HF42F SUBMINIATURE INTERMEDIATE POWER RELAY

c UL us
File No.:E133481

File No.:R50188744

File No.:CQC09002034521

Features

- 5A switching capability
- TV-3 125VAC approved by UL standard
- 2 Form A slim configuration
- Plastic sealed and flux proofed types available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (23.6 x 12.0 x 24.8) mm

CONTACT DATA

Contact arrangement	2A
Contact resistance	100mΩ max. (at 1A 6VDC)
Contact material	$AgSnO_2$, AgCdO
Contact rating (Res. load)	5A 250VAC/30VDC
Max. switching voltage	250VAC / 30VDC
Max. switching current	5A
Max. switching power	1250VA / 150W
Mechanical endurance	1 x 10^7OPS
Electrical endurance	5 x 10^4OPS

CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	4000VAC 1min
	Between open contacts	1000VAC 1min
	Between contact sets	2000VAC 1min
Operate time (at nomi. volt.)		15ms max.
Release time (at nomi. volt.)		10ms max.
Humidity		5% to 85% RH
Ambient temperature		-40˚C to 70˚C
Shock resistance	Functional	98m/s^2
	Destructive	980m/s^2
Vibration resistance		10Hz to 55Hz 1.5mm DA
Termination		PCB
Unit weight		Approx. 14.5g
Construction		Plastic sealed, Flux proofed

Notes: 1) The data shown above are initial values.
2) Please find coil temperature curve in the characteristic curves below.
3) UL insulation system: Class A

COIL

Coil power	Approx. 530mW

COIL DATA at 23˚C

Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	Max. Allowable Voltage VDC	Coil Resistance Ω
5	3.75	0.25	6.5	47 x (1±10%)
6	4.50	0.30	7.8	68 x (1±10%)
9	6.75	0.45	11.7	155 x (1±10%)
12	9.00	0.60	15.6	270 x (1±10%)
18	13.5	0.90	23.4	620 x (1±10%)
24	18.0	1.20	31.2	1080 x (1±10%)
48	36.0	2.40	62.4	4400 x (1±10%)

SAFETY APPROVAL RATINGS

UL/CUL	5A 250VAC 5A 30VDC TV-3 125VAC
TÜV	5A 250VAC 5A 30VDC

Notes: Only some typical ratings are listed above. If more details are required, please contact us.

ORDERING INFORMATION

	HF42F /	012	-2H	S	T	(XXX)
Type						
Coil voltage	5, 6, 9, 12, 18, 24, 48VDC					
Contact arrangement	**2H:** 2 Form A					
Construction [1)]	**S:** Plastic sealed **Nil:** Flux proofed					
Contact material	**T:** $AgSnO_2$ **Nil:** AgCdO					
Customer special code						

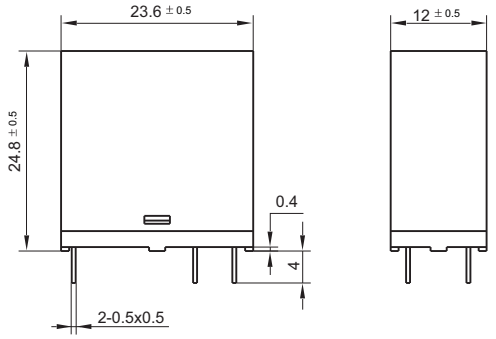
Notes: 1) Under the ambience with dangerous gas like H_2S, SO_2 or NO_2, plastic sealed type is recommended; Please test the relay in real applications. If the ambience allows, flux proofed type is preferentially recommended.
If water cleaning is required after the relay is assembled on PCB, please contact us for suggestion about suitable parts.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

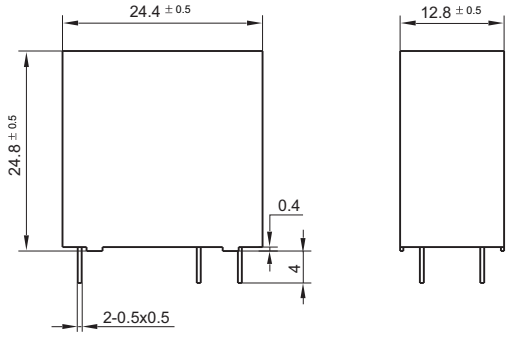
Unit: mm

Outline Dimensions

Flux proofed type



Plastic sealed type

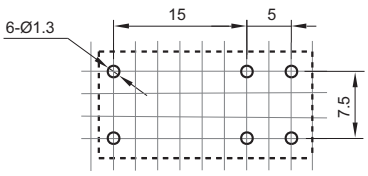


Wiring Diagram

(Bottom view)

PCB Layout

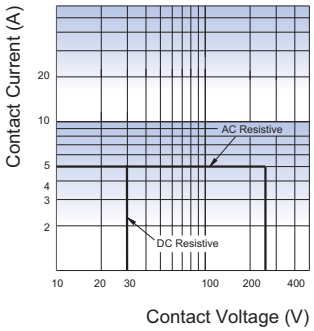
(Bottom view)



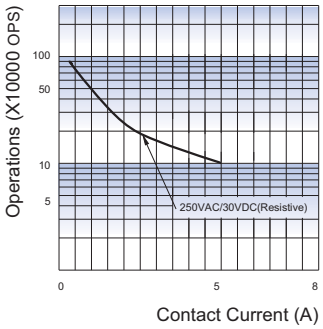
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.
2) The tolerance without indicating for PCB layout is always ±0.1mm.
3) The width of the gridding is 2.5mm.

CHARACTERISTIC CURVES

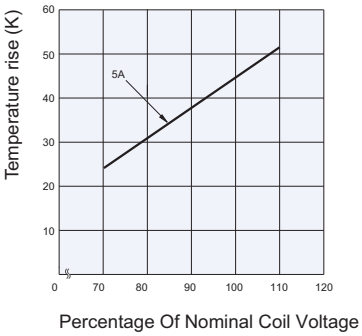
MAXIMUM SWITCHING POWER



ENDURANCE CURVE



COIL TEMPERATURE RISE



Disclaimer

This datasheet is for the customers' reference. All the specifications are 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.