HF115F-25(Explosion-proof type) MINIATURE HIGH POWER RELAY

File No.：E133481

File No.：R 50523670

File No.：CQC21002322054

Features

- 20A 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
- Meet the explosion-proof requirements of IEC60079-15 GB3836.8

RoHS compliant

CONTACT DATA

Contact arrangement	1A
Contact resistance	100mΩ max.(at 1A 6VDC)
Contact material	$AgSnO_2$
Contact rating(Res.)	20A 277VAC
Max.swtiching voltage	250VAC
Max.switching current	20A
Max.switching power	5000VA
Mechanical endurance	1×10^6OPS
Electrical endurance	1×10^5OPS (20A 250VAC, Resistive load, Room temp., 1s on 9s off)

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

COIL

Coil power	Approx.800mW

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	31×(1±10%)
6	4.5	0.6	7.8	45×(1±10%)
9	6.75	0.9	11.7	101×(1±10%)
12	9.00	1.2	15.6	180×(1±10%)
18	13.5	1.8	23.4	405×(1±10%)
24	18.0	2.4	31.2	720×(1±10%)
48	36.0	4.8	62.4	2880×(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		Plastic sealed

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

SAFETY APPROVAL RATINGS

UL/CUL	20A 250VAC Resistive load Room temp.
TÜV	20A 250VAC Resistive load Room temp.

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.

ORDERING INFORMATION

HF115F-25/	12	-H	S	1	P	T	F	（XXX）

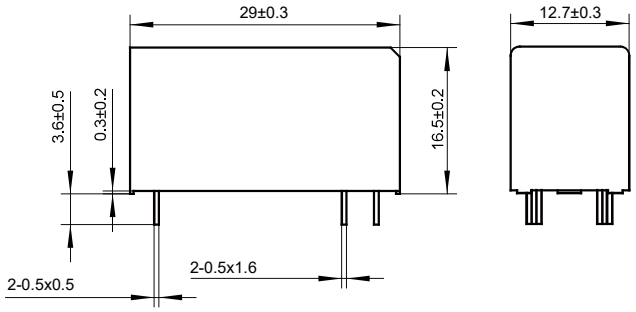
Type	
Coil voltage	5，6，9，12，18，24，48VDC
Contact arrangement	**H:** 1 Form A
Construction	**S:** Plastic sealed
Structure	**1:** 3.5mm
Coil type	**P:** high power consumption type
Contact material	**T:** $AgSnO_2$
Insulation standard	**F:** Class F
Special code	**XXX:** Customer special requiremen；**Nil:** Standard

Notes: 1) The customer special requirement express as special code after evaluating by Hongfa. e.g.(335) stands for product in accordance to IEC 60335-1 (GWT). (253) means Through-Hole Reflow Version(valid for Flux proofed only).
2) For products that should meet the explosion-proof requirements of "IEC 60079 series",please note [Ex] after the specification while placing orders.Not all products have explosion-proof certification,so please contact us if necessary, in order to select the suitable products.

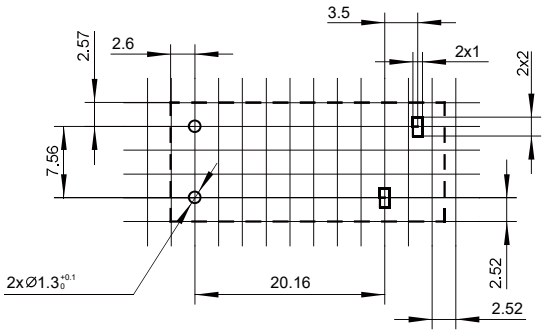
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Outline Dimensions



PCB Layout(Bottom view)

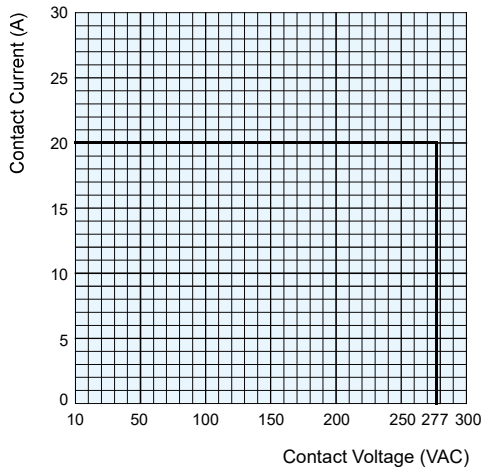


Wiring Diagram(Bottom view)

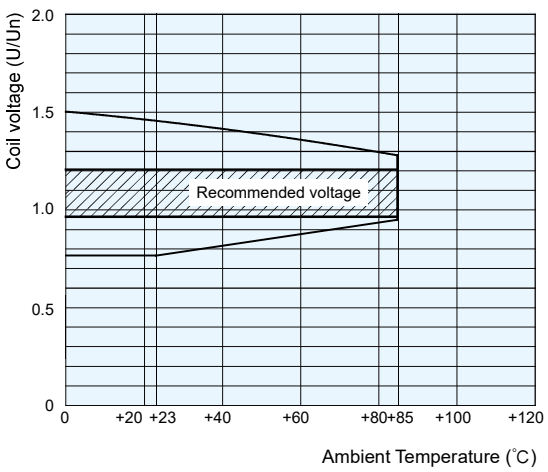
Notes:1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension＞1mm and ≤5mm,tolerance should be ±0.3mm; outline dimension＞5mm and ≤30mm, tolerance should be ±0.4mm;outline dimension＞30 mm, tolerance should be ±0.6mm.
2) The tolerance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

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.