

# JQX-115F (HF115F)

# MINIATURE HIGH POWER RELAY



File No.:15008



File No.:E134517



File No.:116934



File No.:CQC02001001951



## Features

- Low height: 15.7 mm
- 16A switching capability
- 5KV dielectric strength (between coil and contacts)
- Creepage distance: 10mm
- VDE0435/0631/0700, CTI250
- Sealed IP67 & flux proof types available
- Environmental friendly product available (RoHS compliant)
- Outline Dimensions: 29.0 x 12.7 x 15.7 mm

## CONTACT DATA

Contact arrangement	1A, 1B, 1C	2A, 2B, 2C
Initial contact resistance Max.	50mΩ (at 1A 24VDC)	
Contact material	See ordering info.	
Contact rating (Res. load)	12A/16A 250VAC	8A 250VAC
Max. switching voltage	440VAC / 125VDC	
Max. switching current	12A / 16A	8A
Max. switching power	3000VA / 4000VA	2000VA
Mechanical life	1 x 10 <sup>7</sup> OPS	
Electrical life	1 x 10 <sup>5</sup> OPS	

## CHARACTERISTICS

Initial insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	5000VAC 1min.
	Between open contacts	1000VAC 1min.
	Between contact sets	2500VAC 1min.
Surge voltage (between coil & contacts)		10KV (1.2X50μs)
Operate time (at nomi. volt.)		Max. 15ms
Release time (at nomi. volt.)		Max. 8ms
Temperature rise (at nomi. volt.)		55°C
Shock resistance	Functional	100 m/s <sup>2</sup>
	Destructive	1000m/s <sup>2</sup>
Vibration resistance		10 to150 Hz 10g/5g
Humidity		35 to 85% RH
Ambient temperature		-40°C to +85°C
Termination		PCB
Unit weight		13.5g
Construction		Sealed IP67, Flux proof

## COIL

Coil power	400mW
------------	-------

## COIL DATA

Nominal Voltage (VDC)	Pick-up Voltage (VDC)	Drop-out Voltage (VDC)	Max. Allowable Voltage (VDC) 20°C	Coil Resistance (Ω) 20°C
5	3.50	0.5	7.5	62 ± 10%
6	4.20	0.6	9.0	90 ± 10%
9	6.30	0.9	13.5	202 ± 10%
12	8.40	1.2	18	360 ± 10%
18	12.60	1.8	27	810 ± 10%
24	16.80	2.4	36	1440 ± 10%
48	33.60	4.8	72	5760 ± 15%
60	42.00	6.0	90	7500 ± 15%
110	77.00	11.0	165	25200 ± 15%

## SAFETY APPROVAL RATINGS

FIMKO	8A 250VAC at 70 °C
	12A 250VAC at 70 °C
	16A 250VAC at 70 °C

## SAFETY APPROVAL RATINGS

### VDE

Contact material	Specifications	Ratings	Ambient Temperature
AgCdO	JQX-115F....2(H;Z)(S)4(G)(F)	8A 250VAC	at 70°C
	JQX-115F....1H(S)(1;2)(G)(F)	12A 250VAC	at 70°C
		10A 250VAC	at 70°C
	JQX-115F....1Z(S)(1;2)(G)(F)	12A 250VAC	at 70°C
	JQX-115F....1H(S)3(G)(F)	16A 250VAC	at 70°C
		10A 250VAC	at 70°C
		9A 250VAC COSØ =0.4	at 70°C
	JQX-115F....1Z(S)3(G)(F)	16A 250VAC	at 70°C
		9A 250VAC COSØ =0.4	at 70°C
AgNi	JQX-115F....2(H;Z)(S)4B(G)(F)	5A 400VAC	at 85°C
		8A 250VAC	at 85°C
	JQX-115F....1(H;Z)(S)3B(G)(F)	9A 250VAC COSØ =0.4	at 70°C
		16A 250VAC	at 85°C
	JQX-115F....1H(S)(1;2)B(G)(F)	12A 250VAC	at 85°C
		10A 250VAC	at 85°C
AgSnO <sub>2</sub>	JQX-115F....1(H;Z)(S)(1;2)A(G)(F)	12A 250VAC	at 85°C
	JQX-115F....1(H;Z)(S)3A(G)(F)	16A 250VAC	at 85°C
		9A 250VAC COSØ =0.4	at 70°C
	JQX-115F....2(H;Z)(S)4A(G)(F)	8A 250VAC	at 85°C

### UL&CUR

Version 1 or 2 (AgCdO)	12A 277VAC
	1/2HP 250VAC
	1/3HP 125VAC
Version 1 or 2 (AgSnO <sub>2</sub> )	12A/ 277VAC
	B300
	R300
Version 1 or 2 (AgNi)	12A 277VAC
Version 3 (AgCdO)	16A 277 VAC
	9A 250VAC at 105°C
	1HP 250VAC
	1/2HP 125VAC
	TV-5 125VAC
	16A 277 VAC
Version 3 (AgSnO <sub>2</sub> )	B300
	R300
Version 3 (AgNi)	16A 277VAC
Version 4 (AgCdO)	10A 250VAC
	8A 277VAC
	1/2HP 250VAC
	1/4HP 125VAC
	8A 277VAC
Version 4 (AgSnO <sub>2</sub> )	8A 277VAC
Version 4 (AgNi)	8A 277VAC

## ORDERING INFORMATION

Type	JQX-115F / 012 1H S 1 A F XXX
Coil voltage	5, 6, 9, 12, 18, 24, 48, 60, 110VDC
Contact arrangement	1H: 1 Form A 1D: 1 Form B 1Z: 1 Form C 2H: 2 Form A 2D: 2 Form B 2Z: 2 Form C
Construction	S: Sealed IP67 Nil: Flux proof
Version	1: 3.5mm 1 pole 12A 2: 5.0mm 1 pole 12A 3: 5.0mm 1 pole 16A 4: 5.0mm 2 pole 8A
Contact material	A: AgSnO <sub>2</sub> B: AgNi G: AgCdO+ Au plated BG: AgNi+ Au plated Nil: AgCdO
Insulation standard	F: Class F Nil: Class B
Customer special code (Only for special requirements)	e.g. 551 stands for RoHS compliant (Cadmium containing contacts) 555 stands for RoHS compliant (Cadmium-free contacts)

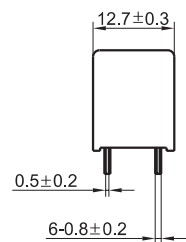
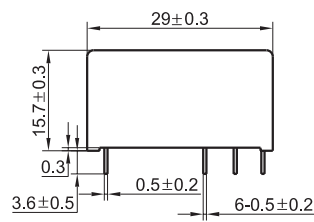
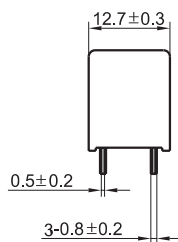
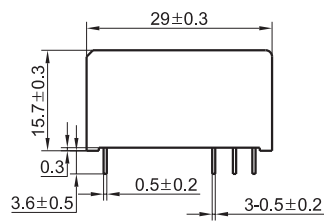
## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

### Outline Dimensions

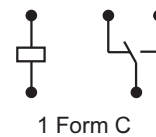
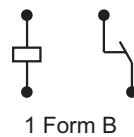
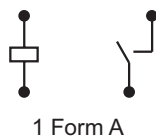
3.5mm Pinning (JQX-115F/□□□-□□-□-1-□□)

5mm Pinning (JQX-115F/□□□-□□-□-2/3/4-□□)

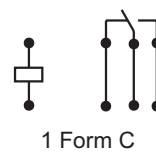
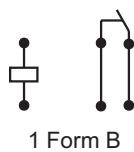
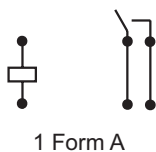


### Wiring Diagram (Bottom view)

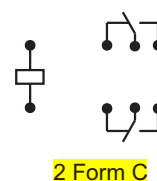
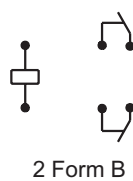
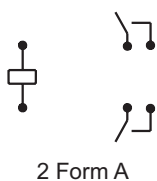
JQX-115F/ □□□-□□-□-1/2-□□, 3.5/5mm Pinning, 1 Pole, 12A



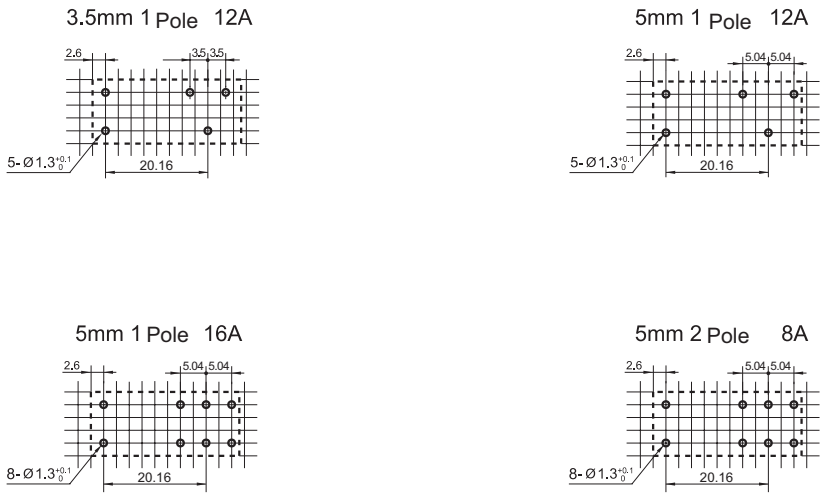
JQX-115F/ □□□-□□-□-3-□□, 5mm Pinning, 1 Pole, 16A



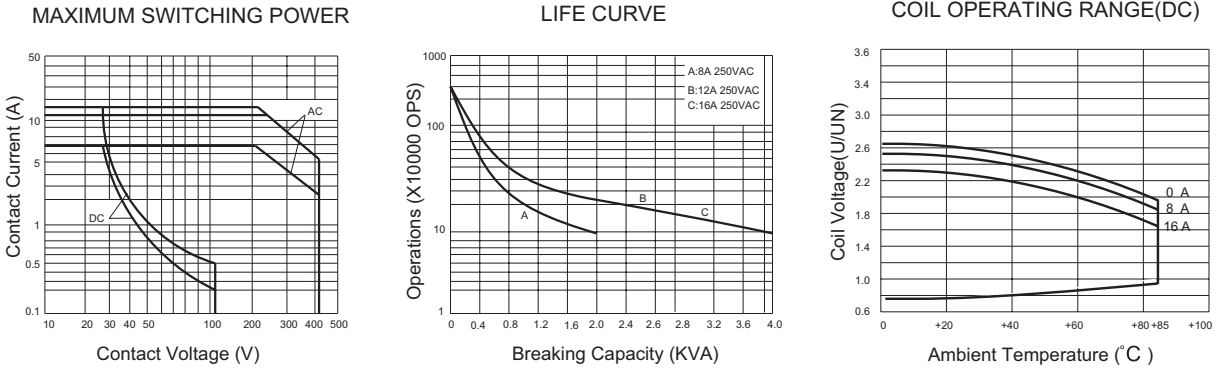
JQX-115F/ □□□-□□-□-4-□□, 5mm Pinning, 2 Pole, 8A



PCB Layout  
(T=2.52±0.02mm)



CHARACTERISTIC CURVES



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.