient temperature	-40℃~85℃	
Termination	Coil terminal	PCB
	Load terminal	PCB
Unit weight	Approx.6g	
Construction	Plastic sealed, Flux proofed	

Notes: The data shown above are initial values.

COIL

Coil power	Single side stable	Approx. 280mW
	Single coils latching	Approx. 200mW
	Double coils latching	Approx. 280mW

COIL DATA

23℃

Single side stable

Nominal Voltage VDC	Pick-up Voltage VDC ¹⁾	Drop-out Voltage VDC ¹⁾	Coil Resistance x (1±10%) Ω
3	≤2.4	≥0.3	32.1
5	≤4	≥0.5	89.3
6	≤4.8	≥0.6	129
9	≤7.2	≥0.9	289
12	≤9.6	≥1.2	514
24	≤19.2	≥2.4	2056

Single coil latching

Nominal Voltage VDC	Set / Reset Voltage ¹⁾ VDC	Pulse Duration ms	Coil Resistance x (1±10%) Ω
3	≤2.4	≥50	45
5	≤4	≥50	125
6	≤4.8	≥50	180
9	≤7.2	≥50	405
12	≤9.6	≥50	720
24	≤19.2	≥50	2880

Double coils latching

Nominal Voltage VDC	Set / Reset Voltage ¹⁾ VDC	Pulse Duration ms	Coil Resistance x (1±10%) Ω
3	≤2.4	≥50	32.1+32.1
5	≤4	≥50	89.3+89.3
6	≤4.8	≥50	129+129
9	≤7.2	≥50	289+289
12	≤9.6	≥50	514+514
24	≤19.2	≥50	2056+2056

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

2) Above driving voltage only apply to check relay normal function without load. When normal use with load, use (1~2)U_e for latching relay set/reset voltage, use (1~1.3)U_e for set voltage and 0V for release voltage for monostable relay.



HONGFA RELAY

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

2020 Rev.1.01

SAFETY APPROVAL RATINGS

TÜV	1A,1B	Resistive load: 10A 250VAC (CosΦ1.0) 85°C Inductive load: 5A 250VAC (CosΦ0.4) 85°C Resistive load: 10A 30VDC (0ms) 85°C
	2A,1A+1B,2B	Resistive load: 8A 250VAC (CosΦ1.0) 85°C Inductive load: 4A 250VAC (CosΦ0.4) 85°C Resistive load: 8A 30VDC (0ms) 85°C
UL	1A,1B	Resistive load: 10A 250VAC 85°C Resistive load: 10A 30VDC 85°C
	2A,1A+1B,2B	Resistive load: : 8A 250VAC 85°C Resistive load: 8A 30VDC 85°C
	1A(803)	TV-5 40°C

ORDERING INFORMATION

Type	HFE62 / 12 1H S T G L1 R (XXX)
Coil voltage	3,5,6,9,12,24 VDC
Contact form	1H: 1 Form A 2H: 2 Form A 1D: 1 Form B(only for latching relay) 2D: 2 Form B(only for latching relay) 1HD: 1A + 1B
Construction	S: Plastic sealed Nil: Flux proofed
Contact material	T:AgSnO ₂
Contact plating	G: Gold plated Nil: No gold plated
Sort	L1: 1 coil latching L2: 2 coils latching Nil: Single side stable
Polarity	R: Negative polarity Nil: Positive polarity
Special code	XXX: Customer special requirement Nil: Standard

Notes: 1) 1H, 2H means that relay is on the "reset" status when delivery; 1D, 2D means that relay is on the "set" status when delivery.

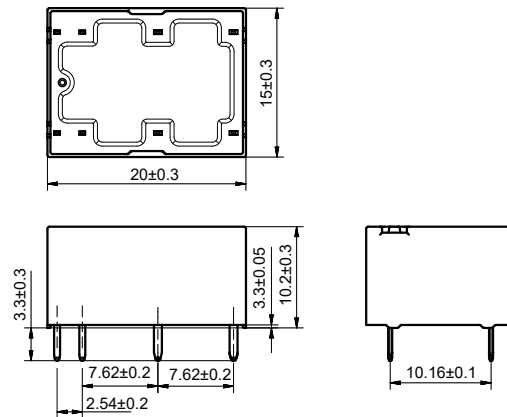
2) Under the ambience with dangerous gas like H₂S, SO₂ or NO₂, plastic sealed type is recommended; Please test the relay in real applications. If the ambience allows, flux proofed type is preferentially recommended. Contact is recommended for suitable condition and specifications, if water cleaning or surface process is involved in assembling relays on PCB.

3) For the application with inrush current conditions, such as lamp load, motor load, capacitance load, coil load, etc..

4) Please check with HF's engineer before designing the relay to your application if there are some requirements' outside the specification we provided.

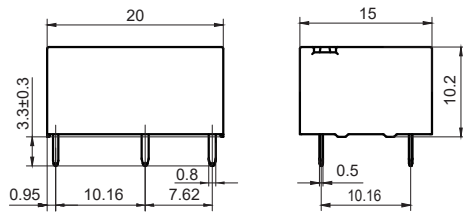
5) The customer special requirement express as special code after evaluating by Hongfa. e.g. (803): suffix (803): single coil driving power 0.4W; dual coil, monostable coil power: 0.8W; TV5 compliant.

Outline Dimensions

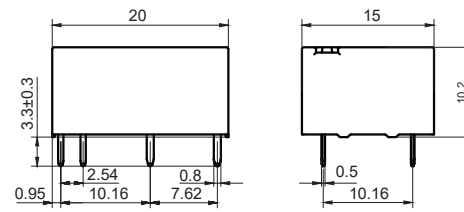


Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension > 1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.

Single side stable & 1 coil latching

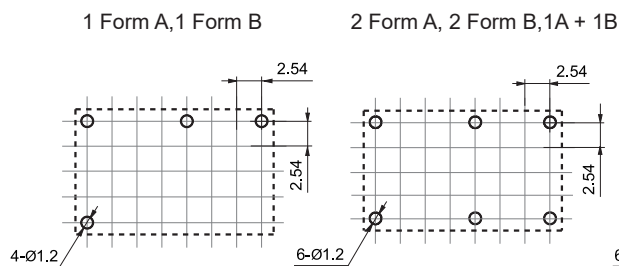


2 coils latching

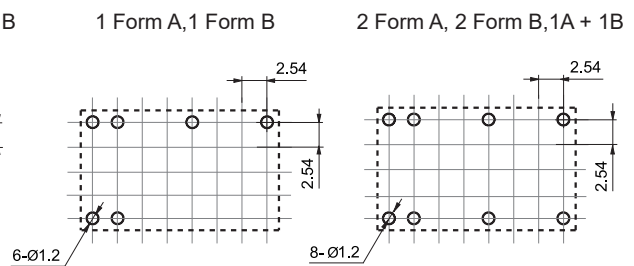


**PCB Layout
(Bottom view)**

Single side stable & 1 coil latching



2 coils latching

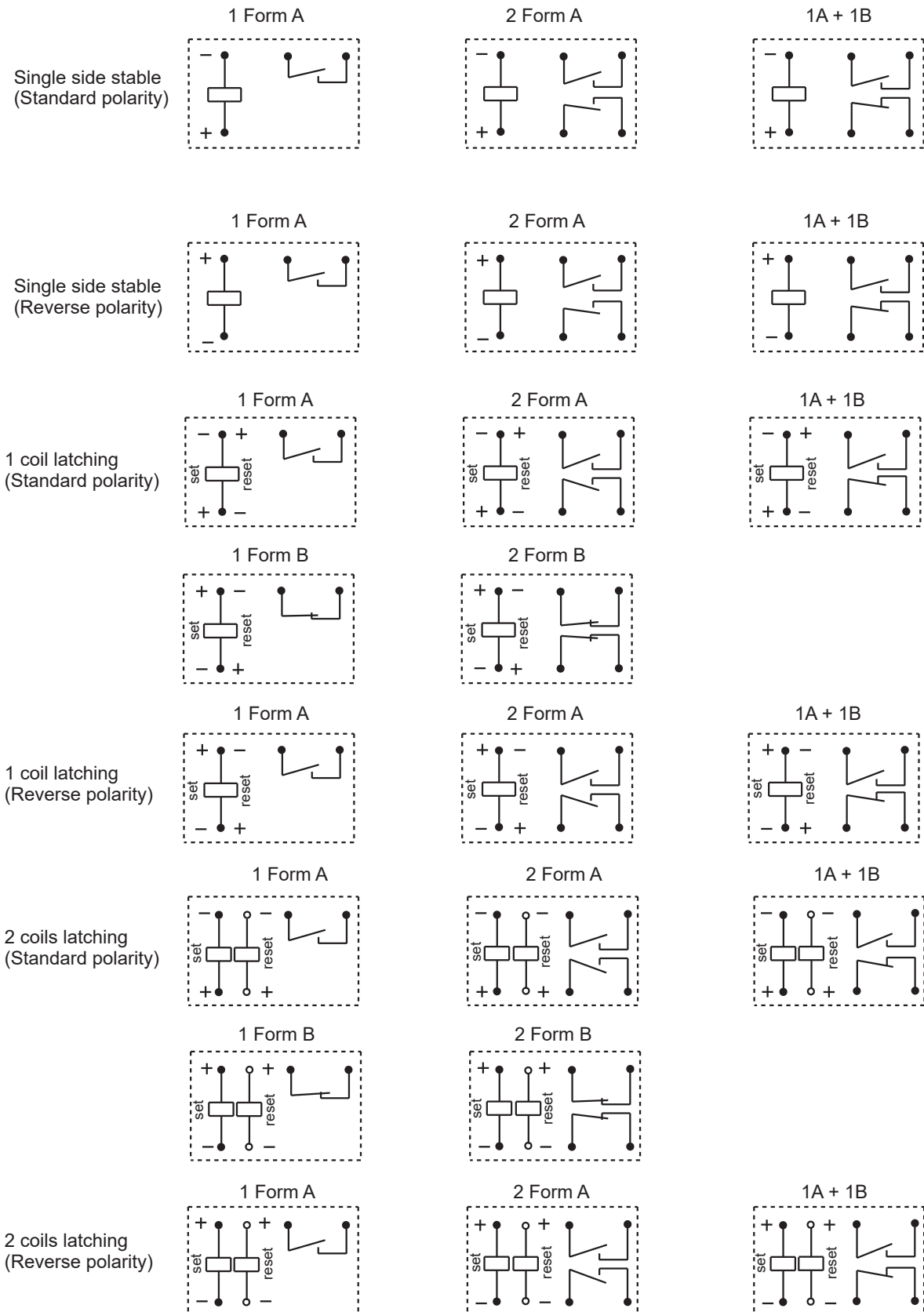


Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension > 1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension > 5mm, tolerance should be ±0.4mm.
 2) The tolerance without indicating for PCB layout is always ±1mm.
 3) The width of the gridding is 2.54mm.

OUTLINE DIMENSIONS AND WIRING DIAGRAM

Unit: mm

Wiring Diagram (Bottom view)



CAUTIONS

Notice:

1. Relay is on the "reset" or "set" status when being released from stock, with the consideration of shock risen from transit and relay mounting, relay would be changed to "set" or "reset" status, therefore, when application (connecting the power supply), please reset the relay to "set" or "reset" status on request.
2. In order to maintain "set" or "reset" status, energized voltage to coil should reach the rated voltage, impulse width should be 5 times more than "set" or "reset" time. Do not energize voltage to "set" coil and "reset" coil simultaneously. And also long energized time (more than 1 min) should be avoided.
3. As the relay component part's will shrink and deformed due to the high temperature impact, our products are forbidden to be used at the temperature outside our suggested working temperature range (-40 °C to 85 °C) for long time ; If the wave soldering will be used, the operating parameters we will suggest are: Up limit of the pre-heating time: 120s; Up limit of the pre-heating temperature: 120 °C ; Soldering temperature: 260 °C ±5 °C ; Soldering time (10±3)s; Besides our suggested parameters, please try to shorten the pre-heating time and the soldering time and try to lower the temperature for pre-heating and the soldering as you can; the manual soldering for such relay is more recommended.

Disclaimer

The specification is for reference only. 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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