

HFE19-60(391) MINIATURE HIGH POWER LATCHING RELAY



Features

- 60A switching capability
- Latching relay
- The relay can stand 1440A peak current for 10ms
- Intergrated one-piece installation solution, facilitate your installation requirement.
- 4kV dielectric strength (between coil and contact)
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (38.0 x 30.9 x 16.5) mm

CONTACT DATA

| | |
|----------------------------|--------------------------------|
| Contact arrangement | 1A, 1B |
| Contact resistance | 1mΩ max.(at 1A 6VDC) |
| Contact material | AgSnO ₂ |
| Contact rating (Res. load) | 60A 250VAC |
| Max. switching voltage | 250VAC |
| Max. switching current | 60A |
| Max. switching power | 15000VA |
| Mechanical endurance | Meter: 1 x 10 ⁵ OPS |
| Electrical endurance | Meter: 5000OPS |

CHARACTERISTICS

| | | |
|-------------------------------|-------------------------|-----------------------|
| Insulation resistance | | 1000MΩ (at 500VDC) |
| Dielectric strength | Between coil & contacts | 4000VAC 1min |
| | Between open contacts | 1500VAC 1min |
| Creepage distance | | 8mm |
| Operate time (at nomi. volt.) | | 20ms max. |
| Release time (at nomi. volt.) | | 20ms max. |
| Shock resistance | Functional | 98m/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 |
| Temperature rise | | 55K max. |
| Termination | | PCB |
| Unit weight | | Approx. 50g |
| Construction | | Dust protected |

Notes: The data shown above are initial values.

COIL

| | |
|------------|--------------------------------|
| Coil power | 1 coil latching: Approx. 1.0W |
| | 2 coils latching: Approx. 2.0W |

COIL DATA at 23°C

1 coil latching

| Nominal Voltage VDC | Set / Reset Voltage VDC max. | Pulse Duration ms min. | Coil Resistance x (1±10%) Ω |
|---------------------|------------------------------|------------------------|-----------------------------|
| 5 | 3.5 | 100 | 25 |
| 6 | 4.2 | 100 | 36 |
| 9 | 6.3 | 100 | 80 |
| 12 | 8.4 | 100 | 145 |
| 24 | 16.8 | 100 | 575 |
| 48 | 33.6 | 100 | 2304 |

2 coils latching

| Nominal Voltage VDC | Set / Reset Voltage VDC max. | Pulse Duration ms min. | Coil Resistance x (1±10%) Ω |
|---------------------|------------------------------|------------------------|-----------------------------|
| 5 | 3.5 | 100 | 12.5+12.5 |
| 6 | 4.2 | 100 | 18+18 |
| 9 | 6.3 | 100 | 40+40 |
| 12 | 8.4 | 100 | 72.5+72.5 |
| 24 | 16.8 | 100 | 287.5+287.5 |
| 48 | 33.6 | 100 | 1152+1152 |

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



HONGFA RELAY

ISO9001, ISO/TS16949 , ISO14001, OHSAS18001, IECQ QC 080000 CERTIFIED2012 Rev. 1.00

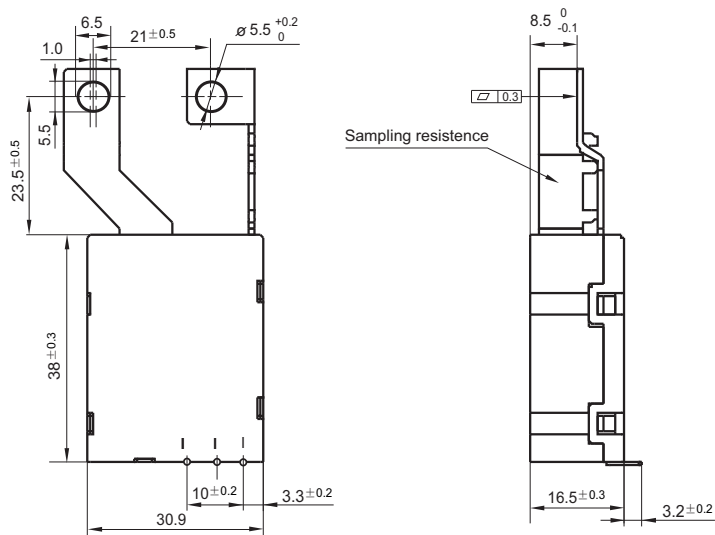
| ORDERING INFORMATION | | | | | | | | | |
|----------------------------|------------------------|-------|------------------------|---|----|---|----|----|-------|
| Type | | HFE19 | -60/ | 9 | -D | T | -1 | -R | (391) |
| Contact rating | 60: 60A | | | | | | | | |
| Coil voltage | 5, 6, 9, 12, 24, 48VDC | | | | | | | | |
| Contact form ¹⁾ | D: 1 Form B | | H: 1 Form A | | | | | | |
| Contact material | T: AgSnO ₂ | | | | | | | | |
| Sort | 1: 1 coil latching | | 2: 2 coils latching | | | | | | |
| Polarity | R: Negative polarity | | Nil: Positive polarity | | | | | | |
| Product special code | | | | | | | | | |

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 speical 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



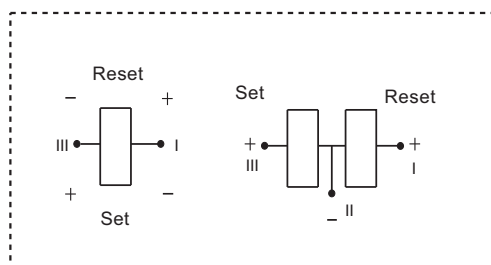
Remark: 1) During the installation, please pre-fix the screws onto the two install holes then fasten the screws to protect relays working reliability from stress force during the installation.
2) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should 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 $\pm 0.4\text{mm}$.
3) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

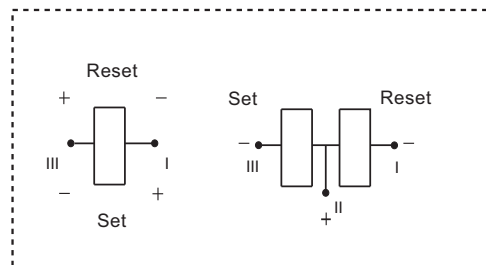
Unit: mm

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 load's output terminals of the latching relay can not be tin-soldered not be wrenched;
4. Please control the distance difference between the working areas of the meter connection terminals can not exceed 0.5mm;
5. 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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