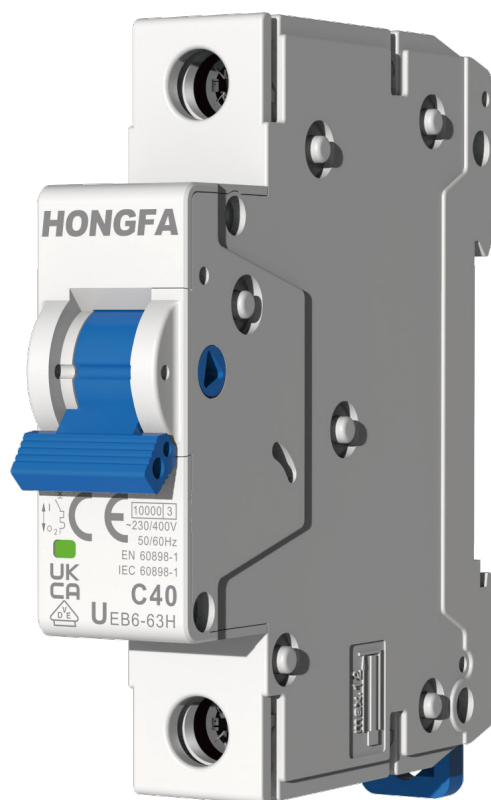


# Miniature Circuit Breaker

## UEB6-63 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 Enel, GE, Honeywell, Carrier, Trane, Johnson Controls, Danfoss, State Grid, China Southern Power Grid, CRRC, China Mobile, China Unicom, etc.



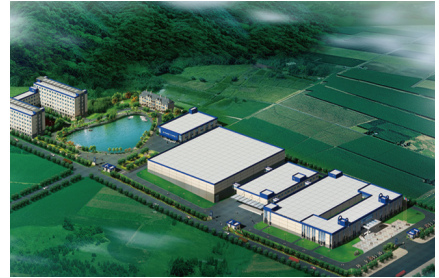
Sunban Industrial Park



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, electro-magnetic 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

UEB6-63 miniature circuit breaker is mainly used in the circuit of rated voltage 230V/400V, with up to rated operational current 63A. Its purpose is to protect the circuit and electric installation from over current, short circuit and insulation function, and can be used for infrequent on/off operations.

M series (smart metering): short-circuit protection, overload resetting current protection, overvoltage and under-voltage auto reclosing, electric parameter metering, remote control, fault analysis, fault alarm, fault recording, RS485 communication and other functions.

### 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

- Can accept wiring torques higher than national standards, making connections more reliable
- Integrated bi-metal mechanism design and innovative calibration process with reliable overload protection

#### Convenient installation

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



#### High electrical performance

- Excellent current limiting performance, with the current limiting level reaching the standard level 3
- Electrical endurance: 10,000 cycles
- Breaking capacity: 10,000A
- Equipped with overload and short circuit protection

### Product Appearance



## Standard

<b>CB</b>	CB	IEC 60898-1	UEB6-63 series
	CCC	GB/T 10963.1	UEB6-63 series
<b>CE</b>	CE	EN 60898-1	UEB6-63 series
<b>UK CA</b>	UKCA	BS EN60898-1	UEB6-63 series
	VDE	EN 60898-1	Only applicable for UEB6-63L/M (6...63A)

## Standard Operation And Installation Conditions

- Operation temperature: -35°C ...+70°C
- Storage temperature: -40°C ...+85°C
- Altitude:< 2,000m
- Pollution degree: II
- Mounting category: II / III .
- Mounting condition: Install on 35mm DIN rail,the inclination between the mounting and the vertical surfaces not exceed  $\pm 5^\circ$

## Ordering Information

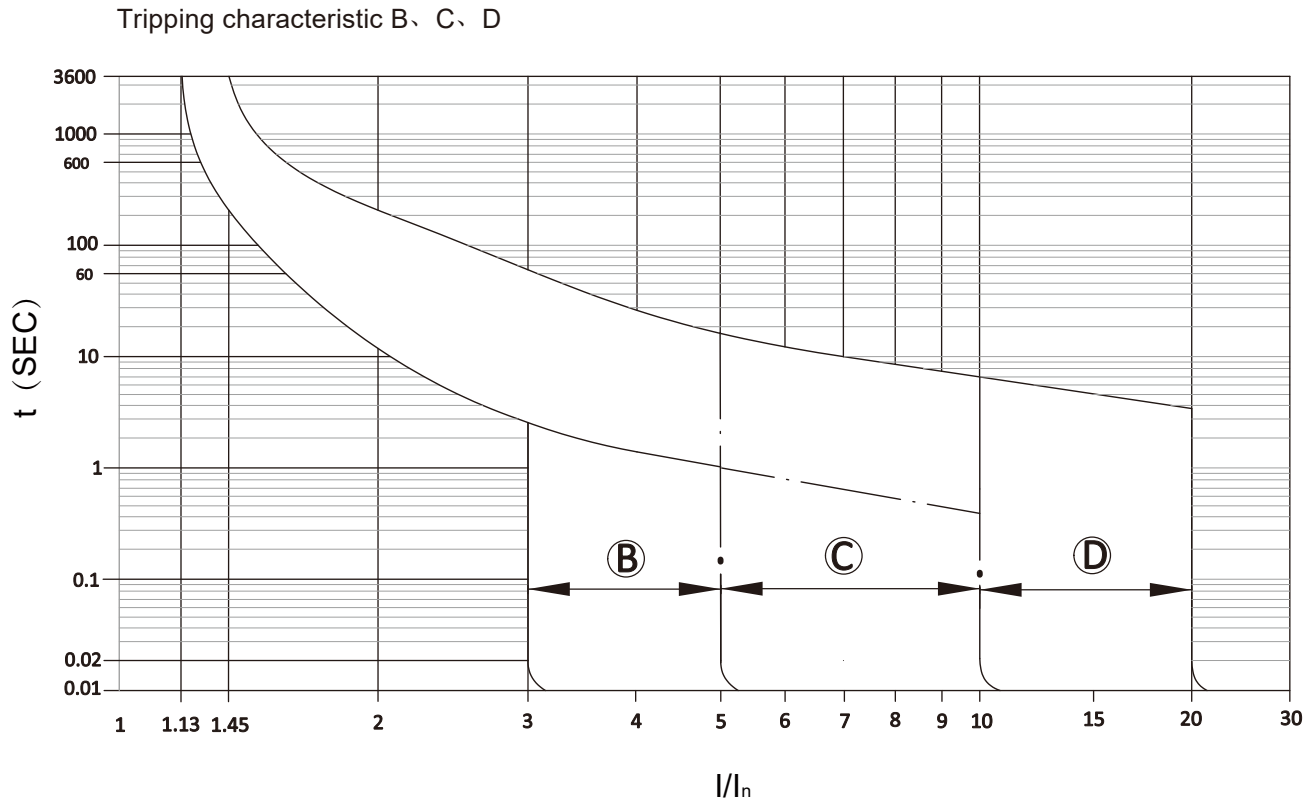
	<b>UE</b>	<b>B</b>	<b>6</b>	<b>- 63</b>	<b>M</b>	<b>/C</b>	<b>06</b>	<b>1N</b>
<b>Company:</b>	Hongfa Electrical Safety & Controls Co., Ltd.							
<b>Product:</b>	Miniature Circuit Breaker Series							
<b>Design sequence:</b>	6							
<b>Frame size:</b>	63: 63A							
<b>Breaking capacity:</b>	L: 4,500A M: 6,000A H: 10,000A							
<b>Instantaneous tripping characteristics:</b>	B: 3In...5In; C: 5In...10In; D:10In...20In							
<b>Rated current:</b>	01: 1A; 02: 2A; 03: 3A; 04: 4A; 06: 6A; 10: 10A; 13: 13A; 15: 15A; 16: 16A; 20: 20A; 25: 25A; 32: 32A; 40: 40A; 50: 50A; 63: 63A							
<b>Number of poles:</b>	1: 1P; 1N: 1P+N; 2: 2P; 3: 3P; 3N: 3P+N; 4: 4P							

Note: When the breaking capacity of 1A...4A breaker is L type, only B and C type instantaneous tripping characteristics are available

## Main Technical Data

Electrical Characteristics		
Number of poles		1P, 1P+N, 2P, 3P, 3P+N, 4P
Instantaneous tripping characteristics		B: 3I <sub>n</sub> ...5I <sub>n</sub> ; C: 5I <sub>n</sub> ...10I <sub>n</sub> ; D: 10I <sub>n</sub> ...20I <sub>n</sub>
Breaking capacity	kA	UEB6-63L : I <sub>cn</sub> =I <sub>cs</sub> =4.5 UEB6-63M: I <sub>cn</sub> =I <sub>cs</sub> =6 UEB6-63H: I <sub>cn</sub> =10, I <sub>cs</sub> =7.5
Rated current I <sub>n</sub>	A	1, 2, 3, 4, 6, 10, 13, 15, 16, 20, 25, 32, 40, 50, 63
Rated voltage U <sub>e</sub>	V/AC	230/400 (1P); 230 (1P+N); 400 (2P/3P/3P+N/4P)
Rated operating frequency	Hz	50/60
Rated insulation voltage U <sub>i</sub>	V	500
Rated impulse withstand voltage U <sub>imp</sub>	kV	4
Power frequency withstand voltage	kV	2
Mechanical Characteristics		
Mechanical endurance	cycles	20000
Electrical endurance	cycles	10000
Protection degree		IP20
Contact indicator		OFF = Green ON = Red
Reference ambient temperature	°C	30
Damp & heat resistance (GB/T 2423.4)		28 cycles (55°C/90%-96% RH, 25°C/95%-100% RH)
Resistance to mechanical impact (GB/T 2423.5)		150 m/s <sup>2</sup> , lasting for 11 ms with a half wave, for 18 impacts
Anti-vibration (GB/T 2423.10)		25...150Hz, 50 m/s <sup>2</sup> , 90mins in total 35Hz, 60 m/s <sup>2</sup> , 45mins in total
Others		
Weight (g)	1P	94.5
	1P+N	208
	2P	210.5
	3P	281.5
	3P+N	378.5
	4P	420.5
Product packaging		Carton 430mm×290mm×260mm
Wiring method		Upper line in

## Characteristic Curve

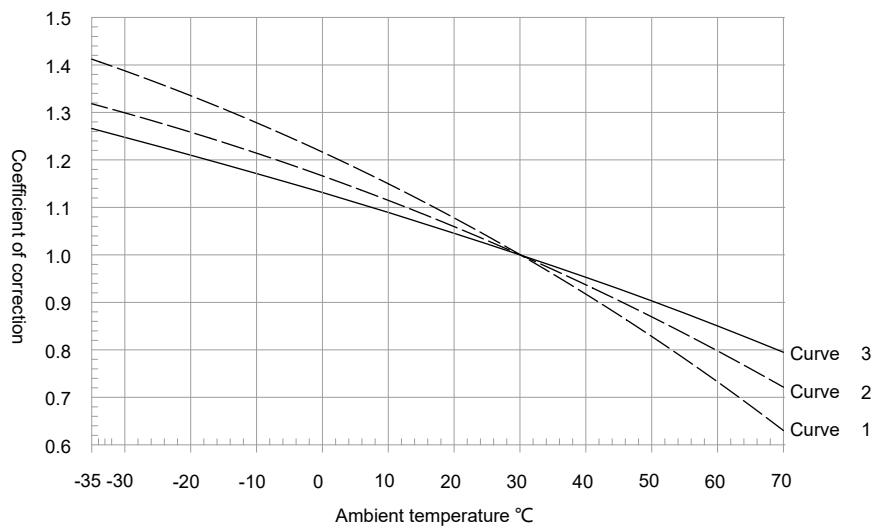


# Derating Coefficient

## Temperature Compensation Coefficient

At different ambient temperature, the rated value of the equipment normally should not exceed the corresponding supplement coefficient of the overload tripping current.

The curve of the correction coefficient															
Rated current (A)	01	02	03	04	06	10	13	15	16	20	25	32	40	50	63
B	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3
C	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3
D	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3



## Frequency Coefficient

Thermal tripping: unchanged

Electromagnetic trip: Multiply the corresponding value by the frequency factor 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)	2,000	3,000	4,000	5,000
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 (cycles)	1	0.87	0.77	0.67

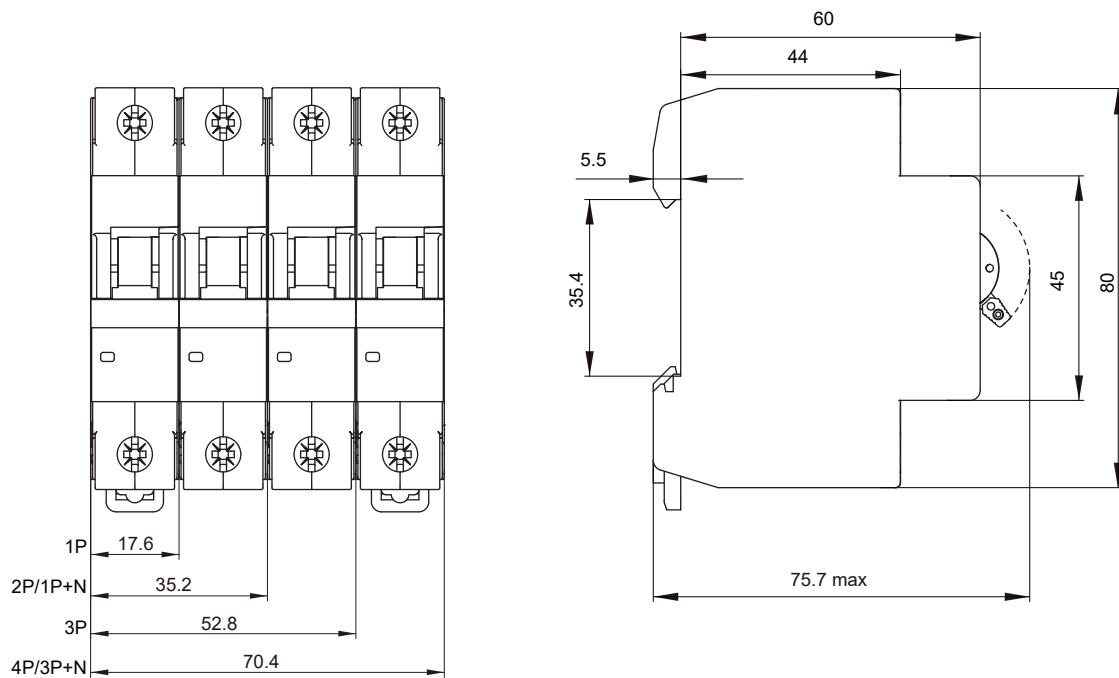
## Wiring Capability

Press wiring connection to 0.75mm<sup>2</sup> ... 35mm<sup>2</sup> wire.

Terminal screw specification	Rated torque	IEC standard torque	Solid wire	Stranded copper wire
M5	2.0N·m	2.0N·m	0.75mm <sup>2</sup> ...35mm <sup>2</sup>	0.75mm <sup>2</sup> ...25mm <sup>2</sup>

## Dimensions

Unit: mm



Note: The tolerance for width is  $\pm 0.4$  (1P/1PN/2P),  $\pm 0.8$  (3P/3PN/4P), and the remaining tolerance is  $\pm 1$

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