

# Miniature Circuit Breaker

## UEB6-40 Series



# INTRODUCTION

Hongfa, (Shanghai Stock Exchange: 600885), founded in 1984, has been adhering to the enterprise spirit of “persevere for progress, strive for excellence”, and has built a complete industry system with complete categories and supporting facilities. At present, Hongfa has more than 30 subsidiaries and has established three districts of R & D and production bases. Its products cover various categories, such as medium and low voltage products, relays, high and low voltage switchgear, capacitors, precision parts and automation equipment.

Xiamen Hongfa Electrical Safety & Controls Co., Ltd. is a wholly-owned subsidiary of Hongfa, which specializes in R & D, design and manufacture medium and low voltage products. Its distribution apparatus, terminal apparatus, control apparatus and other products are widely used in real estate, electric power, new energy, industry, HVAC, transportation, information and other fields.

In the United States, Europe, Southeast Asia and other regions, Hongfa has established localized marketing and service networks with global market operation and technical service. Relying on professional and rigorous technical support, fast response and all-round service, safe and reliable product quality and high cost performance, Hongfa has reached business cooperation relationship with many global top 500 enterprises and other well-known enterprises, such as Ehel, GE, Honeywell, Carrier, Trane, Johnson Controls, Danfoss, State Grid, China Southern Power Grid, CRRC, China Mobile, China Unicom, etc.



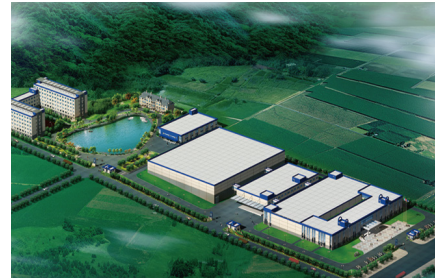
Sunban Industrial Park



Donglin Industrial Park



Haicang Industrial Park



Zhongjiang Industrial Park



Zhangzhou Industrial Park



Zhoushan Industrial Park



Xi'an Factory

In terms of technology R & D and manufacturing, taking the national enterprise technology center as the platform, Hongfa has set up postdoctoral research workstation, academician and expert workstation. Now it has developed into a leading scientific research and production base in the industry. From product development, mold manufacturing, parts manufacturing, automated product assembly and online testing, Hongfa has successfully built an integrated whole industry chain of medium and low voltage products. In terms of product testing, Hongfa testing center has passed the certification of VDE, UL, CNAS and other international organizations, and has complete testing and analysis equipment for low-voltage products, such as 50kA ultimate short circuit test, 8kA electrical life test, 80kA characteristic test, mechanical simulation and testing system, electromagnetic simulation and testing system.

Hongfa always adheres to the policy of "focused on the market, winning through quality", and has a completed quality assurance system. Its products have passed UL / CUL, VDE, CQC, CCC and other international safety certification. In the process of quality management, Hongfa actively implements the advanced quality concept, constantly improves the quality management system, continuously promotes the product process quality control and testing, strengthens the supply chain management, and is committed to providing each customer with high-quality products and creating greater value.

Advanced technology and strict quality control have created Hongfa's brand strength. Hongfa is willing to work hand in hand with global customers to share the convenience and well-being brought by science and technology.

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## Production Overview

### Scope of Application

UEB6-40 miniature circuit breakers are used in the circuit of AC 50Hz/60Hz, rated operational voltage 230V, rated operational current up to 40A, to provide over current protection for line facilities and electrical equipment in buildings and similar places, and can be used for infrequent on/off operations.

### Product Features

#### Provide safe use and protection

- Red and green indicating window to indicate the opening and closing status of the contact
- Level 2 electric shock protection for safer operation

#### Provide reliability

- Innovative bi-metal adjustment process with excellent overload protection stability

#### Convenient installation

- Dual stable snap-on design for easy installation and disassembly



#### High quality electrical performance

- Excellent current limiting performance, with the current limiting level reaching the standard level 3
- Electrical life up to 10000 cycles

### Product Appearance



## Standard

<b>CB</b>	CB	IEC 60898-1
	CCC	GB/T 10963.1
<b>CE</b>	CE	EN 60898-1
	VDE	EN 60898-1

## Standard Operation And Installation Conditions

- Operating temperature range:  $-35^{\circ}\text{C} \dots +70^{\circ}\text{C}$
- Storage temperature range:  $-40^{\circ}\text{C} \dots +85^{\circ}\text{C}$
- Altitude:  $< 2000\text{m}$
- Pollution degree: II
- Mounting category: II / III
- Mounting condition: 35mm DIN rail, the inclination between the installation surface and the vertical surface shall not exceed  $\pm 5^{\circ}$ .

## Ordering Information

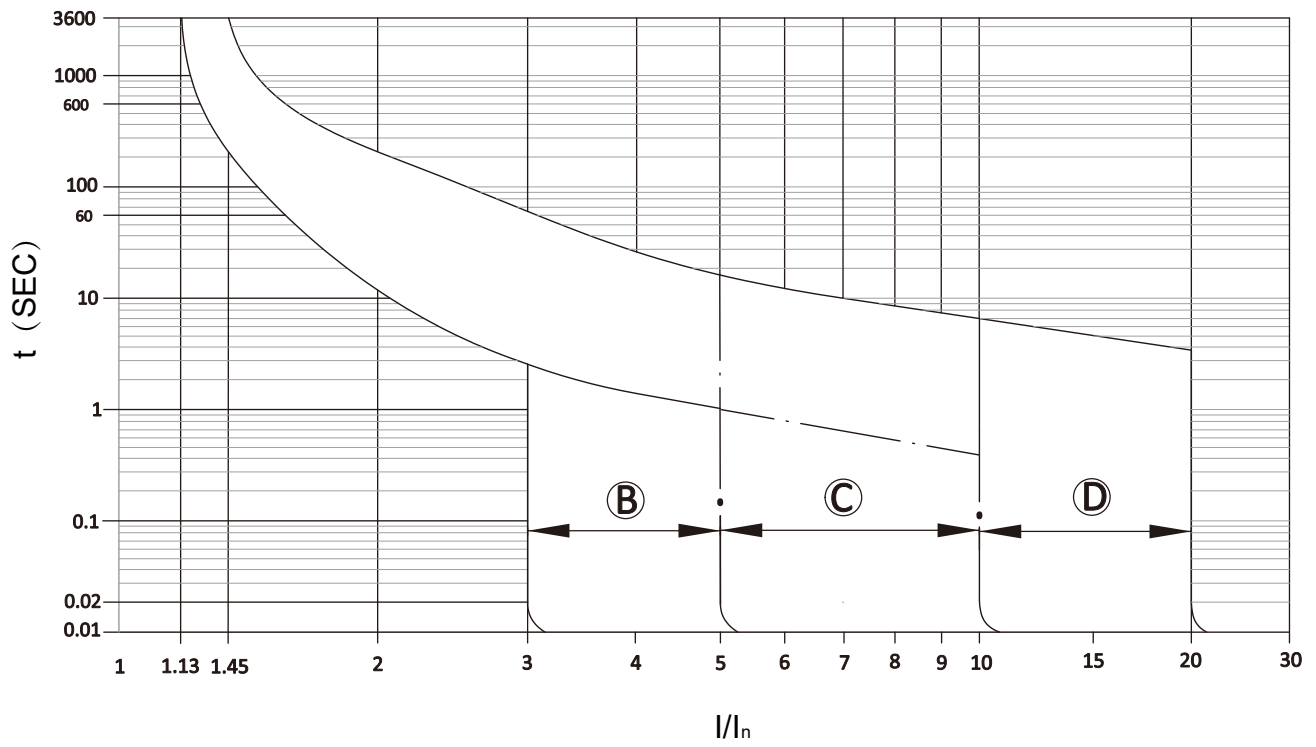
	UE	B	6	- 40	M	/C	06	1N
Enterprise Code: HESC								
Product code: MCB								
Design serial number: 6								
Max rated current: 40A								
Breaking capacity: L, M								
Instantaneous tripping characteristics: B: $3I_n \dots 5I_n$ ; C: $5I_n \dots 10I_n$ ; D: $10I_n \dots 20I_n$								
Rated current:								
06:6A 10:10A 16:16A 20:20A 25:25A 32:32A 40:40A								
Number of poles: 1N: 1P+N								

## Main Technical Parameter

<b>Electrical Characteristics</b>	
Number of poles	1P+N
Instantaneous tripping characteristics	B: 3In... 5In; C: 5In... 10In; D: 10In... 20In
Short-circuit breaking capacity KA	UEB6-40L: Icn=Ics=4.5 UEB6-40M: Icn=Ics=6
Rated current In A	6、10、16、20、25、32、40
Rated voltage Ue V/AC	230
Rated insulation voltage V	500
Rated impulse withstand voltage Uimp kV	4
Power frequency withstand voltage kV	2
<b>Mechanical Characteristics</b>	
Mechanical endurance (cycles)	20000
Electrical endurance (cycles)	10000
Protection degree	IP20
Contact position indication	OFF = Green ON = Red
Reference ambient temperature °C	30°C
Damp heat resistance (GB/T2423.4)	28 cycles (55°C/90%-96% RH,25°C/95%-100% RH)
Mechanical shock resistance (GB/T2423.5)	150m/s <sup>2</sup> , lasting for 11 ms and a half wave, with a total of 18 shocks
Vibration resistance (GB/T2423.10)	25 Hz...150Hz,50m/s <sup>2</sup> ,90min. 35Hz,60m/s <sup>2</sup> ,45min
<b>Other Characteristics</b>	
Weight g	105
Packaging mm	Master carton size 520×313×177
Wiring	UP incoming

## Characteristic Curve

Tripping characteristic B, C, D

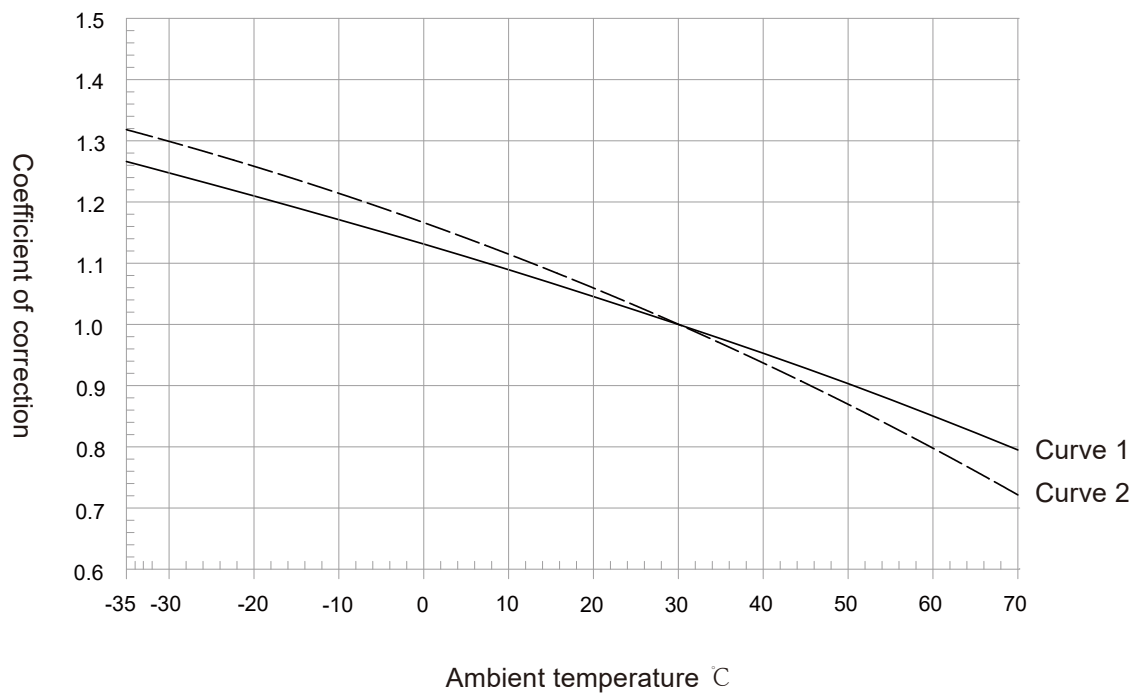


## Derating Coefficient

### Temperature Compensation

Under different temperature conditions, the supplementary coefficient corresponding to overload tripping and current should not exceed the rated value of the equipment under normal circumstances

Curve type corresponding the coefficient							
Rated current (A)	06	10	16	20	25	32	40
Curve type	1	1	2	2	2	2	2



### Frequency Coefficient

Thermal tripping: unchanged

Electromagnetic tripping: Multiply the corresponding value by the frequency coefficient K.

F (Hz)	16Hz ~ 60Hz	100 Hz	200 Hz	300 Hz	400 Hz
K	1	1.1	1.2	1.4	1.5

## Derating Coefficient In High Altitude Area

Altitude (m)	2000	3000	4000	5000
Rated current $I_n$	1	0.97	0.91	0.86
Rated insulation voltage $U_i$	1	0.90	0.82	0.76
Power-frequency withstand voltage	1	0.90	0.82	0.76
Rated impulse withstand voltage $U_{imp}$	1	0.90	0.82	0.76
Rated breaking capacity $I_{cn}$	1	0.87	0.77	0.67
Electrical endurance	1	0.87	0.77	0.67

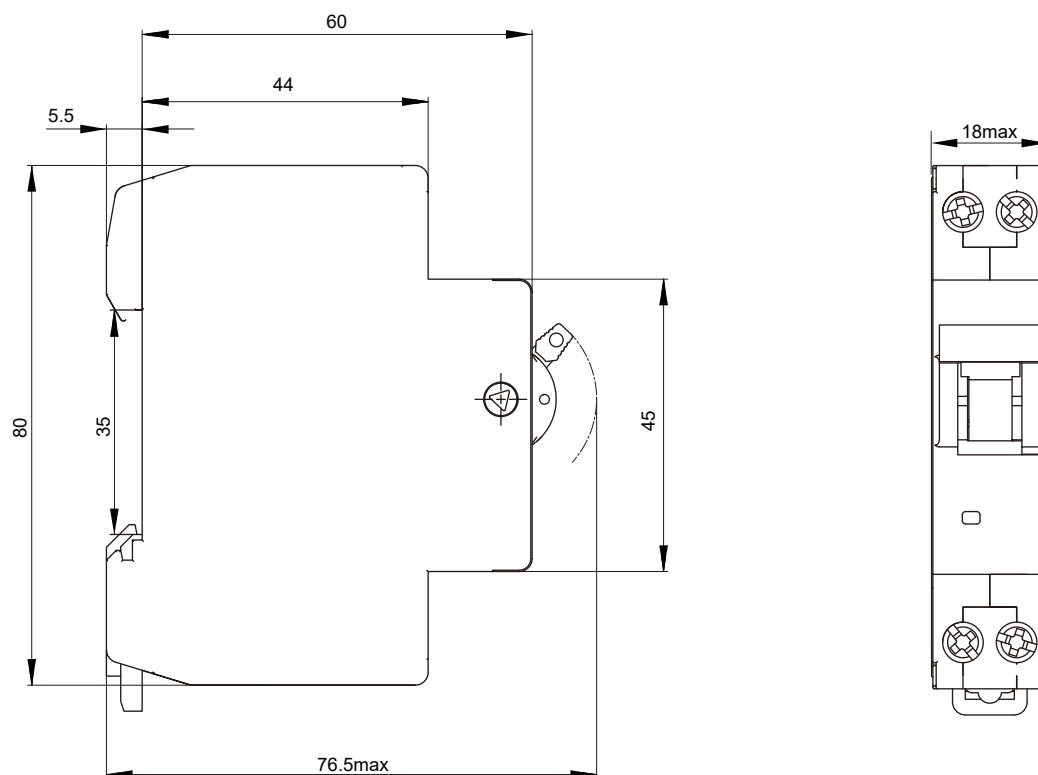
## Wiring Capability

Press wiring ,connection to 0.75mm<sup>2</sup>...16mm<sup>2</sup> wire.

Terminal screw specification	Rated torque	EN/IEC standard torque	Solid/Rigid wire	Flexible/Stranded copper wire
M4	1.2N·m	1.2N·m	0.75mm <sup>2</sup> ...16mm <sup>2</sup>	0.75mm <sup>2</sup> ...16mm <sup>2</sup>

## Dimensions

Unit: mm



Note: For width dimensions, the unmarked tolerance is  $\pm 0.4$ , for other dimensions, the unmarked tolerance is  $\pm 1$ .



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