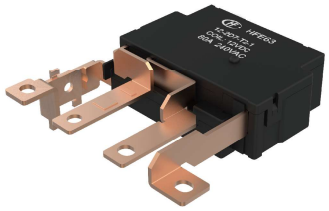
HFE63 SUBMINIATURE INTERMEDIATE POWER RELAY



Features

- 80A Latching relay
- Electrical endurance 10000ops
- Terminal configuration LNNL
- According to IEC62052-31
  IEC62055-31:UC1、UC2、UC3
- Contact resistance ≤0.7mΩ

RoHS compliant

CONTACT DATA

Contact arrangement	2A,2B
Contact resistance [1]	Typical value: [2] ≤0.7mΩ(60A)
Contact material	$AgSnO_2$
Contact rating	See “electrical endurance”
Max. switching voltage	288VAC
Max. switching current	80A
Max. switching power	23040W
Mechanical endurance	Meter:$1x10^5$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 continous measurements for each sample.

CHARACTERISTICS

Insulation resistance		1000MΩ(500VDC)
Dielectric strength	Between coil and contact	4000VAC 1min
	Between open contacts	2000VAC 1min
Creepage distance		8.9mm
Set time (at nomi. volt.)		≤30ms
Reset time (at nomi. volt.)		≤30ms
Shock resistance	Functional	98m/s²
	Destructive	980m/s²
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.85g
Construction		Dust protected

Notes: The data shown above are initial values.

COIL

Rated power	Single coil latching: Approx. 3.0W Double coils latching: Approx. 6.0W

COIL DATA

23˚C

Single coil latching

Nominal Voltage VDC	Set / Reset Voltage [1)2)] VDC	Pulse Duration (Recommended) ms	Coil Resistance x (1±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)2)] VDC	Pulse Duration (Recommended) ms	Coil Resistance x (1±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.
2) The above values are used as incoming inspection standards, and the recommended driving voltage is 1~1.5 times of the rated voltage.

ELECTRICAL ENDURANCE

UC Class	Voltage (Uc)	Current (Ic)	Power Factor	Close Open time (s)	Electrical endurance(ops)	
UC1	240VAC	60A	COSØ=1	10:20	3000	Total: 6000
		10A	COSØ=0.4		3000	
UC2	276VAC	60A	COSØ=1	10:20	5000	Total: 10000
			COSØ=0.5		5000	
UC3	240VAC	80A	COSØ=1	10:20	5000	Total: 10000
			COSØ=0.5		5000	

Notes: 1) Electrical endurance meet IEC62052-31/IEC62055-31 test requirement,do the inductive load test after the resistive load test.
2) Coil driven by rated voltage.

ORDERING INFORMATION

	HFE63	/12	-2H	7	T	2	-1	-R	(XXX)

Type	
Coil voltage	6,9,12,24,48VDC
Contact arrangement [1]	**2H:**2 Form A **2D:**2 FormB
Load terminal type	**7:**With customized connections
Contact material	**T:** $AgSnO_2$
Coil angle form	**2:**No bowleg **4:**Bowleg (See outline dimensions)
Coil type	**1:** Single coil latching **2:** Double coils latching
Polarity	**R:** Reverse polarity **Nil:** Standard polarity
Special code [2) 3)]	**XXX:** Customer special requirement

Notes:1) 2H means that relay is on the "reset" status when delivery; 2D 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.

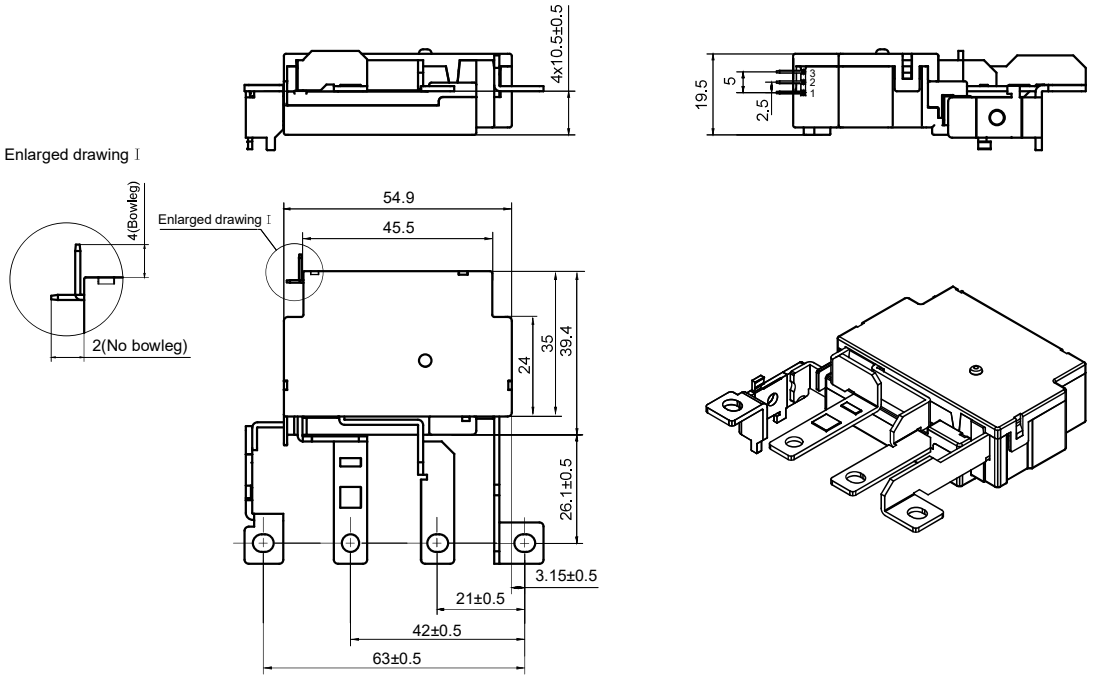
2) Please make clear your technical requirements, and choose from the following 3 UC ratings:
UC1: meet the UC1 requirements on IEC62052-31,IEC62055-31: carrying test 1800A/10ms;
UC2: meet the UC2 requirements on IEC62052-31,IEC62055-31: Making test:2.5kA/10ms; carrying test 4.5kA/10ms;
UC3: meet the UC3 requirements on IEC62052-31,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. (415) stands for UC1,(416) stands for UC2,(417) stands for UC3.

OUTLINE DIMENSIONS, WIRING DIAGRAM

Unit: mm

Outline Dimensions



Note: 1) load terminal dimensions and sampling resistance can be customized made per customer request

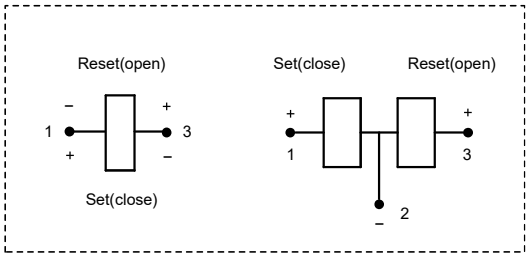
2) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension ＞1mm and ≤5mm, tolerance should be±0.3mm; outline dimension ＞5mm, tolerance should be ±0.4mm.

OUTLINE DIMENSIONS, WIRING DIAGRAM

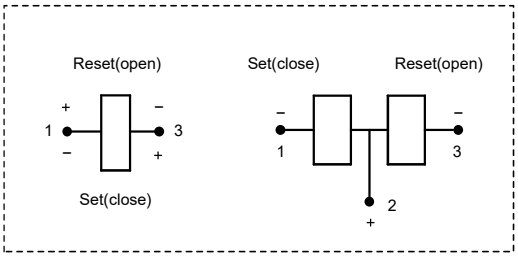
Unit: mm

Wiring Diagram

Standard polarity



Reverse polarity



CAUTIONS

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.