

# Smart miniature circuit breaker

UEZ3-125 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.



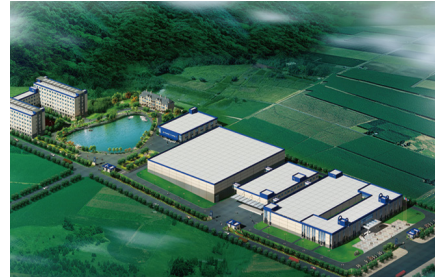
Sunban Industrial Park



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.

# CONTENT

## UEZ3-125 series

### Smart miniature circuit breaker

#### 01

Product Overview 05

---

#### 02

Standard Operation and Installation Conditions 06

---

#### 03

Ordering Information 07

---

#### 04

Main Technical Data 08

---

#### 05

Tripping Characteristic 09

---

#### 06

Derating coefficients 09

---

#### 07

Wiring Capability 09

---

#### 08

Overall Dimensions 10



## UEZ3-125 smart breaker overview

### Scope of Application

UEZ3-125 smart breakers are integrated and independently developed products to achieve smart control and Internet of Things applications. They are a new type of product composed of sensors, microelectronics, computers, and communication technology on the basis of traditional circuit breakers. In addition to traditional overload and short circuit protection functions, the product also has remote control, electrical parameter measurement, overvoltage/undervoltage auto reclosing, fault analysis, fault alarm, RS485 communication, etc. They are suitable for AC 50Hz, rated operational voltage 230V/400V, rated operational current up to 100 A. It is widely used in smart power distribution, video monitoring, communication base stations, data centers, charging piles, smart homes, fire protection, security, and other places.

### Product characteristics

**Multiple functions** With multiple functions such as overload protection, short circuit protection, remote control, electrical parameter measurement, overvoltage/undervoltage auto reclosing, fault analysis, fault alarm, and RS485 communication

**Compact size** The high combination of mechanical releases, contact systems, arc extinguishing devices, DC motors, speed reduction mechanisms, sensors, and electronic components makes the product compact in structure and concise in appearance.

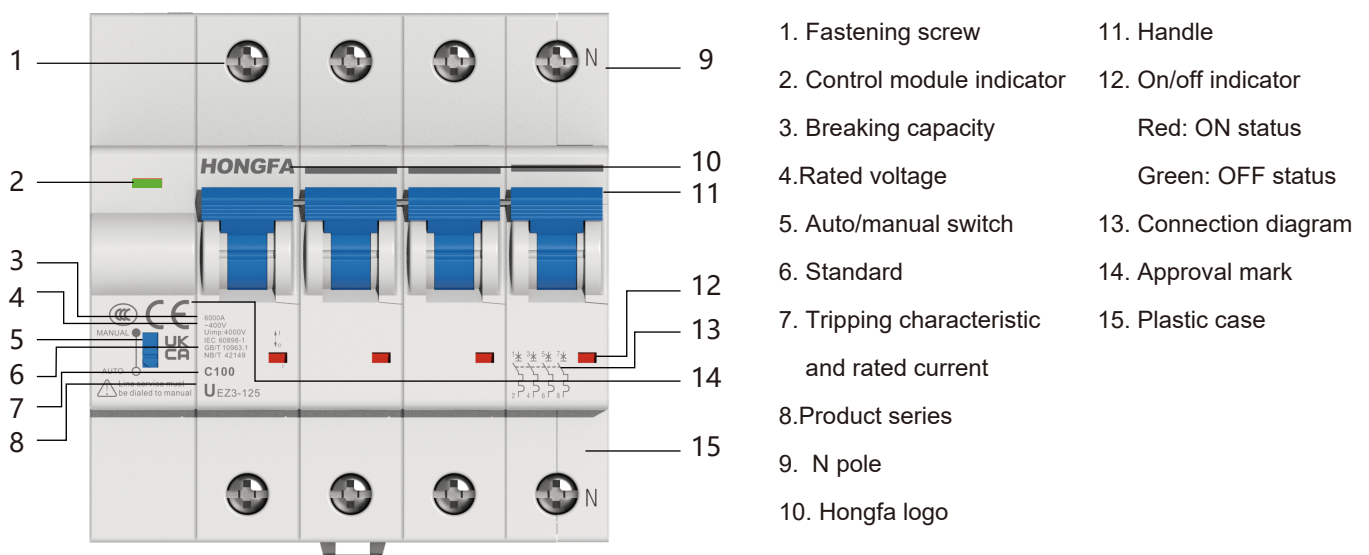
**Safety** Overload protection can be set and refined protection; short circuit protection adopts mechanical protection, with fast action and high breaking capacity.

**Intelligentization** Edge computing strategy, local processing protection; remote multiple type information collection and multiple scheme control to meet the needs of the Internet of Things

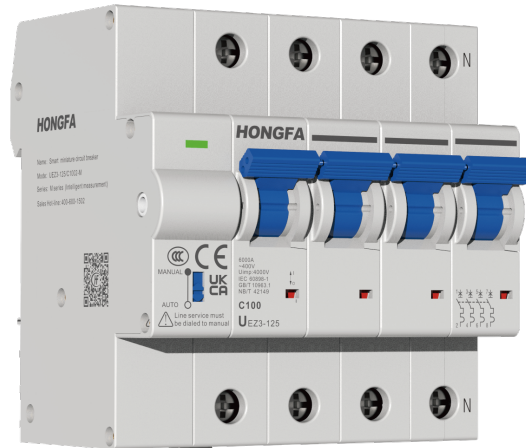
**High reliability** The operating mechanism uses efficient and reliable DC motors to provide stable power for opening and closing. The positioning system uses high-precision detection switches, which provide accurate positioning and strong anti-interference ability. The circuit board adopts anti-interference design to meet EMC requirements

**Easy installation** Adopt a modular design for MCB, which can be installed on a standard 35mm DIN rail; The control power supply and RS485 communication are connected with quick plug-in terminals, and there are various communication cable accessories available for selection.

### Product Structure Diagram



## Product appearance



## Standard

CCC	CCC	GB/T 10963.1
CB	CB	IEC 60898-1
UKCA	UKCA	IEC 60898-1
CE	CE	IEC 60898-1

## Standard Operation and Installation Conditions

- Operating temperature range: - 25 °C...+70 °C (monthly average temperature ≤ 35 °C)
- Storage temperature range: - 40 °C...+80 °C
- Relative humidity: annual average: <75%; 30 days (these days are naturally distributed throughout the year): 95%; accidental occurrence on other days: 85%
- Altitude: not exceeding 2000m
- Pollution degree: 2
- Installation category: II/III
- Installation conditions: 35mm standard DIN rail installation; No more than 5 times the geomagnetic field in any direction

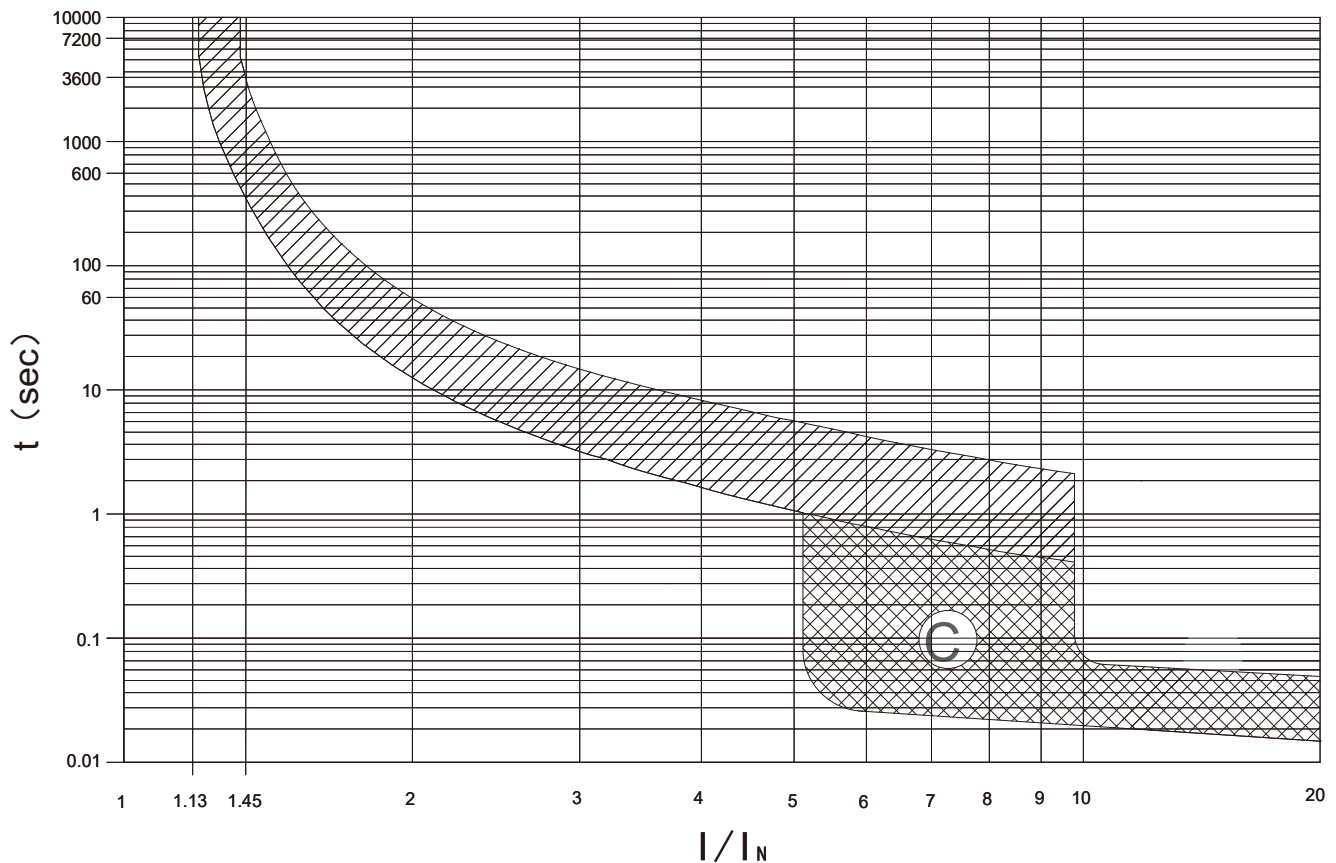
## Ordering Information

	UE	Z	3	-125	/C	100	4	-M
<b>Company code:</b>	UE: Xiamen Hongfa Electrical Safety & Controls Co., Ltd.							
<b>Product code</b>	Z: Smart breaker							
<b>Design serial number</b>								
<b>Frame size:</b>	125: 125A							
<b>Breaking capacity:</b>	Omitted: 6kA							
<b>Tripping curve:</b>	C: 5In~10In							
<b>Rated current:</b>	63A、80A、100A							
<b>No. of poles:</b>	2: 2P, 3: 3P(only used in three-phase three wire systems), 4: 4P							
<b>Type:</b>	M smart measurement							

## Main Technical Data

Part number	UEZ3-125				
NO. of poles	2P, 3P(only used in three-phase three wire systems), 4P				
Tripping curve	C: 5In...15In				
Breaking capacity	Icn=Ics=6kA				
Rated current In	63A, 80A, 100A				
Rated voltage Ue	230VAC (2P), 400VAC (3P/4P)				
Rated insulation and withstand voltage Ui	500V				
Rated impulse withstand voltage Uimp	4kV				
Auto closing time	Tc≤3s				
Auto breaking time	Td≤2s				
Mechanical endurance	10000				
Electrical endurance	6000 (In=63A); 4000 (In=80A, 100A) (power factor 0.85...0.9)				
IP degree	IP20				
Functions	Power Supply	External power supply	2P DC12V	3P DC12V	4P DC12V
	Protection functions	Short circuit protection	Type C	Type C	Type C
		Overload protection	√	√	√
		Overload setting current protection	√	√	√
		Over-voltage and under-voltage auto reclosing	√		√
	Local reclosing function (default off)		√	√	√
	Control function	Remote control function	√	√	√
	Metering functions	Current metering	√	√	√
		Voltage measurement (power, electricity)	√	√(conjunction)	√
	Alarm, fault analysis, fault record		√	√	√
	Timing		√	√	√
	Cost control function		√		√
	Communication function	RS485	√	√	√
	Indication function		Closing indication: the indicator is in green; Opening indication: the indicator is in red; Fault indication: The indicator flashes in red; Fault waiting for closing: the indicator flashes in green; Manual state: the indicator flashes alternately in red and green.		
	Weight (g)	2P		329	
3P		455			
4P		600			
Packaging information	Carton: 405mm×223mm×248mm				
Incoming line	Upper incoming				

## Tripping Characteristic



## Derating coefficients

### Derating Coefficient in High Altitude Area

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

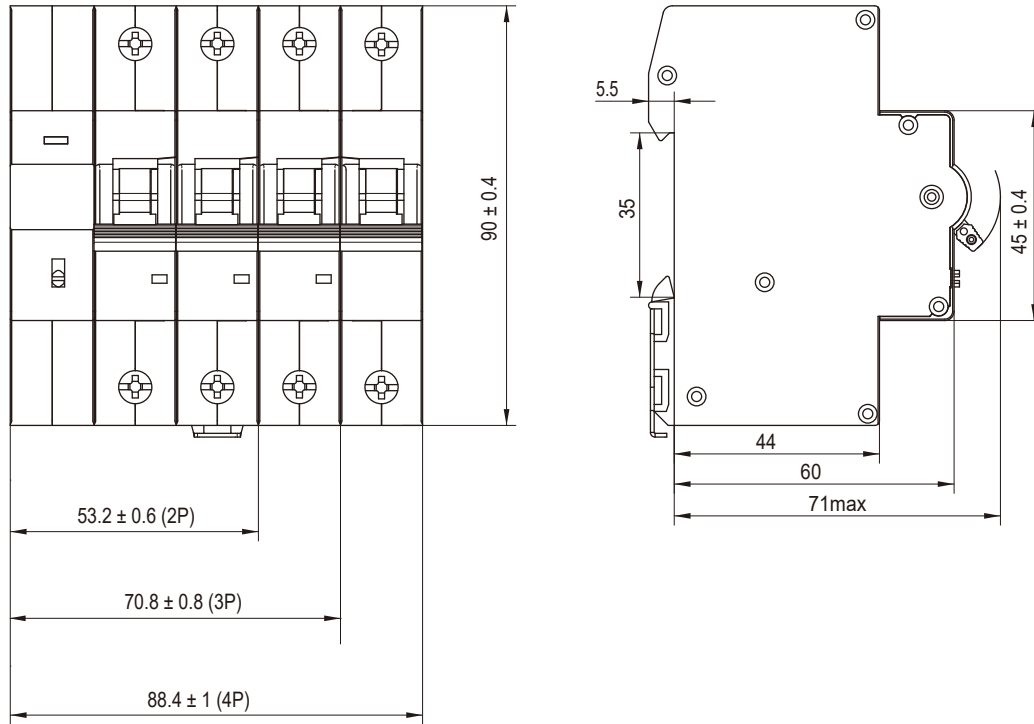
## Wiring Capability

Terminal Screw Specifications	Rated torque	Max torque	IEC standard torque	Rigid (solid or stranded) copper wire	Standard soft copper wire
M7	3.5N.m	4.5N.m	3.5N.m	1.0mm <sup>2</sup> ~ 35mm <sup>2</sup>	1.0mm <sup>2</sup> ~ 25mm <sup>2</sup>

Screw clamp terminals, and wires of 1.0mm<sup>2</sup> ~ 35mm<sup>2</sup> can be connected.

## Overall Dimensions

Unit: mm





如需了解更多信息,请查询我们的网址:

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