

HF115F-25

MINIATURE HIGH POWER RELAY



File No.: E133481



File No.: R50523670



File No.: CQC21002322054



Features

- 25A switching capability
- Low height: 16.5 mm
- Creepage distance and air distance: 10mm/10mm
- Meeting reinforce insulation
- IEC60335-1 compliant products are available
- UL insulation system: Class F
- Meets the requirement of ambient working temperature 105°C

RoHS compliant

CONTACT DATA

Contact arrangement	1A
Contact resistance	100mΩ max.(at 1A 6VDC)
Contact material	AgSnO ₂
Contact rating(Res.)	23A 277VAC
Max.switching voltage	277VAC
Max.switching current	25A
Max.switching power	6925VA
Mechanical endurance	1×10 ⁶ OPS
Electrical endurance	1×10 ⁵ OPS (23A 277VAC, Resistive load, 105°C, 1s on 9s off)
	1×10 ⁴ OPS (25A 277VAC, Resistive load, 105°C, 1s on 9s off)

Notes: 1) The data shown above are initial values.

COIL

Coil power	Approx.400mW
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COIL DATA

23°C

Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min	Max. Allowable Voltage VDC	Coil Resistance Ω
5	3.75	0.5	6.5	62×(1±10%)
6	4.5	0.6	7.8	90×(1±10%)
9	6.75	0.9	11.7	202×(1±10%)
12	9.00	1.2	15.6	360×(1±10%)
18	13.5	1.8	23.4	810×(1±10%)
24	18.0	2.4	31.2	1440×(1±10%)
48	36.0	4.8	62.4	5760×(1±10%)

Notes: 1) The data shown above are initial values.

2) Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time.

CHARACTERISTICS

Insulation resistance		1000MΩ(500VDC)
Dielectric strength	Between coil & contacts	5000VAC 1min
	Between open contacts	1000VAC 1min
Surge Voltage		10kV(1.2×50μs)
Operate time (at nomi. volt.)		15ms max.
Release time (at nomi. volt.)		8ms max.
Shock resistance	Functional	98m/s ²
	Destructive	980m/s ²
Vibration resistance		10Hz to 150Hz 10g
Humidity		5% to 85%RH
Ambient temperature		-40°C to 105°C
Termination		PCB
Unit weight		Approx. 14g
Construction		Flux proofed

Notes: 1) The data shown above are initial values.

SAFETY APPROVAL RATINGS

UL/CUL	23A 250VAC/277VAC Resistive load 105°C
	25A 250VAC/277VAC Resistive load 105°C TV-8 120VAC 40°C
TÜV	23A 250VAC/277VAC Resistive load 105°C 25A 250VAC/277VAC Resistive load 105°C
CQC	23A 250VAC/277VAC Resistive load 105°C
	25A 250VAC/277VAC Resistive load 105°C

Notes: The typical loads listed above are only part of the product certification. The detailed test conditions of each load are different, so the electrical durability is different. For more information, please contact us.



HONGFA RELAY

ISO9001, IATF16949, ISO14001, ISO45001, IECQ QC 080000, ISO/IEC 27001 CERTIFIED

2022 Rev. 2.00

ORDERING INFORMATION

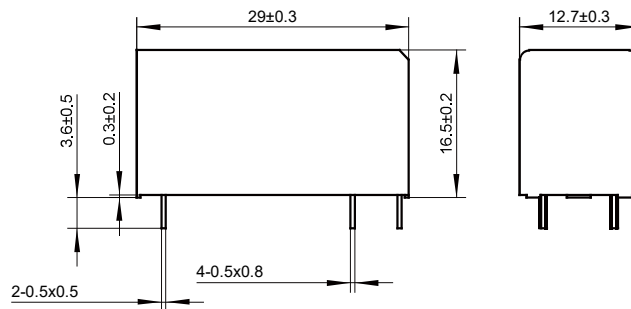
Type	HF115F-25/	12	-H	3	T	F	(XXX)
Coil voltage	5,6,9,12,18,24,48VDC						
Contact arrangement	H:1 Form A						
Structure ¹⁾	3:5.0mm						
Contact material	T: AgSnO ₂						
Insulation standard	F: Class F						
Special code	XXX: Customer special requiremen; Nil: Standard						

Notes: 1) Non-plastic sealed relays cannot be used in environment pollution (containing certain amount of H₂S, SO₂, NO₂, dust and other pollutants);
 2) Non-plastic sealed relays cannot be cleaned and treated as a whole after being loaded into PCB welding;
 3) The customer special requirement express as special code after evaluating by Hongfa.

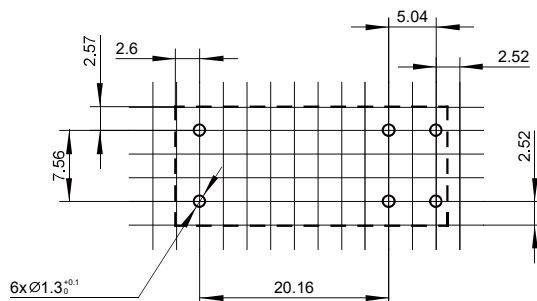
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Outline Dimensions



PCB Layout(Bottom view)



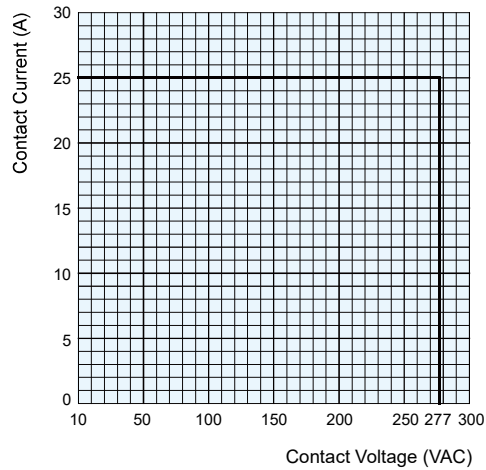
Wiring Diagram(Bottom view)



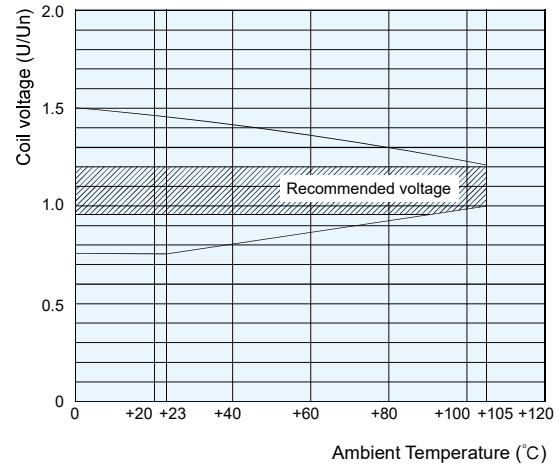
Notes: 1) In case of no tolerance shown in outline dimension: outline dimension ≤ 1 mm, tolerance should be ± 0.2 mm; outline dimension > 1 mm and ≤ 5 mm, tolerance should be ± 0.3 mm; outline dimension > 5 mm and ≤ 30 mm, tolerance should be ± 0.4 mm; outline dimension > 30 mm, tolerance should be ± 0.6 mm.
 2) The tolerance without indicating for PCB layout is always ± 0.1 mm.

CHARACTERISTIC CURVES

MAX.SWITCHING POWER



COIL OPERATING RANGE (DC)



Remark: When the relay is in use, if the excitation voltage exceeds the rated voltage, the relay electrical durability will be reduced.
Within the recommended voltage range, the effect on electrical durability is less.
The insulation of the relay coil may be damaged if it exceeds the upper limit specified by the curve in the diagram.

Disclaimer

The specification is for reference only. See to "Terminology and Guidelines" for more information. Specifications 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.

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