

HFE61 SUBMINIATURE INTERMEDIATE POWER RELAY



Features

- 120A Latching relay
- Electrical endurance 10000ops
- According to IEC62055-31:UC3
- Contact resistance $\leq 0.35m\Omega$

CONTACT DATA

Contact arrangement	1U,1V
Contact resistance ¹⁾	Typ.: 0.35m Ω max. ²⁾
Contact material	AgSnO ₂
Contact rating	120A 240VAC
Max. switching Voltage	277VAC
Max. switching current	120A
Rated switching power	28800VA
Mechanical endurance	1 x 10 ⁵ ops

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	1000 m Ω (500VDC)	
Dielectric strength	Between coil & contacts	4000VAC 1min
	Between open contacts	2000VAC 1min
Creepage distance	8mm	
Set time (at nomi. volt.)	$\leq 20ms$	
Reset time (at nomi. volt.)	$\leq 20ms$	
Shock resistance	Functional	196m/s ²
	Destructive	980m/s ²
Vibration resistance	10Hz ~ 55Hz 1.5mm DA	
Humidity	5% ~ 85% RH	
Ambient temperature	-40°C ~ 85°C	
Termination	Coil termination	PCB&QC
	Load termination	QC
Unit weight	Approx. 70g	
Construction	Dust protected	

Notes: The data shown above are initial values.

COIL

Coil power	Single coil latching: Approx. 3.0W Double coils latching: Approx. 6.0W
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COIL DATA

23°C

Single coil latching

Nominal Voltage VDC	Set / Reset Voltage ¹⁾ VDC	Pulse Duration (Recommended) ms	Coil Resistance x (1 \pm 10%) Ω
6	≤ 4.8	50~100	12
9	≤ 7.2	50~100	27
12	≤ 9.6	50~100	48
24	≤ 19.2	50~100	192
48	≤ 38.4	50~100	768

Double coils latching

Nominal Voltage VDC	Set / Reset Voltage ¹⁾ VDC	Pulse Duration (Recommended) ms	Coil Resistance x (1 \pm 10%) Ω
6	≤ 4.8	50~100	6+6
9	≤ 7.2	50~100	13.5+13.5
12	≤ 9.6	50~100	24+24
24	≤ 19.2	50~100	96+96
48	≤ 38.4	50~100	384+384

Notes:1) The data shown above are initial values; recommended driving voltage is 1~1.5times of rated voltage.

ELECTRICAL ENDURANCE

UC Class	Voltage (Uc)	Current (Ic)	Power Factor	Close Open time (s)	Electrical endurance
417 (UC3)	250VAC	100A	COS ϕ =1	10:20	5000ops
			COS ϕ =0.5		5000ops
					Total: 10000ops

Notes: 1) Electrical endurance meet IEC62055-31 test requirement, do the inductive load test after the resistive load test.

2) Only some typical ratings of UC are listed above, if more special ratings required, please contact us.



HONGFA RELAY

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

2019 Rev.1.00

ORDERING INFORMATION

Type	HFE61 - 120 /12 -SD T -2 -R (XXX)						
Contact rating	120:120A						
Coil voltage	6, 9,12, 24, 48VDC						
Contact form ¹⁾	SH: 1 Form A (Double-contact) SD: 1 Form B (Double-contact)						
Contact material	T: AgSnO2						
Sort	1: Single coil latching			2: Double coils latching			
Polarity	R: Negative polarity			Nil: Positive polarity			
Special code ⁽²⁾⁽³⁾	XXX: Customer special requirement			Nil: Standard(See electrical endurance)			

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) Please make clear your technical requirements, and choose from the following 3 UC ratings:

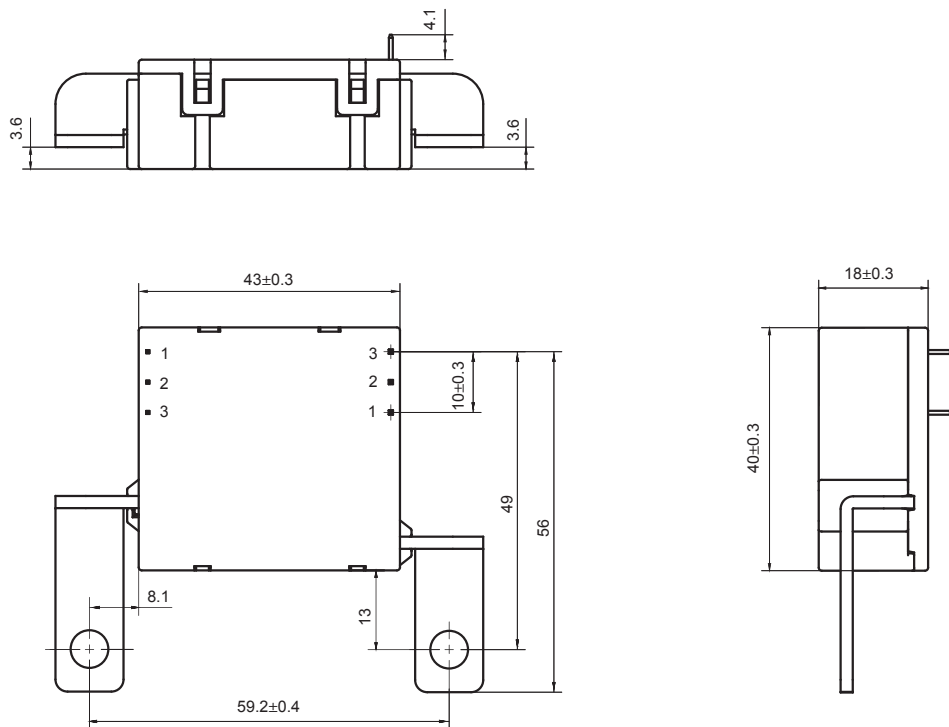
UC3: meet the UC3 requirements on IEC62055-31: Making test:3kA/10ms; carrying test 6kA/10ms.

3) The customer special requirement express as special code after evaluating by Hongfa. e.g. (417) stands for UC3.

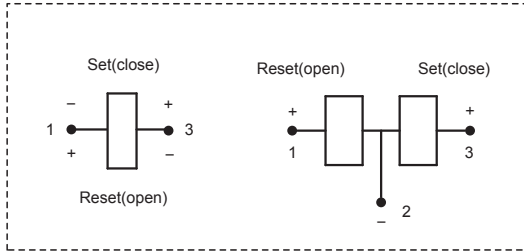
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

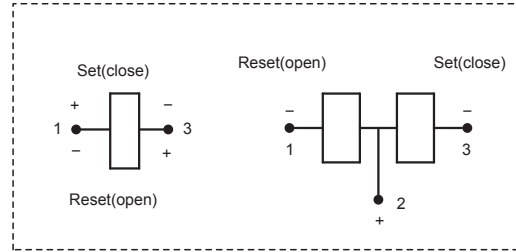
Outline Dimensions



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. Do not energize voltage to "set" coil and "reset" coil simultaneously. And also long energized time (more than 1 min) should be avoided.
3. Normally the load terminals are not suitable for reflow solder, wave solder or tin solder, we suggest use spot welding. Load terminals shall be prevented from assembly stress, or freely move.
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.