HF115F-S MINIATURE HIGH POWER RELAY

c UL us
Pending

VDE
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CQC
Pending

Features

- Special contact struction
- Incandescent lamp load: 3000W 230VAC
- 5kV dielectric strength (between coil and contacts)
- Creepage distance: 10mm
- Low height: 15.7 mm
- Meeting reinforce insulation
- Product in accordance to IEC 60335-1 available
- Plastic sealed and flux proofed types available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (29.0 x 12.7 x 15.7) mm

CONTACT DATA

Contact arrangement	1A
Contact resistance	100mΩ (at 1A 6VDC)
Contact material	W+$AgSnO_2$
Contact rating	Resistive:16A 250VAC Incandescent Lamp: 3000W 230VAC
Max. switching voltage	440VAC
Max. switching current	16A
Max. switching power	4000VA
Mechanical endurance	5 x 10^6OPS
Electrical endurance	1 x 10^4OPS

CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	5000VAC 1min
	Between open contacts	1250VAC 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	98m/s^2
	Destructive	980m/s^2
Vibration resistance *		10Hz to 150Hz 10g
Humidity		35% to 85% RH
Ambient temperature		-40˚C to 70˚C
Termination		PCB
Unit weight		Approx. 13.5g
Construction		Plastic sealed, Flux proofed

Notes: 1) This contact resistance value is tested under the norminal voltage.
2) *Index is not that of relay length direction.
3) The data shown above are initial values.

COIL

Coil power	400mW

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	360 x (1±10%)
18	12.6	1.8	27	810 x (1±10%)
24	16.8	2.4	36	1440 x (1±10%)
48	33.6	4.8	72	5760 x (1±15%)
60	42.0	6.0	90	7500 x (1±15%)
110	77.0	11.0	165	25200 x (1±15%)

Notes: * The max. allowable voltage refers to the maximum value in a varying range of pick-up voltage, not the voltage for continuous operation.

SAFETY APPROVAL RATINGS (Pending)

UL/CUL	Resistive	16A 250VAC
	Incandescent Lamp	3000W 230VAC
VDE		16A 250VAC at 70°C 16A 250VAC cosø=0.6 at 70°C

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

ORDERING INFORMATION

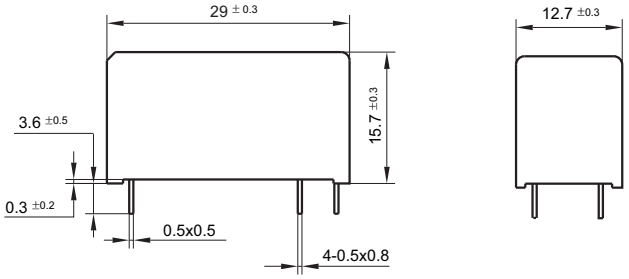
	HF115F-S /	12	H	S	F	(XXX)
Type						
Coil voltage	5, 6, 9, 12, 18, 24, 48, 60, 110VDC					
Contact arrangement	**H:** 1 Form A					
Construction [1]	**S:** Plastic sealed	**Nil:** Flux proofed				
Insulation Standard	**F:** Class F	**Nil:** Standard				
Customer special code	e.g. (335) stands for product in accordance to IEC 60335-1 (GWT)					

Notes: 1) We recommend flux proofed types for a clean environment (free from contaminations like H_2S, SO_2, NO_2, dust, etc.).
We suggest to choose plastic sealed types and validate it in real application for an unclean environment (with contaminations like H_2S, SO_2, NO_2, dust, etc.).
If water cleaning is required after the relay is assembled on PCB, please contact us for suggestion about suitable parts.

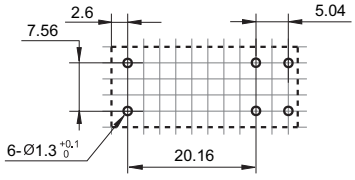
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Outline Dimensions



PCB Layout
(Bottom view)



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 2.52mm.

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.