HFE52 FORM-C TYPE HIGH POWER LATCHING RELAY

Features

- Phase-change switch latching relay
- With micro switch detection funtion
- 120A switching capability
- In accordance to IEC 62055-31:UC3
  Carrying: 6kA current/100ms (can break 2 times voltage)
- Complete switch in 10ms

CONTACT DATA

Contact arrangement	1AB
Contact resistence 1)	Typical value 2) : ≤0.35mΩ(100A)
Contact material	$AgSnO_2$
Contact rating (Res. load)	120A 220VAC
Max. switching voltage	380VAC
Max. switching current	120A
Max. switching power	26400W
Mechanical endurance	1 x 10^5ops
Electrical endurance	2 x 10^4ops(120A 220VAC)

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 & contacts	4000VAC 1min
	Between open contacts	2500VAC 1min
Creepage distance		>10mm
Operate time (at 2.5 time nomi. volt.)		Approx.5.5ms
Release time (at 2.5 time nomi. volt.)		Approx.4.5ms
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 terminal	PCB、QC
	Load terminal	QC
Unit weight		Approx.70g
Construction		Plastic sealed

Notes: The data shown above are initial values.

COIL

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

COIL DATA

23°C

Single coil latching

Nominal Voltage VDC	Set / Reset Voltage VDC 1) 2)	Pulse Duration ms	Coil Resistance x (1±10%) Ω
5	≤4.0	≥100	5
6	≤4.8	≥100	7.2
9	≤7.2	≥100	16.2
12	≤9.6	≥100	28.8
24	≤19.2	≥100	115.2
48	≤38.4	≥100	460.8

Double coils latching

Nominal Voltage VDC	Set / Reset Voltage VDC 1) 2)	Pulse Duration ms	Coil Resistance x (1±10%) Ω
5	≤4.0	≥100	2.5+2.5
6	≤4.8	≥100	3.6+3.6
9	≤7.2	≥100	8.1+8.1
12	≤9.6	≥100	14.4+14.4
24	≤19.2	≥100	57.6+57.6
48	≤38.4	≥100	230.4+230.4

Notes:1) The data shown above are initial values.
2) The above set voltage, reset voltage are the test value for relay without load. Please use 1~1.5 times of rated voltage to drive the relay for your application.

ORDERING INFORMATION

	HFE52	/12	-1HD	T	-L1	-R	(XXX)

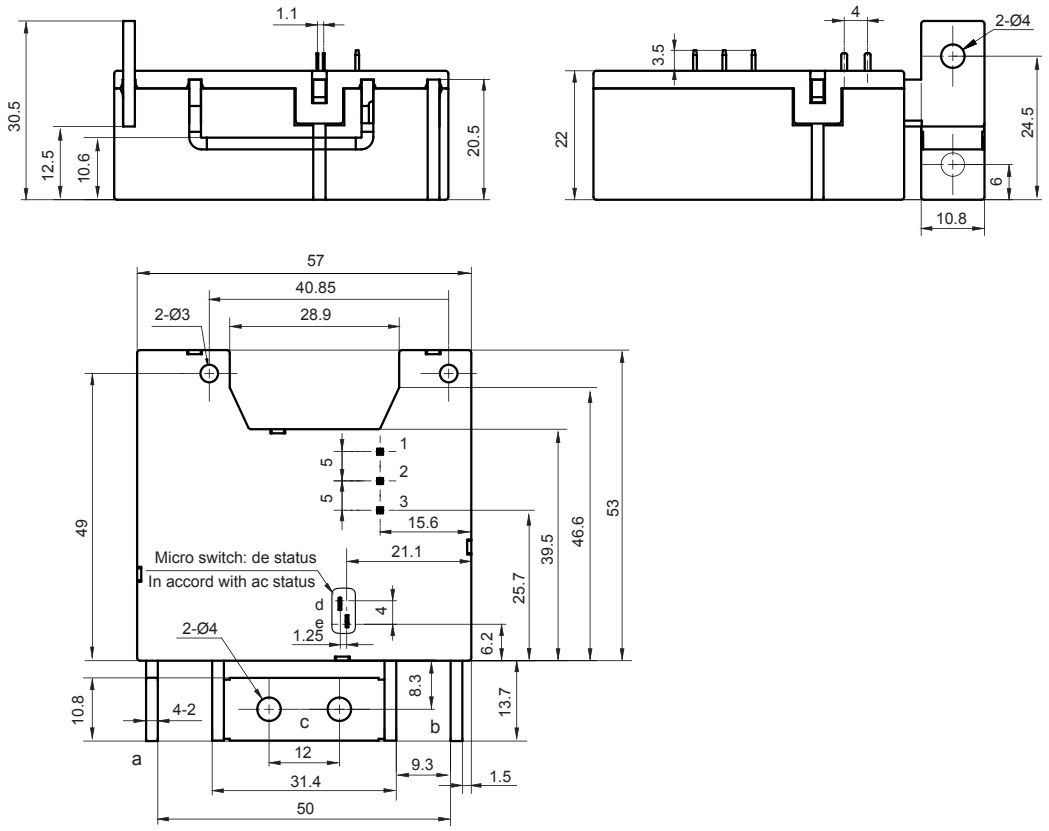
Type	
Coil voltage	5,6,9,12,24,48 VDC
Contact form	**1HD:**1 Form A + 1 Form B
Contact material	**T:** $AgSnO_2$
Sort	**L1:** Single coil latching **L2:** Double coils latching
Polarity	**R:** Reverse polarity **Nil:** Positive polarity
Special code [1) 2)]	**XXX:** Customer special requirement

Note: 1) Please contact us if mirco switch is needed.
2) The customer special requirement express as special code after evaluating by Hongfa.

OUTLINE DIMENSIONS AND WIRING DIAGRAM

Unit: mm

Outline Dimensions

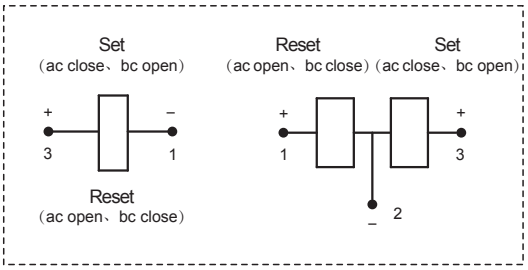


Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be±0.2mm; outline dimension ＞1mm and ≤5mm, tolerance should be±0.3mm; outline dimension ＞5mm, tolerance should be ±0.4mm.

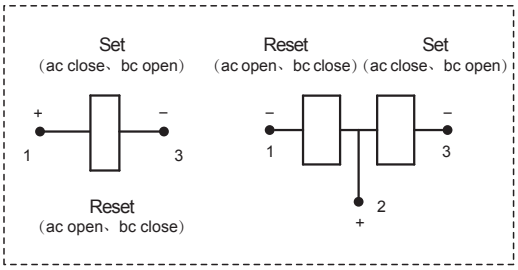
OUTLINE DIMENSIONS AND WIRING DIAGRAM

Wiring Diagram

Positive polarity

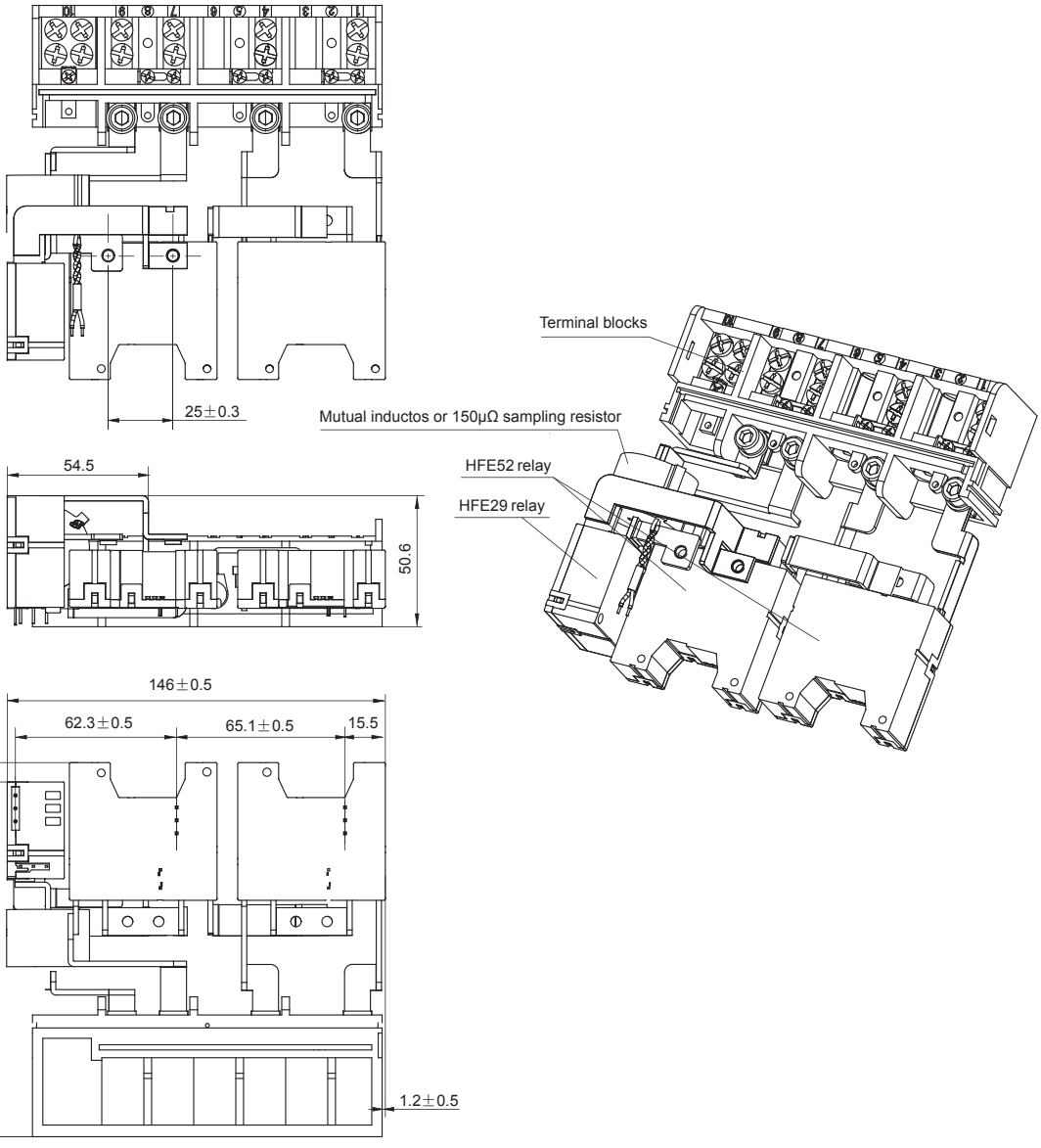


Reverse polarity



Typical Design

Typical Design for phase-changes switch（HFE29+HFE52+HFE52）

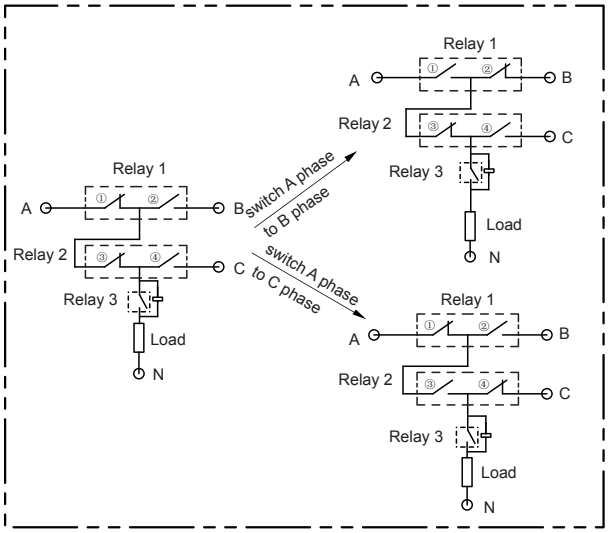


TYPICAL DESIGN

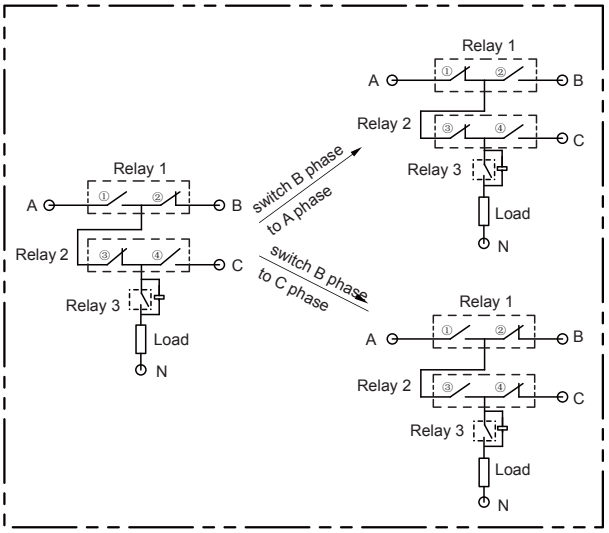
Typical Design

Wiring dirgram of phase-changes switch typical design
（HFE29+HFE52+HFE52）

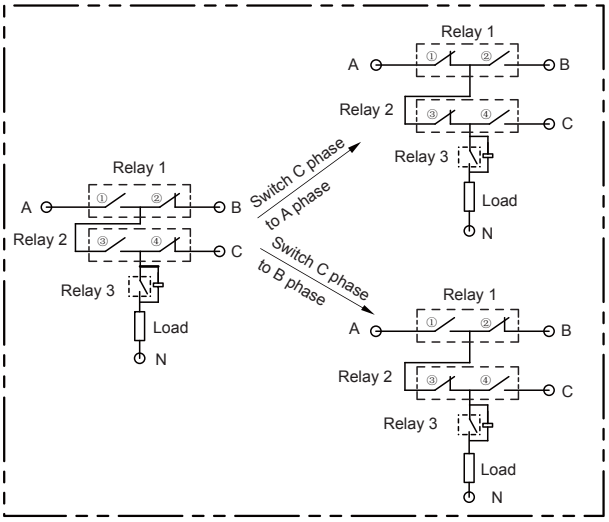
Switch A phase to B phase or C phase



Switch B phase to A phase or C phase



Switch C phase to A phase or B phase



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.

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