

HFE82V-60

DIRECT CURRENT RELAY



RoHS compliant

Features

- Ceramic brazing sealed technology guarantees no risk of arc leaking and ensures no fire or explosion.
- Filled with gas (mostly hydrogen) to effectively prevent the oxidation burnt when exposed to electricity; the contact resistance is low and stable, and the parts exposed to electricity can meet IP67 protection level.
- Carrying current 60A continuously at 85°C.
- Insulation resistance is 1000MΩ(1000 VDC), and dielectric strength between the coil and contacts is 4kV, which meets the requirements of IEC 60664-1.

CONTACT DATA

Contact arrangement	1 Form A
Contact resistance	≤1mΩ(at 60A)
Contact rating	60A
Mechanical endurance	2.5x10 ⁵ ops
Max. switching voltage	1000 VDC
Max. breaking current	600A(450 VDC) 1op
Max. switching power	54kW
Electrical endurance 1)	Switching:7.5x10 ⁴ ops (20 VDC, 60A)
	Switching:800ops (450 VDC, 60A)
	Switching:50ops (450 VDC, 120A)
	Breaking:100ops (450 VDC, 200A,on-off ratio:0.3s:29.7s)
	Breaking:1op (450 VDC, 600A,on-off ratio:0.3s:29.7s)
Current carrying 2) capacity	60A: Cont.
	90A: 1h
	120A: 14min
	240A: 20s
	360A: 2s
	600A: 0.6s

Notes: 1) Unless otherwise specified, the temperature of electrical endurance is at 23°C and the on-off ratio is 0.6s:5.4s.

The coil was not connected to the surge suppression device during the test. Please note that the use of a well-connected diode will greatly increase the release time of the relay, resulting in a reduced lifetime.

2) Ambient temperature is at 85°C and cross section area of wire is 15mm² min. See Fig. Endurance Capacity Curve for more information.

COIL

23°C

Rated Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC	Coil power W
12	≤9	≥1	4.5
24	≤18	≥2	4.5

CHARACTERISTICS

Insulation resistance		1000MΩ (1000 VDC)
Dielectric strength	Between coil & contacts	4000 VAC 1min
	Between open contacts	3000 VAC 1min
Operate time (at rated volt.)		≤30ms
Release time (at rated volt.)		≤15ms
Shock resistance	Functional	196m/s ²
	Destructive	490m/s ²
Vibration resistance		10Hz ~ 500Hz 49m/s ²
Humidity		5% ~ 85% RH
Ambient temperature		-40°C ~ 85°C
Load terminal structure		QC terminal
Unit weight		Approx.175g
Outline Dimensions		55.0x39.8x37.0mm

Notes:The above values are the initial values measured at room temperature.



HONGFA RELAY

ISO9001、ISO/TS16949、ISO14001、OHSAS18001、IECQ QC 080000 CERTIFIED

2021 Rev. 1.00

ORDERING INFORMATION

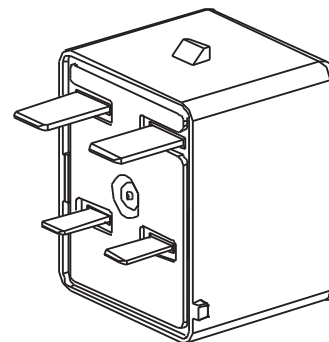
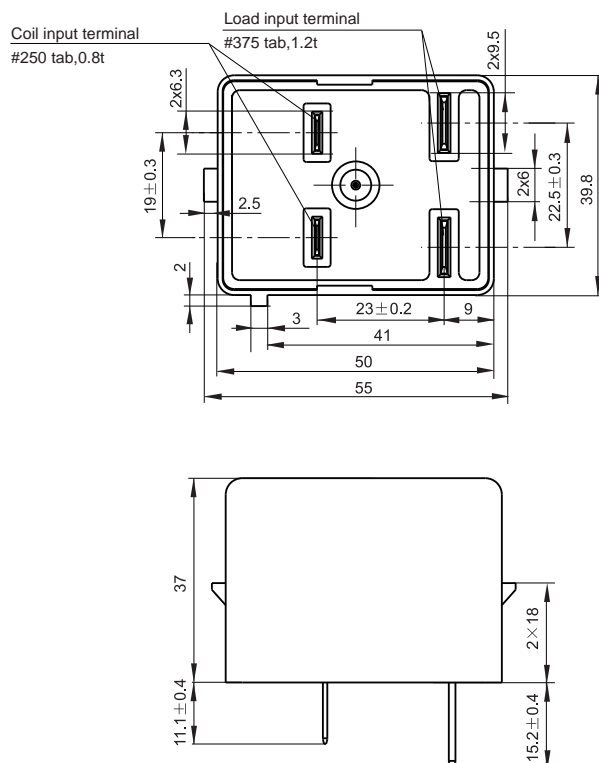
Type	HFE82	V	-60 /	12-	H	2	(XXX)
Application	V: Vehicle						
Contact rating	60: 60A						
Load voltage	Nil: 450 VDC						
Coil voltage	12: 12 VDC 24: 24 VDC						
Contact arrangement	H: 1 Form A						
Load terminal structure	2: QC terminal						
Special code ¹⁾	XXX: Customer special requirement Nil: Standard						

Notes: 1) The customer special requirement express as special code after evaluating by Hongfa.

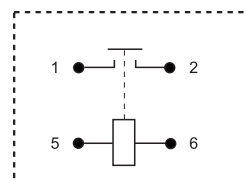
OUTLINE DIMENSIONS, MOUNTING HOLE, TERMINAL ARRANGEMENT

Unit: mm

Outline Dimensions



Terminal Arrangement

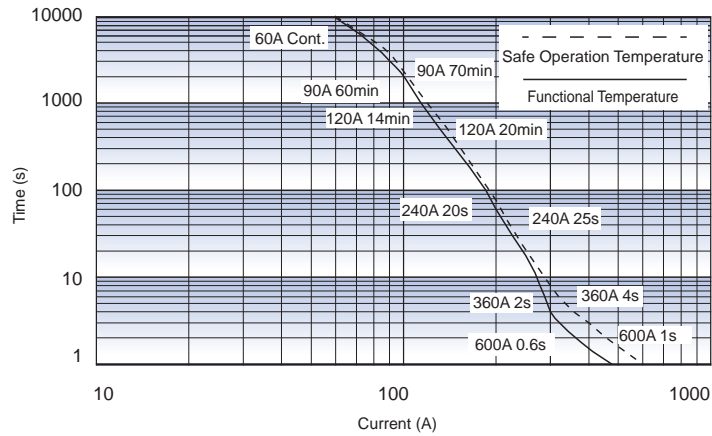


Note: No polarity on the load and coil sides.

Notes: In case of no tolerance shown in outline dimension: outline dimension ≤10mm, tolerance should be ±0.3mm; outline dimension >10mm and ≤50mm, tolerance should be ±0.5mm; outline dimension >50mm, tolerance should be ±0.8mm.

CHARACTERISTIC CURVES

Endurance Capacity Curve



Notes:

1. This data is only for reference and please do not use it for fuse selection.
2. The upper limit of safe operation temperature and functional temperature are set for 180°C and 130°C respectively.
3. To maintain the maximum long-term operating performance, absolute temperature should not exceed 130°C.
4. The data above is measured at the environment temperature 85°C, with cross section area of wire $\geq 15\text{mm}^2$.

CAUTIONS

1. The push and pull force for terminals is 49N for load terminals and 49N for coil terminals. The torque beyond the range may cause damage.
2. Be careful that oils and foreign matter do not stick to the main terminal part and please use the wire with min. cross section area 15mm^2 , otherwise the terminal parts may have abnormal heating.

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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