HF170F SOLAR RELAY

File No.: E133481

File No.: R 50384178

File No.: CQC17002175164
: CQC18002198581

Features

- 35A switching capability
- Applicable to solar photovoltaic inverter
- 3.6 mm contact gap
- Low coil holding voltage contributes to saving energy of equipment
- UL insulation system: Class F

CONTACT DATA

Contact arrangement	2A
Contact resistance(initial)	10mΩ max.(6VDC 20A)
Contact material	$AgSnO_2$, AgNi
Contact rating (Res. load)	35A 277VAC
Max. switching voltage	277VAC
Max. switching current	35A
Max. switching power	9695VA
Mechanical endurance	1 x 10^6OPS
Electrical endurance	3 x 10^4OPS (NO: 35A 277VAC, Resistive load, at 85˚C, 1s on 9s off)

COIL

Coil power	Approx. 1.88W
Holding voltage	30% to 110% U_N (at 25˚C) 40% to 60%U_N (at 85˚C)

Notes: 1)The coil holding voltage is the voltage applied to coil 100ms after the rated voltage.
2)To avoid overheating and burning, the coil can not be consistently applied to with voltage larger than maximum holding voltage.

CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between open contacts	2000VAC 1min
	Between coil & contacts	5000VAC 1min
	Between contact sets	2000VAC 1min
Surge Voltage		10kV (1.2/50μs)
Operate time (at rated. volt.)		30ms max.
Release time (at rated. volt.)		10ms max.
Temperature rise		70K max. (Contact load current 35A, rated voltage excitation60%, at 85˚C)
Shock resistance	Functional	98m/s^2
	Destructive	980m/s^2
Vibration resistance		10Hz to 55Hz 1.0mm DA
Humidity		5% to 85% RH
Ambient temperature		-40˚C to 85˚C
Termination		PCB
Unit weight		Approx. 66g
Construction		Flux proofed

Notes: The data shown above are initial values.

SAFETY APPROVAL RATINGS

UL/CUL	AgNi $AgSnO_2$	35A 277VAC Resistive at 85˚C
TÜV	AgNi $AgSnO_2$	35A 250VAC cos ϕ =0.8 85˚C
CQC	AgNi $AgSnO_2$	35A 277VAC Resistive at 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.

COIL DATA at 23˚C

Nominal Voltage VDC	Pick-up Voltage VDC max	Drop-out Voltage VDC min	Max. Voltage VDC *	Coil Resistance Ω
6	4.5	0.3	6.6	19.1 x (1±10%)
9	6.75	0.45	9.9	43.1 x (1±10%)
12	9	0.6	13.2	76.6 x (1±10%)
24	18	1.2	26.4	306.4 x (1±10%)
48	36	2.4	52.8	1225.5 x (1±10%)

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

ORDERING INFORMATION

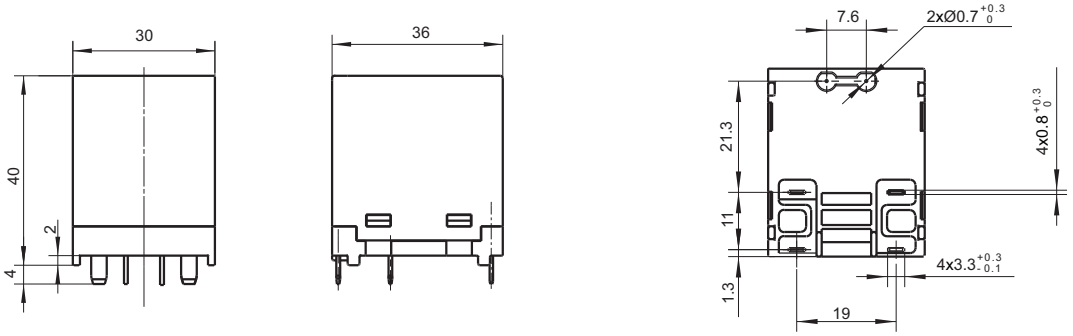
	HF170F/	12	-2H	T	F	(XXX)
Type						
Coil voltage	6, 9, 12, 24,48VDC					
Contact arrangement	**2H:** 2 Form A					
Contact material	**T:** $AgSnO_2$	**Nil:** AgNi				
Insulation standard	**F:** Class F					
Special code 3)	**XXX:** Customer special requirement		**Nil:** Standard			

Notes: 1) Flux-proofed relays can not be used inthe environment with pollutants like H_2S, SO_2, NO_2, dust, etc.
2) Water clearing or surface process is not suggested after the flux-proofed relays are assembled on PCB.
3) The customer special requirement express as special code after evaluating by Hongfa.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

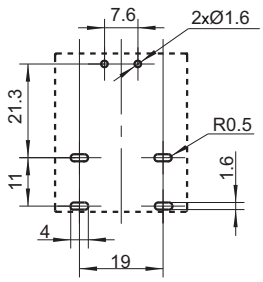
Unit: mm

Outline Dimensions



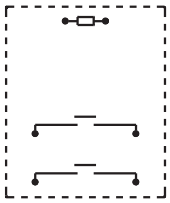
PCB Layout

(Bottom view)



Wiring Diagram

(Bottom view)



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.