HF94F HIGH POWER RELAY

c UL us
File No.:E134517 (AC type)

Features

- 25A switching capability
- 2kV dielectric strength (between coil and contacts)
- Panel mount, various terminal types
- UL insulation system: Class F

RoHS compliant

CONTACT DATA

Contact arrangement	1A, 1B, 1C, 1A + 1B
Contact resistance[1)]	200mΩ max.(at 1A 24VDC)
Contact material	AgCe, AgCdO
Contact rating (Res.load)	18A 277VAC
Max. switching voltage	277VAC
Max. switching current	18A
Max. switching power	4986VA
Mechanical endurance	1 x 10^6OPS
Electrical endurance	5 x 10^4OPS (25A 277VAC, Resistive load, AgCdO, at 65°C, 1s on 9s off) 3 x 10^4OPS (3A 277VAC, General load, AgCe, at 65°C, 1s on 9s off)

Notes: 1) The data shown above are initial values.

CHARACTERISTICS

Insulation resistance		500MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	2000VAC 1min
	Between open contacts	1000VAC 1min
Operate time (at rated. volt.)		DC type: 25ms max.
Release time (at rated. volt.)		DC type: 25ms max.
Temperature rise (at rated. volt.)		90K max.
Shock resistance (Functional)		98m/s²
Vibration resistance		10Hz to 55Hz 0.5mm DA
Ambient temperature		-40°C to 65°C
Humidity		5% to 85% RH
Termination		QC
Unit weight		Approx. 85g
Construction		Dust protected

Notes: 1) The data shown above are initial values.

COIL

Coil power	DC type: Approx. 2.4W; AC type: Approx. 4.0VA

COIL DATA

Nominal Voltage VDC	Pick-up Voltage VDC max.[1)]	Drop-out Voltage VDC min.[1)]	Max. Voltage VDC *[2)]	Coil Resistance Ω
6	4.50	0.6	6.6	17.5 x (1±10%)
9	6.75	0.9	9.9	40 x (1±10%)
12	9.00	1.2	13.2	70 x (1±10%)
24	18.0	2.4	26.4	280 x (1±10%)
48	36.0	4.8	52.8	1120 x (1±10%)
120	90.0	12.0	132	7000 x (1±10%)

Nominal Voltage VAC	Pick-up Voltage VAC max.[1)]	Drop-out Voltage VAC min.[1)]	Max. Voltage VAC *[2)]	Coil Resistance Ω
6	5.1	1.2	6.6	4.8 x (1±10%)
12	10.2	2.4	13.2	19 x (1±10%)
24	20.4	4.8	26.4	77 x (1±10%)
48	40.8	9.6	52.8	280 x (1±10%)
120	102	24	132	2000 x (1±10%)
240	204	48	264	7250 x (1±10%)
277	235	55.4	304.7	11000 x (1±10%)

Notes: 1) The data shown above are initial values.
2)*Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time.

SAFETY APPROVAL RATINGS

UL/CUL	HF94F-10	NO	AgCdO	12FLA,60LRA,120VAC at 65°C 8FLA,48LRA,250VAC at 65°C 8FLA,48LRA,277VAC at 65°C 7FLA,42LRA,277VAC at 65°C 25A,277VAC,Resistive at 65°C
			AgCe	3A,277VAC,Gen Useat 65°C 277VAC pilot duty,10A inrush,1A break at 65°C
	HF94F-11	NC	AgCdO	14FLA,84LRA,125VAC at 40°C 8FLA,48LRA,250VAC at 65°C 8FLA,48LRA,277VAC at 65°C 7FLA,42LRA,277VAC at 65°C 25A,277VAC,Resistive at 65°C
			AgCe	3A,277VAC,Gen Use at 65°C 277VAC pilot duty,10A inrush,1A break at 65°C
	HF94F-12	NO/NC	AgCdO	14FLA,84LRA,125VAC at 40°C 8FLA,48LRA,250VAC at 65°C 8FLA,48LRA,277VAC at 65°C 7FLA,42LRA,277VAC at 65°C 25A,277VAC,Resistive at 65°C
			AgCe	3A,277VAC,Gen Use at 65°C 277VAC pilot duty,10A inrush,1A break at 65°C
	HF94F-13	NO/NC	AgCdO	12FLA,60LRA,120VAC at 65°C 8FLA,48LRA,250VAC at 65°C 8FLA,48LRA,277VAC at 65°C 7FLA,42LRA,277VAC at 65°C 18A,277VAC,Resistive at 65°C 25A,277VAC,Resistive at 65°C
			AgCe	3A,277VAC,Gen Use at 65°C 277VAC pilot duty,10A inrush,1A break at 65°C

Notes: 1) All values unspecified are at room temperature.
2) Only typical loads are listed above. Other load specifications can be available upon request.

ORDERING INFORMATION

	HF94F	-10	A	24	E	-1	(XXX)
Type							
Contact arrangement	**10:** 1 Form A **11:** 1 Form B **12:** 1 Form C **13:** 1 Form A+1 Form B						
Coil voltage form			**A:** AC **D:** DC				
Coil voltage				**AC:** 6VAC to 277VAC **DC:** 6VDC to 120 VDC (No UL approved)			
Contact material					**E:** AgCe **Nil:** AgCdO		
Mounting						**1:** Flang, Mounting Distance 54.8mm. diameter Ø3.8mm **2:** Flang, Mounting Distance 66.7mm. diameter Ø4.8mm **Nil:** Metal Bracket	
Special code[1)]							**XXX:** Customer special requirement **Nil:** Standard

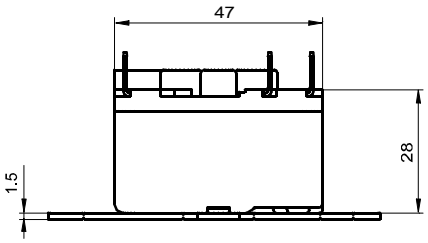
Notes: 1) The customer special requirement express as special code after evaluating by Hongfa.

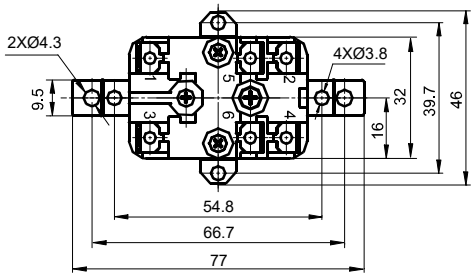
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Outline Dimensions

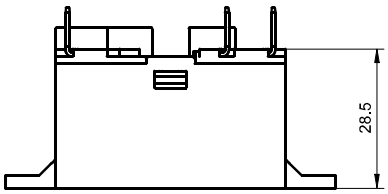
Metal Bracket

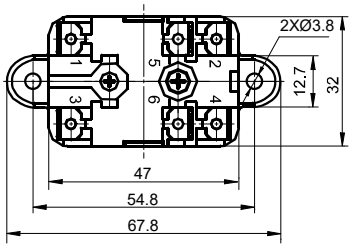




(Top view)

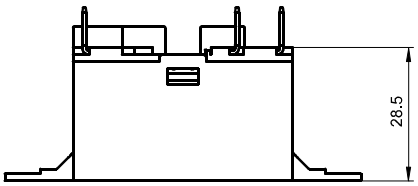
Flang, Mounting Distance 54.8mm

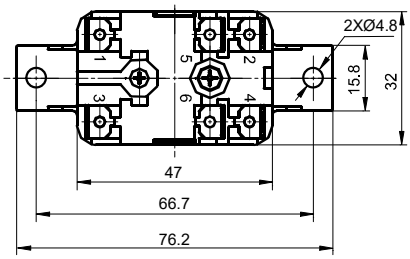




(Top view)

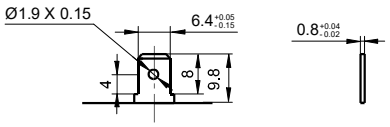
Flang, Mounting Distance 66.7mm





(Top view)

Terminals type

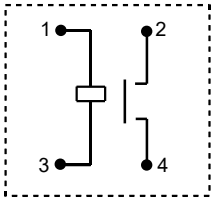


Remark: In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.

Wiring Diagram

(Top view)

1 Form A



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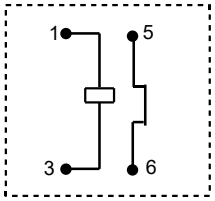

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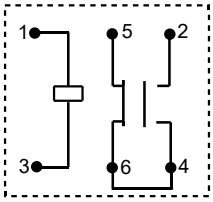
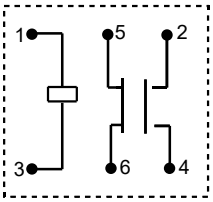


1A+1B



Disclaimer

The specification is for reference only. See to "Terminology and Guidelines" for more information. 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.