

HFE19-60(391) MINIATURE HIGH POWER LATCHING RELAY



File No.: CQC12002086396

Features

- 60A switching capability
- Latching relay
- The relay can stand 1440A peak current for 10ms
- Integrated 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	Single coil latching: Approx. 1.0W Double coils latching: Approx. 2.0W
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COIL DATA

at 23°C

Single 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

Double 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 CERTIFIED

2013 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: Single coil latching			2: Double coils latching				
Polarity	R: Negative polarity			Nil: Positive polarity				

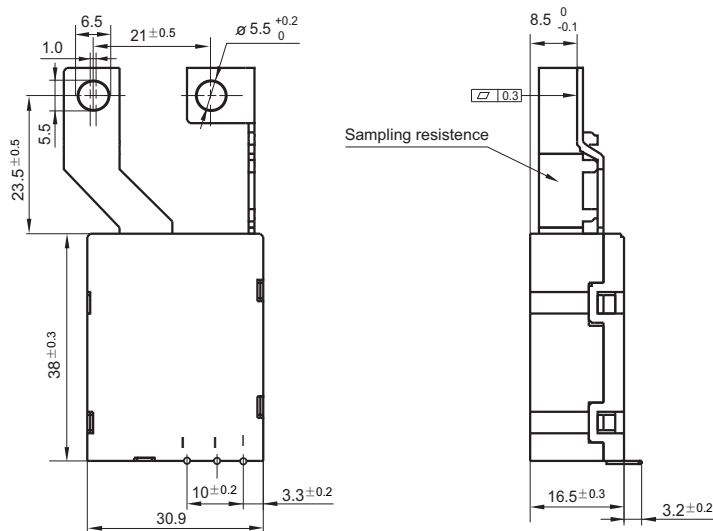
Product special code

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 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

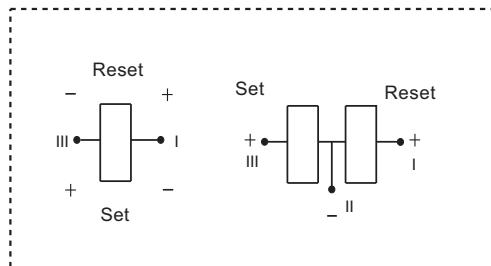
Outline Dimensions



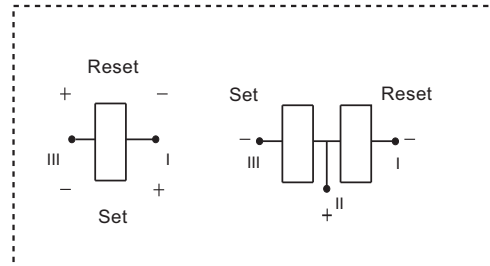
- Remark: 1) During the installation, please pre-fix the screws onto the two install holes then fasten the screws to protect relays working reliability from stress force during the installation.
- 2) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should 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 $\pm 0.1\text{mm}$.

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.