



File No.:E134517



File No.:R 50154722



File No.:CQC18002206328



Features

- 80A switching capability
- Applicable to solar photovoltaic inverter
- Applicable to UPS
- 3mm contact gap
(compliant to European Photovoltaic Standard VDE0126, compliant to IEC 62109-2-2011)
- 4kV dielectric strength(between coil and contacts)
- UL insulation system: Class F

CONTACT DATA

Contact arrangement	1A
Contact resistance ¹⁾	10mΩ max(at 10A 13.5VDC)
Contact material	AgSnO ₂ , AgNi
Contact rating (Res. load)	80A 60VDC/80A 250VAC
Max. switching voltage	277VAC/60VDC
Max. switching current	90A
Max. load current	100A 15min at room temp.
Max. switching power	24930VA
Mechanical endurance	1 x 10 ⁶ OPS
	6 x 10 ³ OPS
Electrical endurance	(80A 250VAC, at 85°C, 1s on 9s off) (80A 60VDC, at 85°C, 1s on 9s off)

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

CHARACTERISTICS

Insulation resistance	1000MΩ (at 500VDC)
Dielectric strength	Between open contacts
	4000VAC 1min
Surge Voltage	6kV (1.2/50μs)
Operate time (at nomi. volt.)	30ms max
Release time (at nomi. volt.)	30ms max
Shock resistance	Functional
	98m/s ²
Functional	980m/s ²
Vibration resistance*	10Hz to 55Hz 1.5mm DA
Humidity	5% to 85% RH
Ambient temperature	-40°C to 85°C
Termination ²⁾	PCB
Unit weight	Approx. 90g
Construction	Dust protected

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

2) It does not allow using quick-connect terminations.

3)*Index is not in relay width direction.

COIL

Coil power	Approx. 3.2W
Holding voltage	60% to 120%U _N (at 23°C) 70% to 95%U _N (at 85°C)

Notes: 1)The coil holding voltage is the voltage applied to coil 200ms after the rated voltage.

2)To avoid overheating and burning, the coil can not be consistently applied to with voltage larger than maximum holding voltage.

COIL DATA

at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC max ¹⁾	Drop-out Voltage VDC min ¹⁾	Max. Voltage VDC * ²⁾	Coil Resistance Ω
3	2.25	0.3	3.3	2.8 x (1±10%)
6	4.50	0.6	6.6	11.3 x (1±10%)
9	6.75	0.9	9.9	25 x (1±10%)
12	9.00	1.2	13.2	45 x (1±10%)
24	18.0	2.4	26.4	180 x (1±10%)
48	36.0	4.8	52.8	720 x (1±10%)

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

2) *Maximun voltage refers to the maximun voltage which relay coil could endure in a short period of time.

SAFETY APPROVAL RATINGS

UL/CUL	AgSnO ₂	277VAC 80A 60VDC 80A
TÜV	AgSnO ₂	277VAC 90A 277VAC 80A Making 35A 100ms 250VAC,loading 90A 800ms 250VAC,Breaking 35A 100ms 250VAC
	AgNi	Making 35A 100ms 250VAC,loading 90A 800ms 250VAC,Breaking 35A 100ms 250VAC

Notes: 1) All values unspecified are at room temperature.

2) Only typical loads are listed above. Other load specifications can be available upon request.



HONGFA RELAY

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

2025 Rev. 1.00

ORDERING INFORMATION

HF116F-80/	12	-1H	T	F	(XXX)
Type					
Coil voltage	3, 6, 9, 12, 24, 48VDC				
Contact arrangement	1H:1 Form A				
Contact material	T: AgSnO ₂	Nil: AgNi			
Insulation standard	F: Class F				
Special code¹⁾	XXX: Customer special requirement			Nil: Standard	

Notes: 1) Water cleaning or surface process is not suggested after the dust protected relays are assembled on PCB.

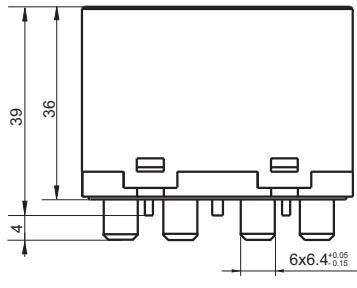
2) Dust protected relays can not be used in the environment with pollutants like H₂S, SO₂, NO₂, dust, etc.

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).

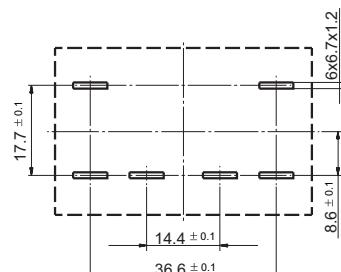
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

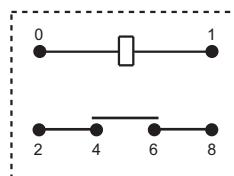
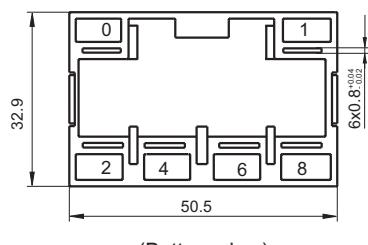
Outline Dimensions



PCB Layout
(Bottom view)



Wiring Diagram
(Bottom view)



Remark: 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, tolerance should be ± 0.4 mm.
2) The tolerance without indicating for PCB layout is always ± 0.1 mm.

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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