

HF115F-Q (JQX-115F-Q)

MINIATURE HIGH POWER RELAY



File No.: E134517



File No.: 116934



Features

- Ambient temperature up to 125 °C
- 5kV dielectric strength (between coil and contacts)
- Low height: 15.7mm
- Meet VDE0435/ 0110/ 0631/ 0700
- Creepage distance >8mm
- UL94, V-0 flammability class
- Product in accordance to IEC 60335-1 available
- Class F insulation
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (41.4 x 12.7 x 15.7) mm

CONTACT DATA

Contact arrangement	1A, 1B
Contact resistance	100mΩ (at 1A 6VDC)
Contact material	AgSnO ₂ , AgNi
Contact rating	20A 250VAC
Max. switching voltage	440VAC / 125VDC
Max. switching current	20A
Max. switching power	5000VA
Mechanical endurance	1 x 10 ⁷ OPS
Electrical endurance	1 x 10 ⁵ OPS (See approval reports for more details)

CHARACTERISTICS

Insulation resistance	1000MΩ (at 500VDC)	
Dielectric strength	Between coil & contacts	5000VAC 1min
	Between open contacts	1000VAC 1min
Surge voltage (between coil & contacts)	10kV (1.2 x 50μs)	
Operate time (at nomi. volt.)	15ms max.	
Release time (at nomi. volt.)	8ms max.	
Temperature rise (at nomi. volt.)	55K max.	
Shock resistance	Functional	100m/s ² (10g)
	Destructive	1000m/s ² (100g)
Vibration resistance	1A: 10Hz to150Hz 10g 1B: 10Hz to150Hz 5g	
Humidity	35% to 85% RH	
Ambient temperature	-40°C to 125°C	
Termination	PCB & QC	
Unit weight	Approx. 16g	
Construction	Flux proofed	

Notes: The data shown above are initial values.

COIL

Coil power	400mW
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COIL DATA

at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC	Max. Allowable Voltage VDC	Coil Resistance Ω
5	3.50	0.5	7.5	62 x (1±10%)
6	4.20	0.6	9.0	90 x (1±10%)
9	6.30	0.9	13.5	202 x (1±10%)
12	8.40	1.2	18.0	360 x (1±10%)
18	12.6	1.8	27.0	810 x (1±10%)
24	16.8	2.4	36.0	1440 x (1±10%)
48	33.6	4.8	72.0	5760 x (1±15%)
60	42.0	6.0	90.0	7500 x (1±15%)
110	77.0	11.0	165.0	25200 x (1±15%)

SAFETY APPROVAL RATINGS

VDE	AgNi	18A 250VAC 105°C
		12A 400VAC 105°C
		16A 250VAC 125°C
UL&CUR	AgNi	20A 277VAC

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



HONGFA RELAY

ISO9001、ISO/TS16949、ISO14001、OHSAS18001 CERTIFIED

2007 Rev. 2.00

ORDERING INFORMATION

HF115F-Q / 012 -1H 3 T (XXX)	
Type ¹⁾	HF115F-Q JQX-115F-Q (Old type)
Coil voltage	5, 6, 12, 24, 48, 60, 110VDC
Contact arrangement	1H: 1 Form A 1D: 1 Form B
Terminals	3: Quick connect terminals horizontal Nil: Quick connect terminals vertical
Contact material	T: AgSnO ₂ Nil: AgNi
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.

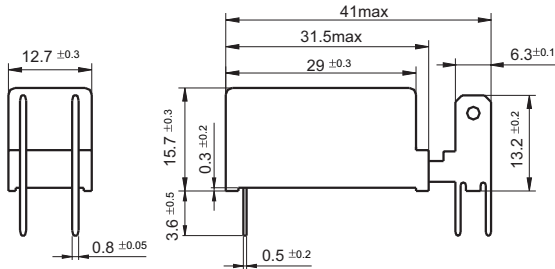
2) HF115F-Q is an environmental friendly product. Please mark a special code (555) when ordering.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

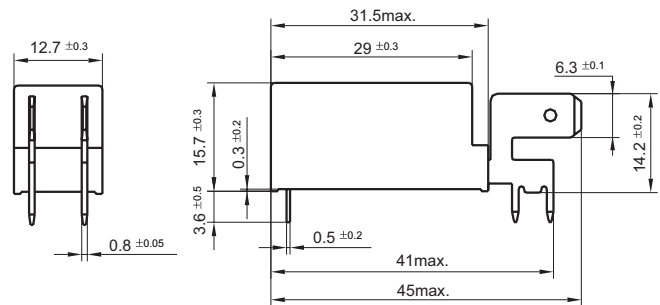
Unit: mm

Outline Dimensions

Quick connect terminals vertical



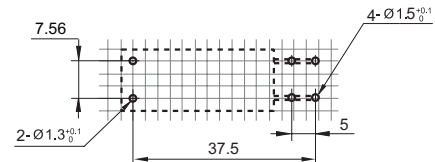
Quick connect terminals horizontal



Wiring Diagram
(Bottom view)



PCB Layout
(Bottom view)



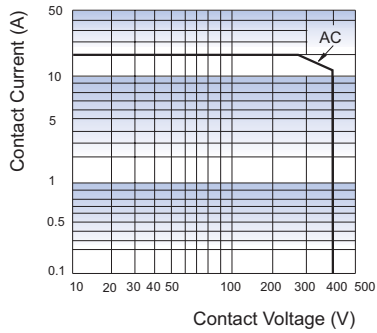
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$.

2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

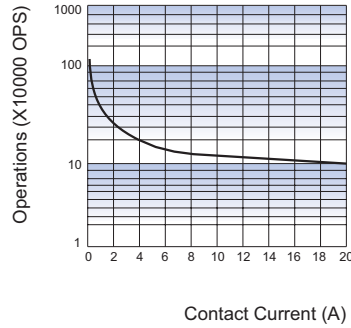
3) The width of the gridding is 2.52mm.

CHARACTERISTIC CURVES

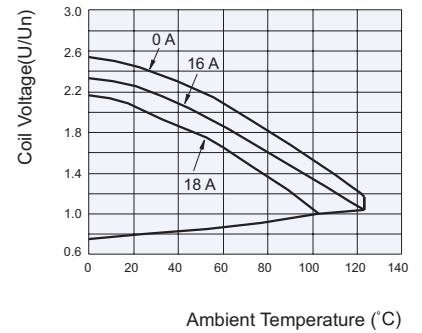
MAXIMUM SWITCHING POWER



ENDURANCE CURVE



COIL OPERATING RANGE (DC)



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.