

HF196F-Q

MINIATURE HIGH POWER RELAY



File No.:E133481



File No.:40058049



File No.:CQC23002410355



Features

- 1 pole, 25 A, 1 form A (NO)
- Coil power 530mW
- Low Height: 17.9mm(27.6mm with quick connects)
- PCB & Quick connect terminal for load
- Reinforced insulation
- UL insulation system: Class F
- Ambient temperature up to 105°C

RoHS compliant

CONTACT DATA

Contact arrangement	1A
Contact resistance	100mΩ max.(1A 6VDC)
Contact material	AgSnO ₂
Contact rating (Res.Load)	25A 250VAC
Max.switching voltage	250VAC
Max.switching current	25A
Max.switching power	6250VA
Mechanical endurance	1×10 ⁶ ops
Electrical endurance	1×10 ⁵ ops (25A 250VAC, Resistive load, 105°C, 1s on 9s off)

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

COIL

Coil power	Approx.0.53W
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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 ¹⁾	Coil Resistance Ω
5	3.75	0.5	7.5	47× (1±10%)
6	4.50	0.6	9.0	67× (1±10%)
9	6.75	0.9	13.5	153× (1±10%)
12	9	1.2	18	272× (1±10%)
18	13.5	1.8	27	611× (1±10%)
24	18	2.4	36	1086× (1±10%)
48	36	4.8	72	4347× (1±15%)

Notes: 1) 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 (Between coil & contacts)	10kV (1.2×50μs)	
Operate time (at nomi. volt.)	15ms max.	
Release time (at nomi. volt.)	5ms max.	
Shock resistance	Functional	98m/s ²
	Destructive	980m/s ²
Vibration resistance	10Hz to 55Hz 1.5mm DA	
Humidity	5% to 85% RH	
Ambient temperature	-40°C to 105°C	
Termination	PCB, QC	
Unit weight	Approx. 16g	
Construction	Flux proofed	

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

SAFETY APPROVAL RATINGS

UL/CUL	30A 120/125/220/250/277VAC, Resistive load 105°C 25A 120/125/220/250/277VAC, Resistive load 105°C 16A 250VAC, cosφ=0.4, 105°C 1HP 250VAC, 105°C 2HP 250VAC, 40°C TV-8 120VAC, 40°C
	30A 120/125/220/250/277VAC, Resistive load 105°C 25A 120/125/220/250/277VAC, Resistive load 105°C 16A 250VAC, cosφ=0.4, 105°C

Notes: 1) Only some typical rating are listed above.If more details are required,please contact us.



HONGFA RELAY

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

2024 Rev. 1.01

ORDERING INFORMATION

Type	HF196F-Q/	12	-H	T	F	(XXX)
Coil voltage	5,6,9,12,18,24,48VDC					
Contact arrangement	H:1 Form A					
Contact material	T: AgSnO ₂					
Insulation class	F: Class F					
Special code	XXX: Customer special requiremen; Nil: Standard					

Notes: 1) We recommend flux proofed types for a clean environment (free from contaminations like H₂S, SO₂, NO₂, dust, etc.).

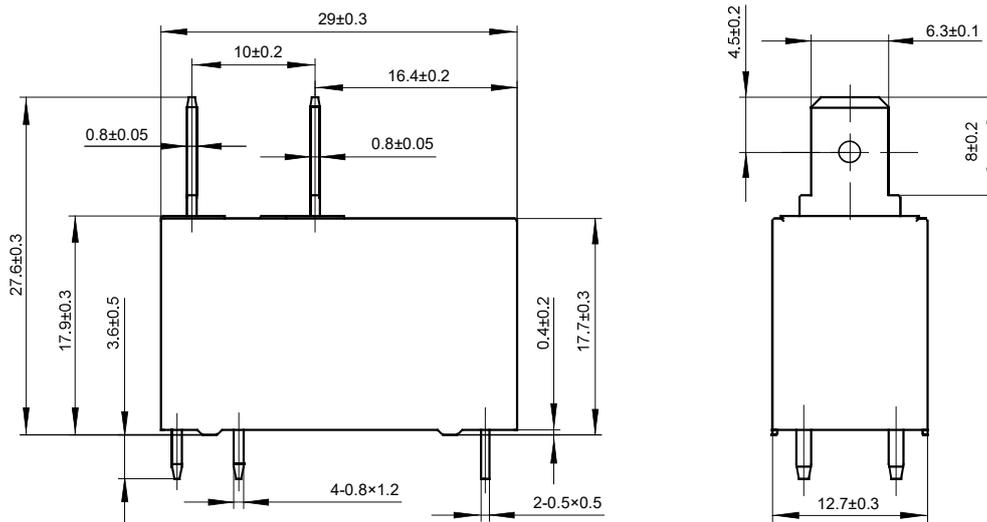
2) Contact is recommended for suitable condition and specifications if water cleaning or surface process is involved in assembling relays on PCB.

3) 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).

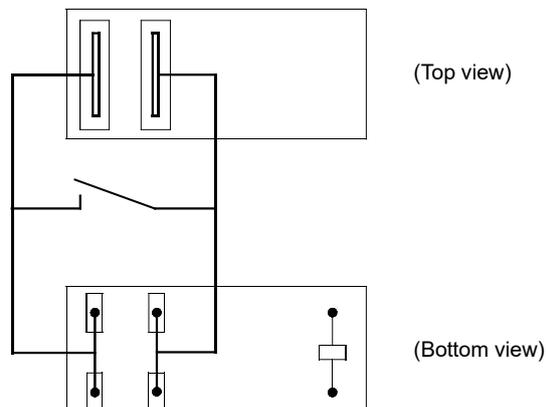
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Outline Dimensions



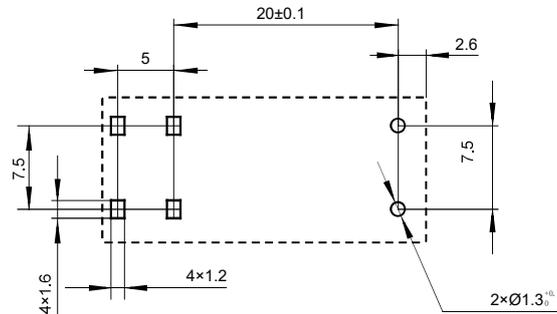
Wiring Diagram



OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

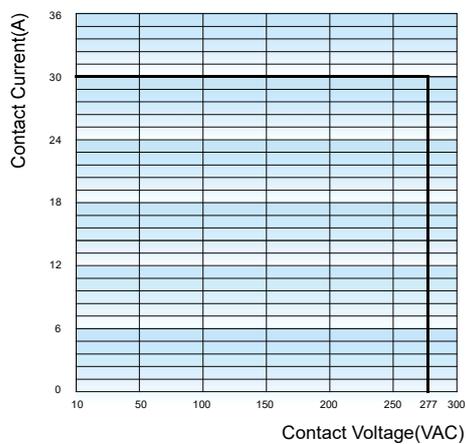
PCB Layout(Bottom view)



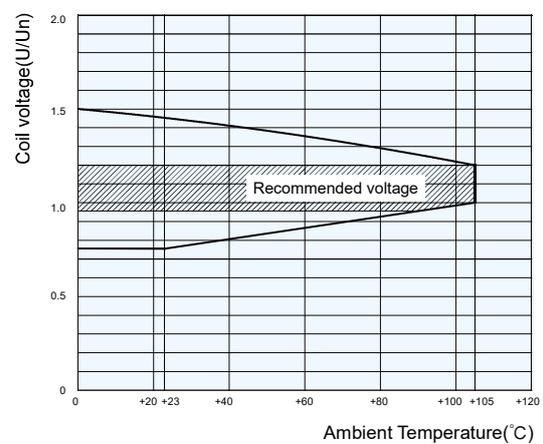
- Notes:1) In case of no tolerance shown in outline dimension: outline dimension ≤ 1 mm, tolerance should be ± 0.2 mm; outline dimension > 1 mm and ≤ 5 mm, tolerance should be ± 0.3 mm; outline dimension > 5 mm and ≤ 30 mm, tolerance should be ± 0.4 mm; outline dimension > 30 mm, tolerance should be ± 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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