HFE80V-100B DIRECT CURRENT RELAY

RoHS compliant

Features

- Preferred products for 48V system.
- Low height and small size.
- Carrying current 100A continuously at 75°C.
- Insulation resistance is 1000MΩ(500 VDC), and dielectric strength between the coil and contacts is 2.5kV, which meets the requirements of IEC 60664-1.

CONTACT DATA

Contact arrangement		1 Form A
Contact resistance		≤1.5mΩ(at 100A)
Contact rating		100A
Mechanical endurance		4 x 10^5ops
Max. switching voltage		60 VDC
Max. breaking current		800A(52 VDC)
Max. switching power		12kW
Electrical 1) endurance	Res. load	Making:6 x 10^4ops(52 VDC, +3A)
		Making: 2 x 10^4ops(52 VDC, +10A)
		Breaking:6 x 10^4ops(52 VDC, +3A)
		Breaking:2 x 10^4ops(52 VDC, +10A)
		Breaking:500ops(52 VDC, +30A)
		Breaking:50ops(52 VDC, +250A, 5s:45s)
		Breaking:50ops(52 VDC, -220A, 5s:45s)
Current carrying 2) capacity		100A:Cont.
		300A:20s
		500A:4s
		750A:1s

Notes: 1) Unless otherwise specified, the temperature of eletrical 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 35mm² 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	≥0.5	3

CHARACTERISTICS

Insulation resistance		100MΩ(500 VDC)
Dielectric strength	Between coil & contacts	2500 VAC 1min
	Between open contacts	1500 VAC 1min
Operate time (at rated volt.)		≤30ms
Release time (at rated volt.)		≤10ms
Shock resistance	Functional	196m/s²
	Destructive	500m/s²
Vibration resistance		10Hz ~ 1000Hz 27.1m/s²
Humidity		5% ~ 85% RH
Ambient temperature		-40°C ~ 75°C
Load terminal structure		Connector
Unit weight		Approx.155g
Outline Dimensions		50.6 x 23.0 x 57.0mm

Notes: Above is the initial vale in the room temperature

ORDERING INFORMATION

HFE80	V	-100	B/	12-	H	T	L	7	Y	(XXX)

Type	
Application	**V:** Vehicle
Contact rating	**100:**100A
Series breakdown	**B:**B series
Coil voltage	**12:** 12 VDC
Contact arrangement	**H:** 1 Form A
Contact material	**T:** $AgSnO_2$
Coil terminal structure	**L:** Lead wire
Load terminal structure	**7:** With external connector
Mounting	**Y:** Horizontal mounting
Special code[1)]	**XXX:** Customer special requirement **Nil:** Standard

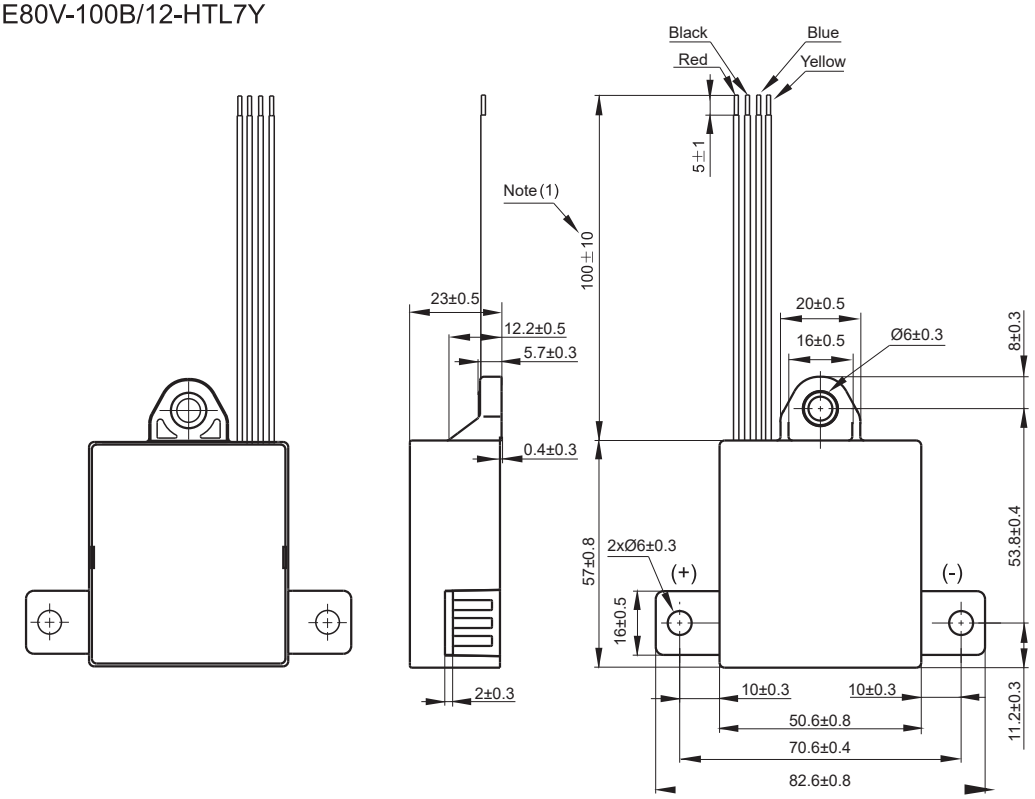
Notes: 1) The customer special requirement express as special code after evaluating by Hongfa.

OUTLINE DIMENSIONS, MOUNTING HOLE, TERMINAL ARRANGEMENT

Unit: mm

Outline Dimensions

HFE80V-100B/12-HTL7Y

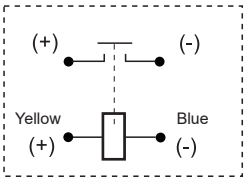


Note:1)The length of lead wire can be customized according to actual needs. If there is no special description,the default length of our company is 100mm。

OUTLINE DIMENSIONS, MOUNTING HOLE, TERMINAL ARRANGEMENT

Unit: mm

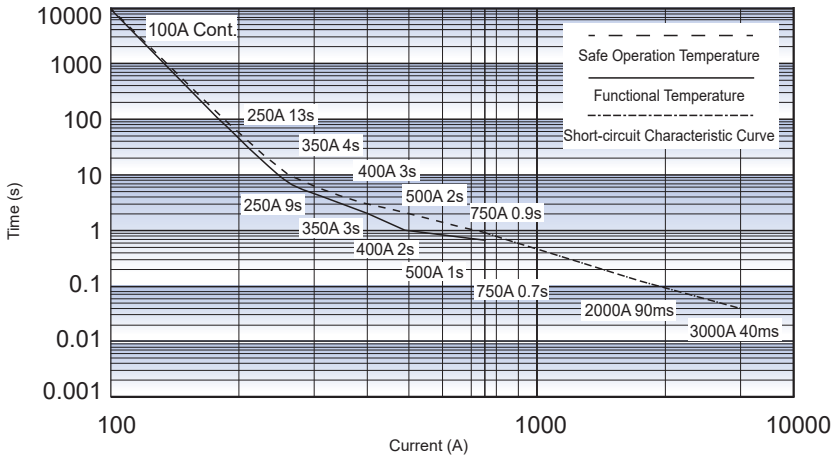
Terminal Arrangement



Note: Both the load side and coil side have polarity.

CHARACTERISTIC CURVES

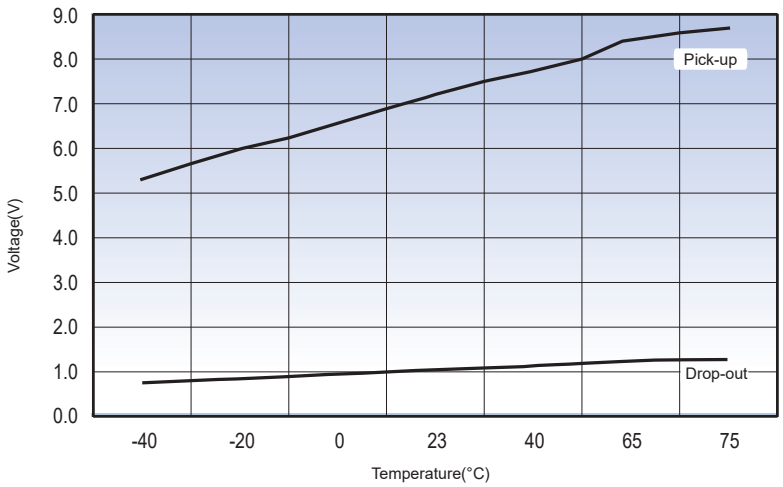
Endurance Capacity Curve



Notes:

1.The upper limit of safe operation temperature and functional temperature are 180℃ and 130℃ respectively.
2.If the product needs to be operated for a long time, the upper temperature limit should not exceed 120℃.
3.The ambient temperature is 75℃, and the cross-sectional area of the wire is ≥35mm².
4.When the current is ≥2000A, the relay is likely to weld without fire or explosion.
5.The dash-dotted line is the short-circuit capacity curve of the relay without fire or explosion.

Pick-up Voltage / Drop-out Voltage Curve



CAUTIONS

1.In case of loosening, please use washer when mounting the relay with M5 screw, and the torque shall be within 3N.m to 4N.m; the screw tightening torque at terminals shall be with 3N·m to 4N·m. 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 35mm^2, otherwise the terminal parts may have abnormal heating.