HF49F/49FA (JZC-49F/49FA) MINIATURE POWER RELAY

c UL us
File No.:E133481

File No.:R50035304

CQC
File No.:CQC02001001937

Features

- 5A switching capability
- 2kV dielectric strength (between coil and contacts)
- Slim size (width 5mm, height 12.5mm)
- High sensitive: Min. 120mW
- HF49FA's size and terminals compatible with HFS8 (Output module) and HF5420 SSR
- Sockets available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (20.0 x 5.0 x 12.5) mm

CONTACT DATA

Contact arrangement	1A
Contact Resistance	100mΩ (at 1A 6VDC)
Contact material	$AgSnO_2$, AgNi
Contact rating (Res. load)	5A 250VAC/30VDC
Max. switching voltage	250VAC /30VDC
Max. switching current	5A
Max. switching power	1250VA / 150W
Mechanical endurance	2 x10^7 OPS
Electrical endurance	1x10^5 OPS (See approval reports for more details)

COIL

Coil power	120 to 180mW

COIL DATA at 23˚C

Nominal Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC	Max. Allowable Voltage VDC 85˚C	Coil Resistance Ω
5	3.50	0.25	6.0	208 x (1±10%)
6	4.20	0.30	7.2	300 x (1±10%)
9	6.30	0.45	10.8	675 x (1±10%)
12	8.40	0.60	14.4	1200 x (1±10%)
18	12.6	0.90	21.6	2700 x (1±15%)
24	16.8	1.20	28.8	3200 x (1±15%)

Notes: All above data are tested when the relays terminals are downward position. Other positions of the terminals, the pick-up and drop-out voltages will have ± 5% tolerance. For example, when the relay terminals are transverse position, the max. pick-up voltage change is 75% of nominal voltage.

CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	2000VAC 1min
	Between open contacts	1000VAC 1min
Operate time (at nomi.volt.)		10ms max.
Release time (at nomi.volt.)		5ms max.
Shock resistance	Functional	100m/s² (10g)
	Destructive	1000m/s² (100g)
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. 3g
Construction		Wash tight

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

SAFETY APPROVAL RATINGS

UL&CUR	Single contact	5A 30VDC L/R =0ms 5A 250VAC COSØ=1
	Bifurcated contact	3A 30VDC L/R =0ms 3A 250VAC COSØ=1
TÜV		5A 250VAC COSØ=1 5A 30VDC L/R=0ms

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

ORDERING INFORMATION

	HF49F / HF49FA	012	-1H	1	T	F	(XXX)

Type [1] HF49F/49FA
JZC-49F/49FA (Old type)

Coil voltage 5, 6, 9,12, 18, 24 VDC

Contact arrangement **1H:** 1 Form A

Contact version
1: Single contact, no gold plated
1G: Single contact, gold plated
2G: Bifurcated contact, gold plated

Contact material **T:** $AgSnO_2$ (Only for single contact) **Nil:** AgNi

Insulation standard **B:** Class B **F:** Class F **Nil:** Class A

Customer special code [2] Only for special requirements, e.g. (555) stands for RoHS compliant

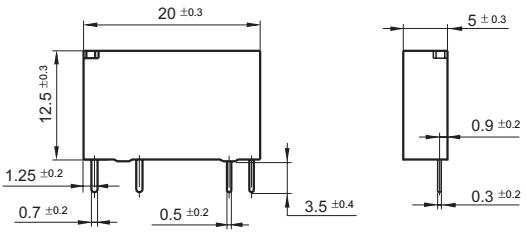
Notes: 1) We have now gradually updated our ordering information. We suggest new type should be selected. If necessary, old type can be kept for some period for the old customers.
2) HF49F/49FA is an environmental friendly product. Please mark a special code (555) when ordering.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

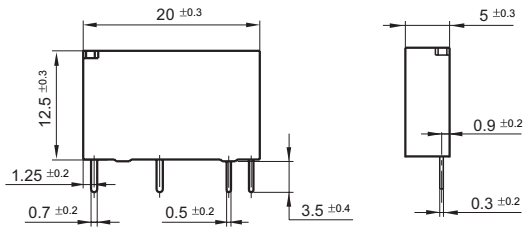
Unit: mm

Outline Dimensions

HF49F

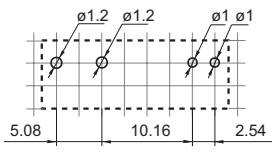


HF49FA

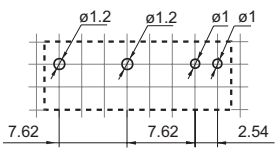


PCB Layout
(Bottom view)

HF49F



HF49FA

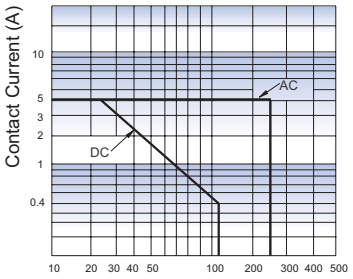


Wiring Diagram
(Bottom view)

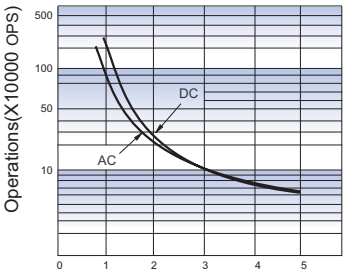
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.
2) The tolerance without indicating for PCB layout is always ±0.1mm.
3) The width of the gridding is 2.54mm.

CHARACTERISTIC CURVES

MAXIMUM SWITCHING POWER



ENDURANCE CURVE



COIL TEMPERATURE RISE