

HFE22

MINIATURE HIGH POWER LATCHING RELAY



File No.: E133481



Features

- 100A Latching relay
- Making test 1500A 10ms
short circuit current without explosion
- Heavy load up to 27700VA
- 4kV dielectric strength (between coil and contacts)
- Micro switch on mounting board available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (60.0 x 40.0 x 21.0) mm

CONTACT DATA

Contact arrangement	1A, 1B
Contact resistance	Typ.:0.35mΩ max.(at 100A) ¹⁾
Contact material	AgSnO ₂
Contact rating (Res. load)	100A 277VAC/28VDC
Max. switching voltage	440VAC
Max. switching current	100A
Max. switching power	27700VA / 2800W
Mechanical endurance	1 x 10 ⁵ OPS
Electrical endurance	1 x 10 ⁴ OPS (100A 220VAC, Resistive load, Room temp., 1s on 9s off)

Notes: 1) 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 (at 500VDC)	
Dielectric strength	Between coil & contacts	4000VAC 1 min
	Between open contacts	2000VAC 1 min
Creepage distance	8mm	
Set time (at nomi. volt.)	20ms max.	
Reset time (at nomi. volt.)	20ms max.	
Shock resistance	Functional	294m/s ²
	Destructive	980m/s ²
Vibration resistance	10Hz to 55Hz 1.5mm DA	
Humidity	5% to 85% RH	
Ambient temperature	-40°C to 70°C	
Termination	QC	
Unit weight	Approx. 100g	
Construction	Dust protected	

Notes: The data shown above are initial values.

COIL

Coil power	Single coil latching: Approx. 2.4W Double coils latching: Approx. 4.8W
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COIL DATA

at 23°C

Nominal Voltage VDC	Set / Reset Voltage VDC max.	Pulse Duration ms min.	Coil Resistance x (±10%) Ω	
6	4.8	100	Single coil latching	16
12	9.6	100		60
24	19.2	100		250
48	38.4	100	Double coils latching	1000
6	4.8	100		8+8
12	9.6	100		30+30
24	19.2	100		125+125
48	38.4	100		500+500

Notes: When requiring other nominal voltage, special order allowed.



HONGFA RELAY

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

2016 Rev. 1.00

ORDERING INFORMATION

	HFE22		-A /	12	-D	1	T	2	1	-R	(XXX)
Type											
Version	A: Type A contact terminal B: Type B contact terminal C: Type C contact terminal										
Coil voltage	6, 12, 24, 48VDC										
Contact form ¹⁾	D: 1 Form B H: 1 Form A										
Coil terminal type	1: Type 1 2: Type 2										
Contact material	T: AgSnO ₂										
Sort	1: Single coil latching 2: Double coils latching										
Mounting board form	1: Without micro switch 2: With micro switch										
Polarity	R: Negative polarity Nil: Positive polarity										
Special code ²⁾	XXX: Customer special requirement Nil: Standard										

Notes: 1) H means that relay is on the "reset" status when delivery; D means that relay is on the "set" status when delivery. If no special required by customer, we will keep the relay on the "set" status when delivery.

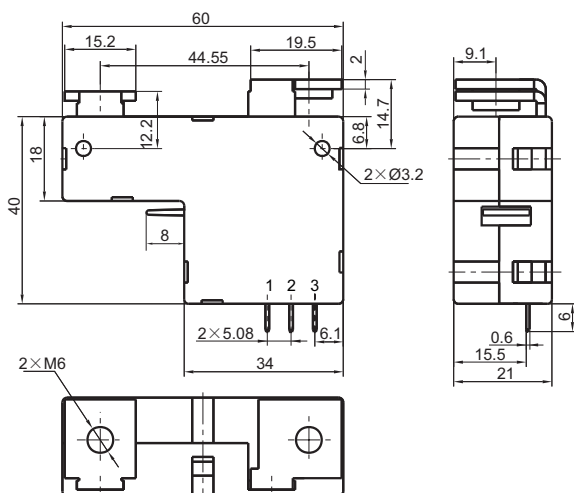
2) The customer special requirement express as special code after evaluating by Hongfa.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

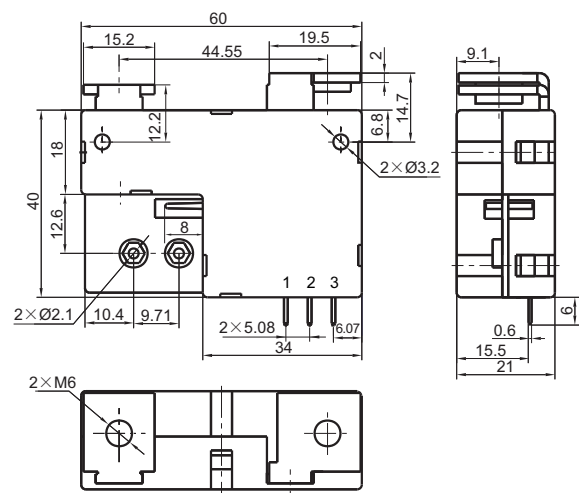
Unit: mm

Outline Dimensions

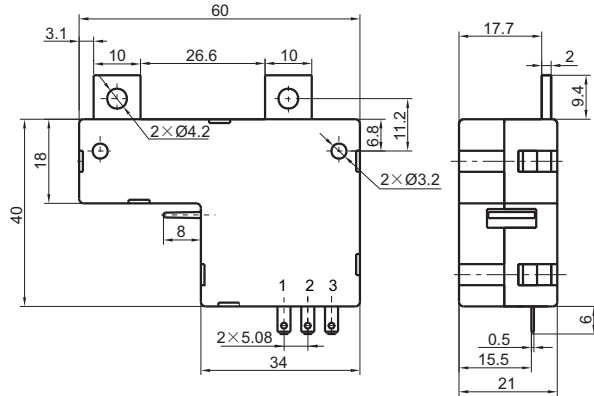
Type A contact terminal, Without micro switch



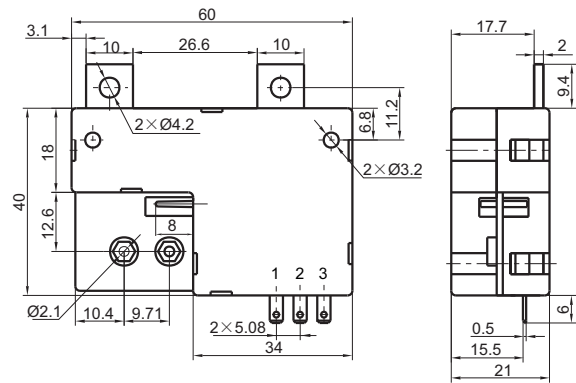
Type A contact terminal, With micro switch



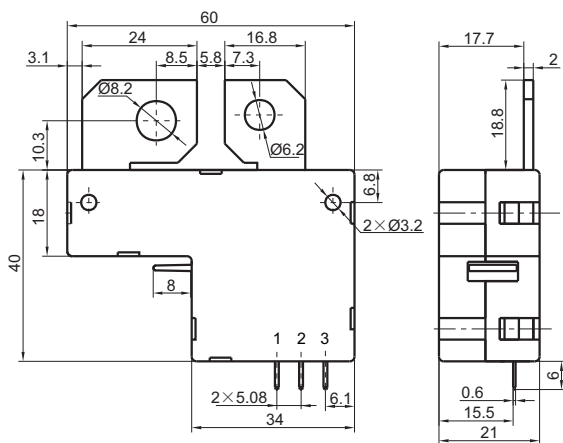
Type B contact terminal, Without micro switch



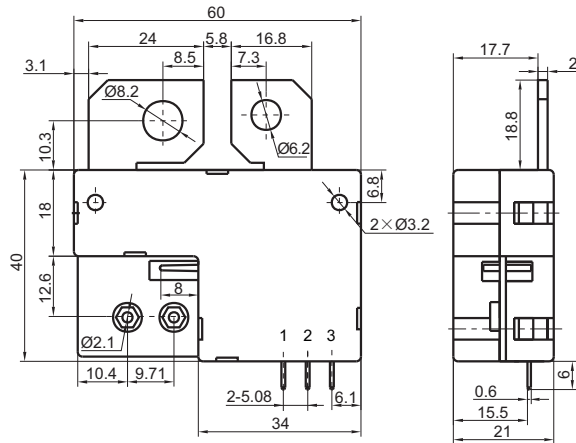
Type B contact terminal, With micro switch



Type C contact terminal, Without micro switch

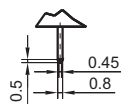


Type C contact terminal, With micro switch

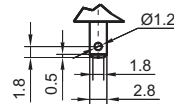


Coil Terminal Type

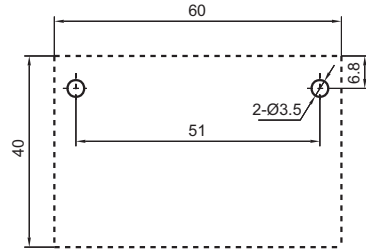
type 1



type 2



PCB Layout

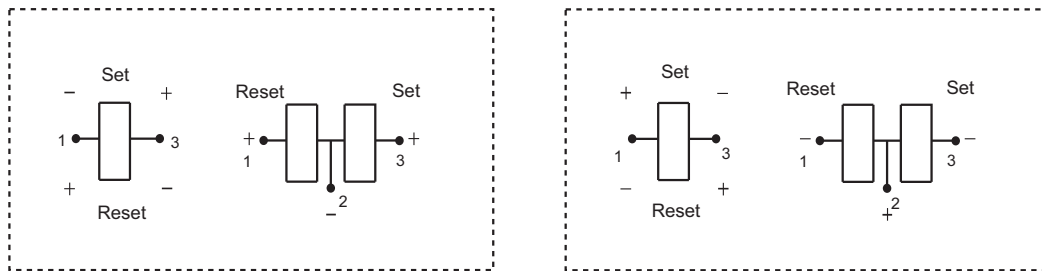


Remark: 1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$.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

Coil Wiring Diagram

Positive polarity

Negative polarity



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. The terminals of relay without twisted copper wire can not be tin-soldered, can not be moved willfully.
4. Relays used for metering measuring applications are usually made with dust proof structure, while most relays could be made specially per customer's specific requirements. No longer than 6 months' storage time is recommended for this kind of relay, and please pay attention to the storage environment. To ensure contact reliability, we will keep contact status be closed when delivery if no special required by customer.

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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