HF171F

MINIATURE HIGH POWER RELAY

File No.:E133481

File No.:40048577

File No.:CQC17002177419

Features

- 8A switching capability
- 1 form A and 1 form C configurations
- High sensitivity 200mW
- Creepage/clearance distance:>6mm,meets VDE 0631reinforce insulation
- 5KV dielectric between coil to contacts
- Class F insulation

RoHS compliant

CONTACT DATA

Contact arrangement	1A	1C	
Contact resistance[1)]	100mΩ max.(at 1A 6VDC)		
Contact material	$AgSnO_2$,AgNi		
Contact rating (Res. load)	1A	1C	
		NO	NC
	6A 250VAC 6A 30VDC	6A 250VAC 6A 30VDC	5A 250VAC 5A 30VDC
Max. switching voltage	30VDC / 277VAC		
Max. switching current	8A		
Max. switching power	180W/1662VA		
Mechanical endurance	1 x 10^7OPS		
Electrical endurance	1 x 10^5OPS(Resistive load, Room temp., 1.5s on 1.5s off)		

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

CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	5000VAC 1min
	Between open contacts	1000VAC 1min
Surge voltage(Between coil & contacts)		10KV(1.2/50μs)
Operate time (at rated. volt.)		8ms max.
Release time (at rated. volt.)		5ms max.
Temperature rise (at rated.volt.)		60K max.
Shock resistance*	Functional	98m/s²
	Destructive	980m/s²
Vibration resistance	NC*(No coil voltage)	10Hz to 55Hz 0.65mm DA
	NO	10Hz to 55Hz 1.5mm DA
Humidity		5% to 85% RH
Ambient temperature		-40˚C to 85˚C
Termination		PCB
Unit weight		Approx. 4.6g
Construction		Flux proofed

Notes: 1)*Index is not in relay length direction.
2)The data shown above are initial values.

COIL

Coil power	Approx. 200mW

COIL DATA

at 23˚C

Nominal Voltage VDC	Pick-up Voltage VDC[1)] max.	Drop-out Voltage VDC[1)] min.	Max.[2)] Allowable Voltage VDC	Coil Resistance Ω
3	2.25	0.30	3.90	45 x (1±10%)
5	3.75	0.50	6.50	125 x (1±10%)
6	4.50	0.60	7.80	180 x (1±10%)
9	6.75	0.90	11.7	405 x (1±10%)
12	9.00	1.20	15.6	720 x (1±10%)
18	13.5	1.80	23.4	1600 x (1±10%)
24	18.0	2.40	31.2	2880 x (1±10%)
36	27.0	3.60	46.8	6480 x (1±10%)
48	36.0	4.80	62.4	11520 x (1±10%)

Notes: 1)The data shown above are initial values.
2) Maximum voltage is refers to the relay coil in a short period of time can bear the biggest values.

SAFETY APPROVAL RATINGS(PENDING)

UL/CUL	1 Form A	8A 250/277VAC Resistive 85˚C 6A 250/277VAC Resistive 85˚C 5A 30VDC Resistive 85˚C 6A 250VAC General purpose 85˚C 10A 120VAC General purpose 85˚C 1/4HP 240/277VAC Motor 40˚C B300 Pilot duty 40˚C
	1 Form C	NO:8A 250/277VAC Resistive 85˚C NO:6A 250/277VAC Resistive 85˚C CO:5A 250/277VAC Resistive 85˚C
VDE	1 Form A	8A 250/277VAC Resistive 85˚C 6A 250/277VAC Resistive 85˚C 6A 30VDC Resistive 85˚C $AgSnO_2$ 8A 30VDC Resistive 85˚C $AgSnO_2$
	1 Form C	NO:8A 250/277VAC Resistive 85˚C NO:6A 250/277VAC Resistive 85˚C NO:6A 30VDC Resistive 85˚C $AgSnO_2$ NO:8A 30VDC Resistive 85˚C $AgSnO_2$ CO:5A 250VAC/30VDC Resistive 85˚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

	HF171F /	12	-H	T	G	(XXX)

Type			
Coil voltage	3,5,6,9,12,18,24,36,48VDC		
Contact arrangement	**H:** 1 Form A	**Z:** 1 Form C	
Construction	**T:** $AgSnO_2$	**3:** AgNi	
Contact plating	**G:** Gold plated	**Nil:** No gold plated	
Special code[2)]	**XXX:** Customer special requirement	**Nil:** Standard	

Notes: 1) We recommend flux proofed types for a clean environment (free from contaminations like H_2S,SO_2,NO_2 dust,etc).
2) The customer special requirement express as special code after evaluating by Hongfa.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Outline Dimensions

1 Form A

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

1 Form C

Wiring Diagram

(Bottom view)

PCB Layout

(Bottom view)

1 Form A

1 Form C

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.
2) The tolerance without indicating for PCB layout is always ±0.1mm.

CHARACTERISTIC CURVES

MAXIMUM SWITCHING POWER

ENDURANCE CURVE

COIL TEMPERATURE RISE

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.

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