

HF115FK

MINIATURE HIGH POWER RELAY



File No.:E134517



File No.:116934



File No.:CQC13002103948



Features

- Low height: 15.7 mm
- 16A switching capability
- 5kV dielectric strength (between coil and contacts)
- Creepage distance: 10mm
- Meeting reinforce insulation
- Product in accordance to IEC 60335-1 available
- Dust protected and flux proofed types available
- UL insulation system: Class F
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (29.0 x 12.7 x 15.7) mm

CONTACT DATA

Contact arrangement	1A, 1C	2A, 2C
Contact resistance	100mΩ max.(at 1A 6VDC)	
Contact material	AgSnO ₂	
Contact rating (Res. load)	12A/16A 250VAC	8A 250VAC
Max. switching voltage	400VAC	
Max. switching current	12A / 16A	8A
Max. switching power	3000VA / 4000VA	2000VA
Mechanical endurance	1 x 10 ⁷ OPS	
Electrical endurance	5 x 10 ⁴ 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
	Between contact sets	2500VAC 1min
Surge voltage (between coil & contacts)	10kV (1.2 / 50μs)	
Operate time (at nomi. volt.)	10ms max.	
Release time (at nomi. volt.)	5ms max.	
Shock resistance *	Functional	98m/s ²
	Destructive	980m/s ²
Vibration resistance *	10Hz to 150Hz 10g/5g	
Humidity	5% to 85% RH	
Ambient temperature	-40°C to 85°C	
Termination	PCB	
Unit weight	Approx. 13g	
Construction	Dust protected, Flux proofed	

Notes: 1) The data shown above are initial values.
2) * Index is not in relay length direction.

COIL

Coil power	Approx. 400mW
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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	3.50	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	360 x (1±10%)
18	12.60	1.8	27	810 x (1±10%)
24	16.80	2.4	36	1440 x (1±10%)
48	33.60	4.8	72	5760 x (1±15%)

Notes: * The max. allowable voltage in the COIL DATA is coil overdrive voltage, it is the instantaneous max. voltage which the relay coil could endure in a very short time.

SAFETY APPROVAL RATINGS

UL/CUL	2Z4T: 8A 250VAC at 85°C
	Z1T: 12A 250VAC at 85°C
	Z2T: 12A 250VAC at 85°C
	Z3T: 16A 250VAC at 85°C
VDE	2Z4T: 8A 250VAC at 85°C
	Z1T: 12A 250VAC at 85°C
	Z2T: 12A 250VAC at 85°C
	Z3T: 16A 250VAC at 85°C
	H3T: 10A 250VAC at 85°C

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



HONGFA RELAY

ISO9001, ISO/TS16949, ISO14001, OHSAS18001, IECQ QC 080000 CERTIFIED

2014 Rev. 1.00T

ORDERING INFORMATION

Type	HF115FK /	12	-H	3	T	(XXX)
Coil voltage	5, 6, 9, 12, 18, 24, 48 VDC					
Contact arrangement	H: 1 Form A 2H: 2 Form A		Z: 1 Form C 2Z: 2 Form C			
Version	1: 3.5mm 1 pole 12A 3: 5.0mm 1 pole 16A		2: 5.0mm 1 pole 12A 4: 5.0mm 2 pole 8A			
Contact material ¹⁾	T: AgSnO ₂		TG: AgSnO ₂ + Au plated			
Customer special code	e.g. (528) stands for flux proofed type; (335) stands for product in accordance to IEC 60335-1 (GWT)					

Notes: 1) For gold plated type, the min. switching current and min. switching voltage is 10mA 5VDC;

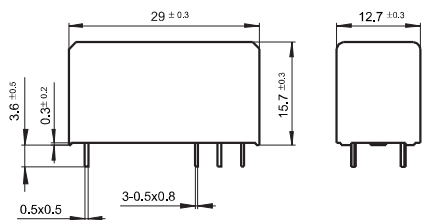
2) We recommend dust protected and flux proofed types for a clean environment (free from contamination like H₂S, SO₂, NO₂, dust, etc.). Especially, avoiding flux and pollutant ingress into relay for dust protected type.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

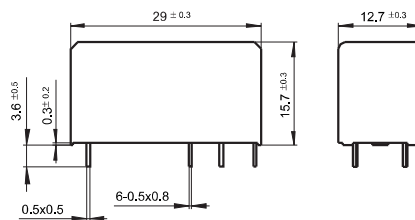
Unit: mm

Outline Dimensions

3.5mm Pinning (HF115FK/ □ □ -□ -1 -□)



5mm Pinning (HF115FK/ □ □ -□ □ -2/3/4 -□)

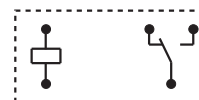


Wiring Diagram (Bottom view)

3.5/5mm Pinning, 1 Pole, 12A, HF115FK/ □ □ -□ -1/2-□

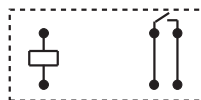


1 Form A

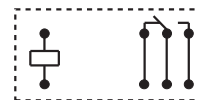


1 Form C

5mm Pinning, 1 Pole, 16A, HF115FK/ □ □ -□ -3-□

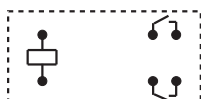


1 Form A

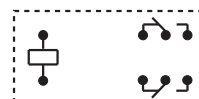


1 Form C

5mm Pinning, 2 Pole, 8A, HF115FK/ □ □ -2 □ -4-□

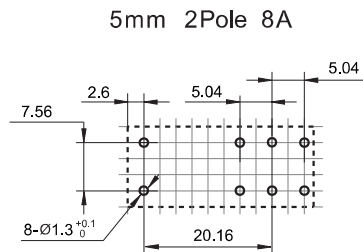
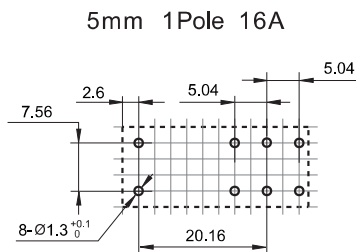
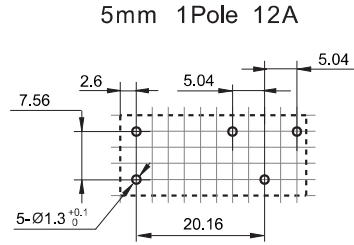
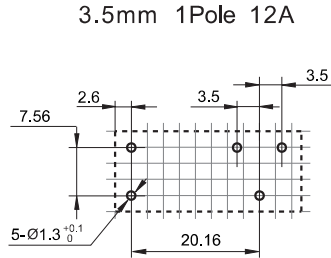


2 Form A



2 Form C

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.

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.