

HFE31

HIGH POWER LATCHING RELAY



Features

- Latching relay
- 200A switching capability
- Carrying:7kA peak current/500ms
- According to the fault current test of IEC 62055-31:UC3 (Carrying: 6kA current / 10ms; Making:3kA current / 10ms)
- Switching power up to 55.4kVA
- 4kV dielectric strength (between coil and contacts)
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (61.3 x 57.0 x 29.3) mm

CONTACT DATA

| | |
|----------------------------|---|
| Contact arrangement | SH, SD |
| Contact resistance | Typ.:0.25mΩ max. (at 200A) ⁽¹⁾ |
| Contact material | AgSnO ₂ |
| Contact rating (Res. load) | 200A 250VAC |
| Max. switching voltage | 400VAC |
| Max. switching current | 200A |
| Max. switching power | 50kVA |
| Mechanical endurance | 1 x 10 ⁵ OPS |
| Electrical endurance | 5000 OPS |

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 1min |
| | Between open contacts | 2000VAC 1min |
| Creepage distance | 9.6mm | |
| Operate time (at nomi. volt.) | 25ms max. | |
| Release time (at nomi. volt.) | 25ms max. | |
| Shock resistance | Functional | 196m/s ² |
| | Destructive | 980m/s ² |
| Vibration resistance | 10Hz to 55Hz 1.5mm DA | |
| Humidity | 5% to 85% RH | |
| Ambient temperature | -40°C to 85°C | |
| Termination | QC | |
| Unit weight | Approx. 151g | |
| Construction | Dust protected | |

Notes: The data shown above are initial values.

COIL

| | |
|------------|--|
| Coil power | Single coil latching:Approx. 5W Double coils latching: Approx.10W |
|------------|--|

COIL DATA

at 23°C

| Nominal Voltage VDC | Pick-up Voltage VDC max. | Pulse Duration ms min. | Coil Resistance x (1±10%)Ω | |
|---------------------|--------------------------|------------------------|----------------------------|-------------|
| 6 | 4.8 | 150 | Single coil latching | 7.2 |
| 12 | 9.6 | 150 | | 28.8 |
| 24 | 19.2 | 150 | | 115.2 |
| 48 | 38.4 | 150 | | 460.8 |
| 6 | 4.8 | 150 | Double coils latching | 3.6+3.6 |
| 12 | 9.6 | 150 | | 14.4+14.4 |
| 24 | 19.2 | 150 | | 57.6+57.6 |
| 48 | 38.4 | 150 | | 230.4+230.4 |

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



HONGFA RELAY

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

2013 Rev. 1.00

ORDERING INFORMATION

| | | | | | | | |
|----------------------------|--|--|--|--------------------------|--|--|-------------------------|
| Type | HFE31 / 6 -SD 1 T -2 -R (XXX) | | | | | | |
| Coil voltage | 6,12, 24, 48VDC | | | | | | |
| Contact form ¹⁾ | SD: 1 Form B (Double-contact of 1 Form B) | | | | | | |
| | SH: 1 Form A (Double-contact of 1 Form A) | | | | | | |
| Termination 1: | With mounting aperture | | | | | | 2: No mounting aperture |
| Contact material | T: AgSnO ₂ | | | | | | |
| Coil Sort | 1: Single coil latching | | | 2: Double coils latching | | | |
| Polarity | R: Negative polarity | | | Nil: Positive polarity | | | |

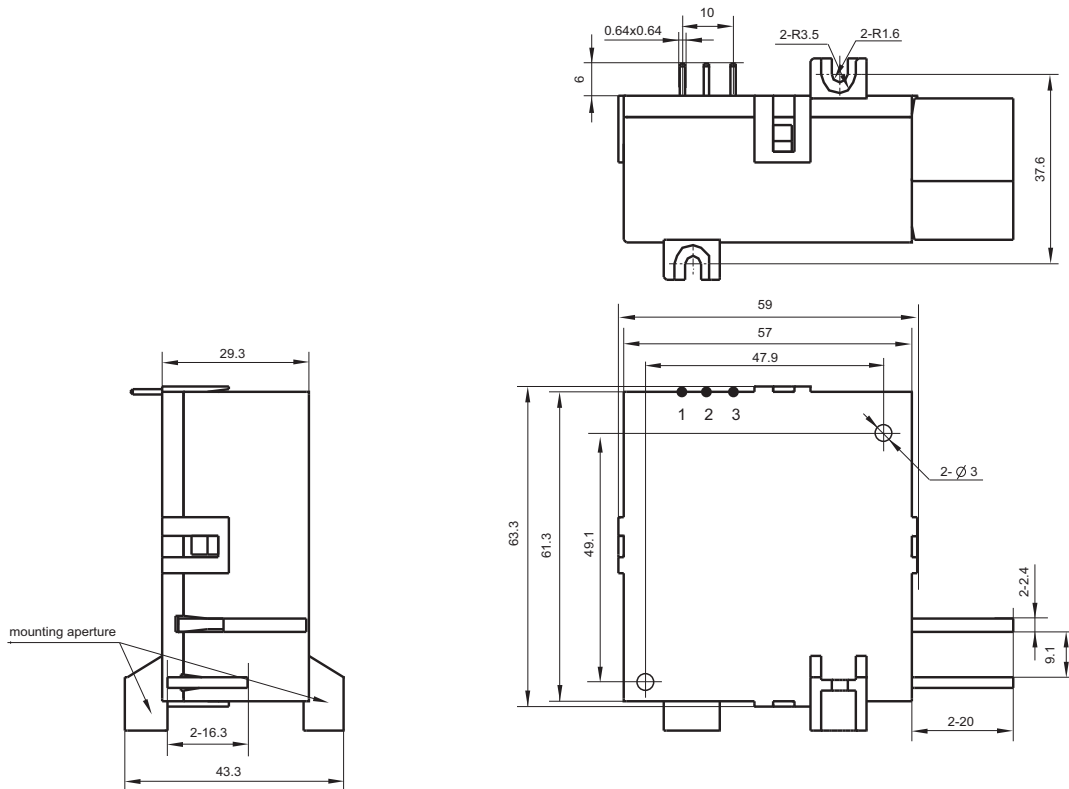
Customer special code

Notes: 1) SH means that relay is on the "reset" status when delivery; SD 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.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Outline Dimensions

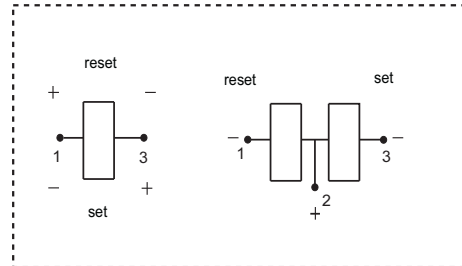
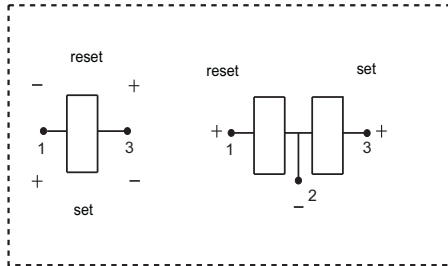


Remark: In case of no tolerance shown in outline dimension: outline dimension ≤ 1 mm, tolerance should be ± 0.2 mm; outline dimension > 1 mm and ≤ 5 mm, tolerance should be ± 0.3 mm; outline dimension > 5 mm, tolerance should be ± 0.4 mm.

Coil Wring 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

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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