HF3FA-W SUBMINIATURE HIGH POWER RELAY

File No.: E134517

File No.: 40023708

File No.:CQC12002076529

Features

- 10A 36VDC switching capability
- Flammability class according to UL94, V-0
- Product in accordance to IEC 60335-1 available
- Plastic sealed and flux proofed types available
- Subminiature, standard PCB layout
- UL insulation system: Class F

RoHS compliant

CONTACT DATA

Contact arrangement	1C	
	NO	NC
Contact resistance	100mΩ max.(at 1A 6VDC)	
Contact material	$AgSnO_2$	
Contact rating (Res. load)	8A 277VAC 10A 36VDC	5A 250VAC
Max. switching voltage	277VAC/36VDC	250VAC
Max. switching current	10A	5A
Max. switching power	2770VA /360W	
Mechanical endurance	1 x 10^7OPS	
Electrical endurance	NO:1 x 10^5OPS (10A 36VDC, Resistive load, Room temp., 1s on 9s off)	

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

COIL

Coil power	Approx. 800mW

COIL DATA at 23˚C

Nominal Voltage VDC	Pick-up Voltage VDC max. 1)	Drop-out Voltage VDC min. 1)	Max. Voltage VDC 2)	Coil Resistance Ω
12	9	0.6	15.6	180 x (1±10%)
24	18	1.2	31.2	720 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.

CHARACTERISTICS

Insulation resistance		100MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	2500VAC 1min
	Between open contacts	750VAC 1min
Operate time (at rated. volt.)		10ms max.
Release time (at rated. volt.)		5ms max.
Shock resistance	Functional	98m/s²
	Destructive	980m/s²
Vibration resistance		10Hz to 55Hz 1.5mm DA
Humidity		5% to 85% RH
Ambient temperature		-40˚C to 85˚C
Termination		PCB
Unit weight		Approx. 8.0g
Construction		Plastic sealed, Flux proofed

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

SAFETY APPROVAL RATINGS

UL/CUL	Z	NO:8A 277VAC at 85˚C NO:10A 24VDC at 45˚C NO:10A 36VDC at 40˚C
VDE	Z	NO:8A 250VAC at 85˚C NO:10A 24VDC at 45˚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.
3) For sealed type, the vent-hole cover should be excised.

ORDERING INFORMATION

	HF3FA-W/	12	-Z	S	T	F	(XXX)
Type	Gap≥0.8mm						
Coil voltage		12, 24VDC					
Contact arrangement			**Z**: 1 Form C				
Construction 1) 2)				**S**: Plastic sealed	**Nil**: Flux proofed		
Contact material					**T**: $AgSnO_2$		
Insulation system						**F**: Class F	
Special code3)							**XXX:** Customer special requirement **Nil:** Standard

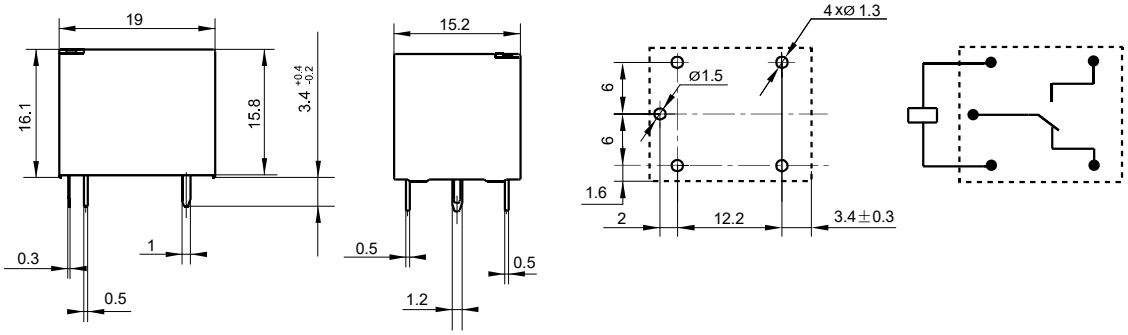
Notes: 1) We recommend flux proofed types for a clean environment (free from contaminations like H_2S, SO_2, NO_2, dust, etc.).
We suggest to choose plastic sealed types and validate it in real application for an unclean environment (with contaminations like H_2S, SO_2, NO_2, dust, etc).
2) Contact is recommended for suitable condition and specifications if water cleaning or surface process is involved in assembling relays on PCB.
3) The customer special requirement express as special code after evaluating by Hongfa. e.g.(335) stands for product in accordance to IEC 60335-1 (GWT).

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Outline Dimensions | PCB Layout (Bottom view) | Wiring Diagram (Bottom view)

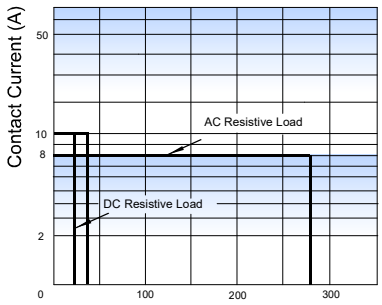
1 Form C



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.

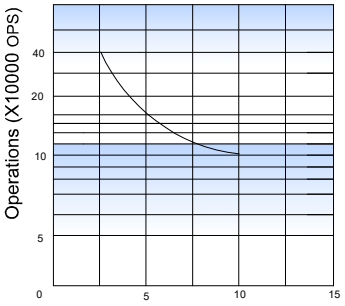
CHARACTERISTIC CURVES

MAXIMUM SWITCHING POWER



Contact Voltage (V)

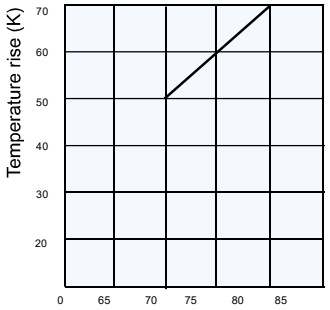
ENDURANCE CURVE



Contact Current (A)

Test conditions:
NO: Resistive load, 36VDC,Flux proofed, Room temp., 1s on 9s off

COIL TEMPERATURE RISE



Percentage of Nominal Coil Voltage

Test conditions: at 85°C, 8A
Mounting distance: 10mm
Driving voltage: Coil activated with rated voltage,then reduce to 80% of rated voltage.