HF152FD

SUBMINIATURE HIGH POWER RELAY



File No.: E134517





File No.: CQC12002083404

CONTACT DATA

Contact arrangement	1A	1(
Contact resistance		100mΩ max. (at 1A 24VDC)				
Contact material		AgSnO ₂ , AgNi				
Contact rating (Res. load)	20A 125VAC 17A 277VAC(Q type) 7A 400VAC	NO:17A277VAC(Q type) NC:10A 277VAC				
Max. switching voltage	400VAC	400VAC (NO)				
Max. switching current	20A	17A				
Max. switching power	4700VA	4700VA				
Mechanical endurance		1 x 10 ⁷ 0PS				
	1A: 5 x 10 ⁴ 0PS (16A 277VAC,					
Electrical endurance	Resistive load, AgNi, at 85 $^\circ C$, 1s on 9s off) 1A: 1 x 10 ⁵ OPS (12A 277 VAC)					
	Resistive load, AgSO ₂ , at 105°C, 1s on 9s off)					

Notes: For plastic sealed type, the venting-hole should be opened in electrical endurance test.

CHARACTERISTICS

Insulation resistance			1000MΩ (at 500VDC)				
Dielectric Between coil & contacts			2500VAC 1mi				
strength	Between o	open contacts	1000VAC 1min				
Operate time (at nomi. volt.)		ni. volt.)	10ms max.				
Release time (at nomi. volt.)			5ms max.				
Shock res	Shock resistance	Functional	98m/s				
		Destructive	980m/s ²				
Vibration resistance			10Hz to 55Hz 1.5mm DA				
Humidity			5% to 85% RH				
Ambient temperature		е	-40°C to 105°C				
Termination			PCE				
Unit weight			Approx.14g				
Construction			Plastic sealed, Flux proofed				
Notes: 1) The data shown above are initial values.							

lotes: 1) The data shown above are initial values.2) Please find coil temperature curve in the characteristic curves below.

3) UL insulation system: Class F, Class B.

COIL Coil power Approx. 360mW

Features

- 20A switching capability
- Ambient temperature meets 105°C
- High temperature load: 17A 277VAC at 105°C (Long endurance type)
- 1 Form C and 1 Form A configurations available
- Double pins and Single pin terminal available, effectively reduce terminal temperature rise
- Product in accordance to EN 60335-1 available
- UL insulation system: Class F available
- Environmental friendly product (RoHS compliant)

COIL DATA at 23°C							
Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	Max. Voltage VDC*	Coil Resistance Ω			
3	2.25	0.3	3.9	25 x (1±10%)			
5	3.75	0.5	6.5	70 x (1±10%)			
6	4.50	0.6	7.8	100 x (1±10%)			
9	6.75	0.9	11.7	225 x (1±10%)			
12	9.00	1.2	15.6	400 x (1±10%)			
18	13.5	1.8	23.4	900 x (1±10%)			
24	18.0	2.4	31.2	1600 x (1±10%)			
48	36.0	4.8	62.4	6400 x (1±10%)			

Notes: *Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time.

SAFETY APPROVAL RATINGS

UL/ CUL	NO, Standard Type	AgNi AgSnO ₂	20A 125VAC Resistive at 40°C
		AgNi	17A 125VAC Resistive at 85°C 16A 277VAC Resistive at 85°C 10A 277VAC Resistive at 105°C
		AgSnO ₂	12A 277VAC General Use at 105°C 1/2HP 125VAC at 40°C 1HP 250VAC at 40°C TV-8 125VAC at 40°C
	NO, Q Type	AgNi	17A 277VAC Resistive at 105°C 10A 277VAC Resistive at 105°C
	NC	AgNi AgSnO ₂	20A 125VAC Resistive at 40°C 10A 277VAC Resistive at 85°C
		AgNi	7A 277VAC Resistive at 105°C
	1 Form A,	AgNi	16A 250VAC Resistive at 85°C 7A 400VAC Resistive at 105°C
VDE	Standard Type	AgSnO ₂	8A 250VAC COSØ =0.4 at 85°C 10(4)A 250VAC Resistive at 105°C (EN60730-1)
	1 Form A, Q Type	AgNi	17A 250VAC at 23°C 2h/ at 105°C 2h 10A 250VAC at 23°C 2h/ at 105°C 2h
	1 Form C	AgNi	NO/NC:10A/7A 250VAC at 105°C

Notes: 1) All values unspecified are at room temperature.

 Only typical loads are listed above. Other load specifications can be available upon request.

HONGFA RELAY

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

ORDERING INFORMATION										
HF	152FD /	12	-1Z	Ρ	S	Т	G	F	Q	(XXX)
Туре										
Coil voltage 3, 5, 6	6, 9, 12, 18, 24, 48	SVDC								
Contact arrangement	1H : 1 Form A	1Z : 1	Form C							
Pin version	P: Double pins	Nil:	Single p	in						
Construction ¹⁾	S: Plastic sealed	d Ni	I: Flux pr	oofed						
Contact material	T: AgSnO ₂	Nil:	AgNi							
Contact plating	G: Gold plated	Nil:	No gold p	lated			1			
Insulation standard	F: Class F	Nil:	Class B							
Contact endurance	Q: Long endurance type (Only for AgNi type) Nil: Standard type									
Special code ⁴⁾ XXX: Customer special requirement Nil: Standard										

Notes: 1) Under the ambience with dangerous gas like H2S, SO₂ or NO₂, plastic sealed type is recommended; Please test the relay in real applications. If the ambience allows, flux proofed type is preferentially recommended.
2) Contact is recommended for suitable condition and specifications if water cleaning or surface process is involved in assembling relays

on PCB.

3) If plastic sealed type is selected for cleaning purpose, the vent-hole cover should be excised after cleaning.

4) The customer special requirement express as special code after evaluating by Hongfa.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Single pin version





OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Double pin version

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



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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Curve C: NO, 20A 125VAC, Resistive load, Room temp., 1s on 9s off Curve D: NO, 16A 250VAC, Resistive load, at 85 $^\circ\!C$, 1s on 9s off