

HFE80V-60

DIRECT CURRENT RELAY



File No: B0532860033

RoHS compliant



Features

- Preferred for micro electric vehicle(low speed vehicle) and 48V system.
- Carrying current 60A continuously at 85°C.
- No polarity on the load and coil sides.
- The electricity safety meets the requirements of IEC 60664-1.

CONTACT DATA

Contact arrangement	1 Form A
Contact resistance ¹⁾	≤ 1.5mΩ(at 20A)
Contact rating	60A
Mechanical endurance	2 x 10 ⁵ ops
Max. switching voltage	250 VDC
Max. breaking current	100A
Max. switching power	32kW
Electrical ²⁾ endurance	Switching: 1 x 10 ⁵ ops(12 VDC,60A)
	Switching:7.5 x 10 ⁴ ops(150 VDC,10A)
	Switching: 5 x 10 ⁴ ops(48 VDC,60A)
	Switching:3 x 10 ⁴ ops(72 VDC,60A)
	Switching:1 x 10 ⁴ ops(150 VDC,60A)
	Switching:5 x 10 ³ ops(200 VDC,60A)
Current carrying ³⁾ capacity	60A:Cont.
	90A:12min
	180A:15s
	600A:1s

Notes: 1) The above values are the initial values.

2) 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.

3) 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	3
24	≤18	≥2	3

CHARACTERISTICS

Insulation resistance		1000MΩ (500 VDC)
Dielectric strength	Between coil & contacts	3000 VAC 1min
	Between open contacts	2000 VAC 1min
Operate time (at rated volt.)		≤30ms
Release time (at rated volt.)		≤10ms
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		PCB terminal
Unit weight		Approx.200g
Outline Dimensions		76.6 x 55.1 x 49.6mm

Notes: Above is the initial value in the room temperature



HONGFA RELAY

ISO9001, IATF16949, ISO14001, OHSAS18001, IECQ QC 080000 CERTIFIED

2022 Rev. 1.00

ORDERING INFORMATION

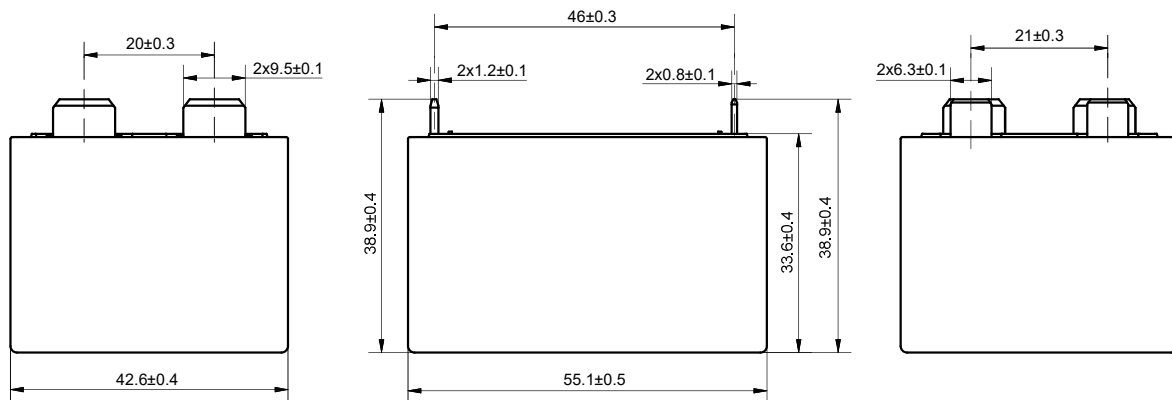
Type	HFE80	V	-60/	150-	12-	H	T	P	(XXX)
Application	V: Vehicle								
Contact rating	60: 60A								
Load voltage	150: 150 VDC 200: 200 VDC								
Coil voltage	12: 12 VDC 24: 24 VDC								
Contact arrangement	H: 1 Form A								
Contact material	T: AgSnO ₂								
Load terminal structure	P: PCB terminal								
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

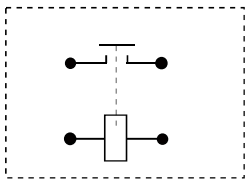
Outline Dimensions



OUTLINE DIMENSIONS, MOUNTING HOLE, TERMINAL ARRANGEMENT

Unit: mm

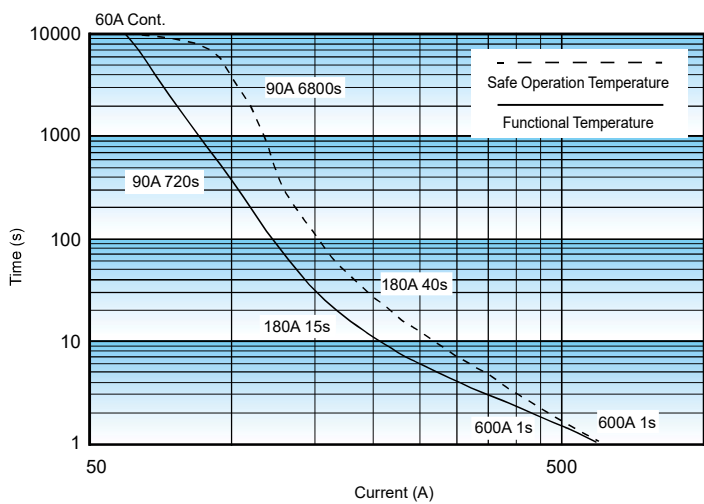
Terminal Arrangement



Note: No polarity on the load and coil sides.

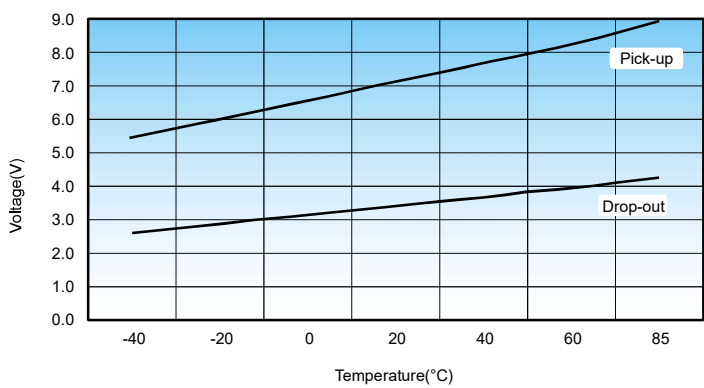
CHARACTERISTIC CURVES

Endurance Capacity Curve



- Notes:
- 1. The upper limit of safe operation temperature and functional temperature are 180°C and 130°C respectively.
 - 2. If the product needs to be operated for a long time, the upper temperature limit should not exceed 130°C.
 - 3. The ambient temperature is 85°C, and the cross-sectional area of the wire is $\geq 15\text{mm}^2$.
 - 4. When the current is $\geq 600\text{A}$, the relay is likely to weld without fire or explosion.

Pick-up Voltage / Drop-out Voltage Curve



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 15mm², 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.

© Xiamen Hongfa Electroacoustic Co.,Ltd. All rights of Hongfa are reserved.