

DC smart miniature circuit breaker

UEZ3D-125



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.



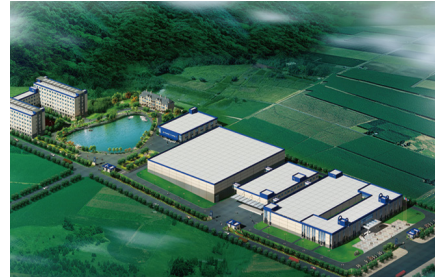
Sunban Industrial Park



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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UEZ3D-125

DC smart circuit breaker

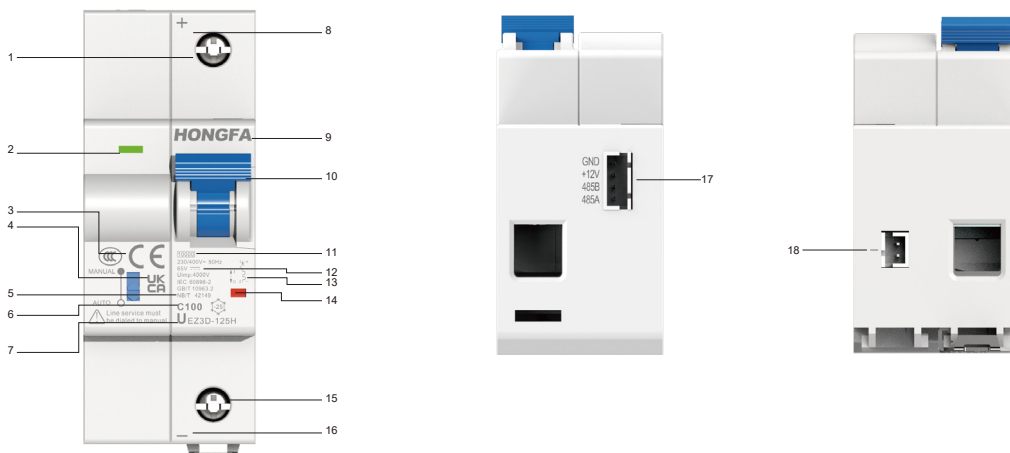
Scope of Application

UEZ3D-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 65Vd.c., rated operational current up to 100 A. It is widely used in various occasions such as 5G base stations, DC power distribution systems, etc.

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



- | | | | | |
|-----------------------------|------------------------------|--------------------------------------|--|-------------|
| 1. Tightening screw | 2. Control modular indicator | 3. CCC/CE/UKCA | 4. Manual/auto switch | 5. Standard |
| 6. Tripping curve and rated | 7. Series code | 8. + pole mark | 9. Brand | 10. Handle |
| 11. Breaking capacity | 12. Rated voltage | 13. Wiring diagram | 14. Open/closed indicatio (Red: ON /green: OFF) | |
| 15. Housing | 16. - pole mark | 17. Power and communication terminal | 18. - pole terminal | |

Product appearance



Standard

CCC	CCC	GB/T 10963.1, GB/T 10963.2
CB	CB	IEC 60898-1, IEC 60898-2
UKCA	UKCA	IEC 60898-1, IEC 60898-2
CE	CE	IEC 60898-1, IEC 60898-2

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; The inclination between the installation surface and the vertical surface shall not exceed $\pm 5^\circ$; No more than 5 times the geomagnetic field in any direction

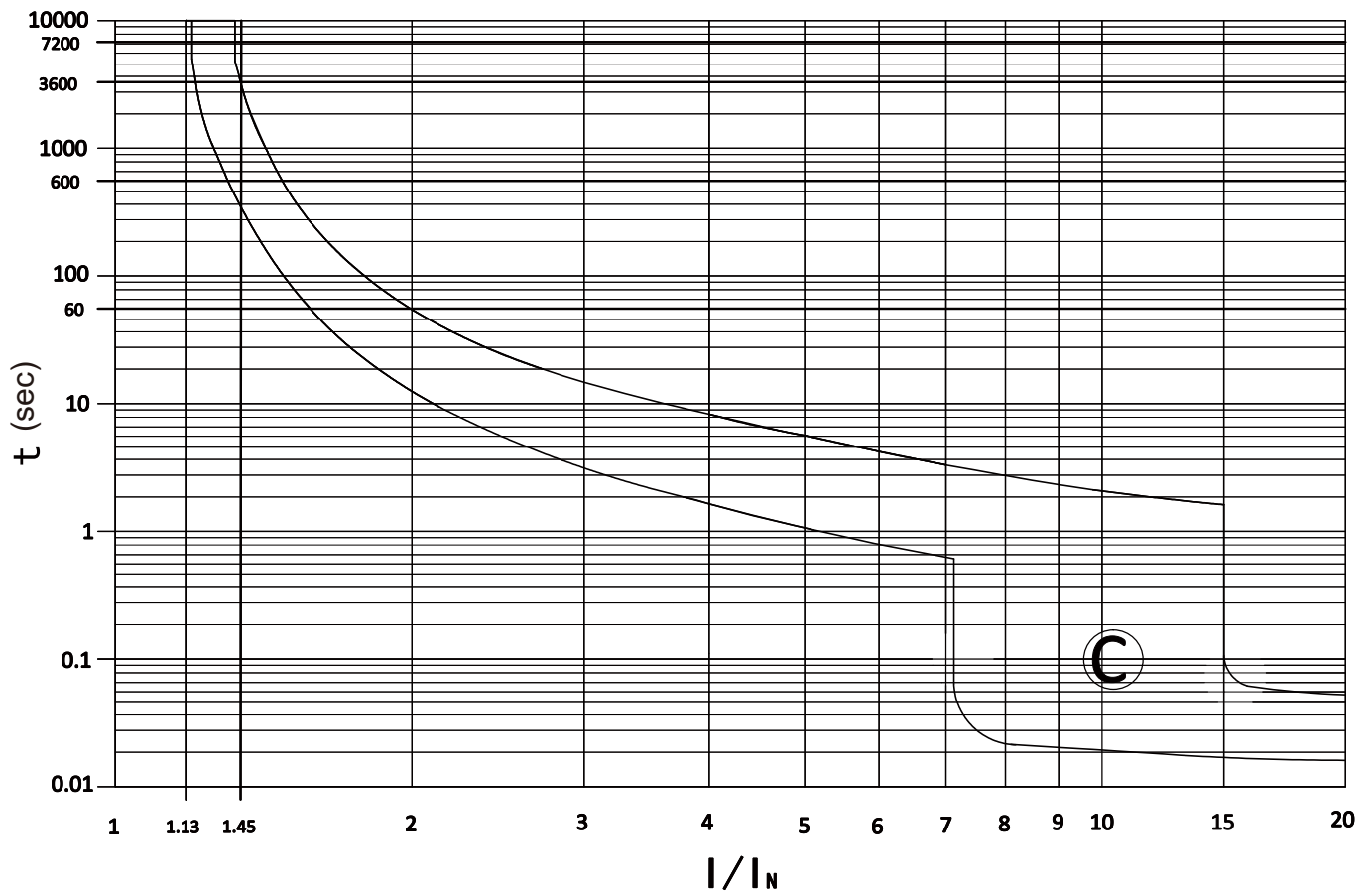
Ordering Information

	UE	Z	3	D	-125	H	/C	63	1	-M	-N
Company code:	Xiamen Hongfa Electrical Safety & Controls Co., Ltd.										
Product code:	Z: Smart breaker										
Design serial number:	3										
Derivative code:	D: DC										
Frame size:	125: 125A										
Breaking capacity:	H: 10kA										
Tripping curve:	C: 7In...15In										
Rated current:	6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A, 80A, 100A										
Number of poles:	1: 1P										
Type:	M: smart measurement										
External wiring for electricity metering:	N: External negative electrode										

Technical parameter

Part number	UEZ3D-125
NO. of poles	1P
Power Supply	external power supply DC12V
Tripping curve	C: 7In...15In
Breaking capacity	Icn=10kA; Ics=7.5kA
Rated current In	6A、10A、16A、20A、25A、32A、40A、50A、63A、80A、100A
Rated voltage Ue	65Vd.c.
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=6A...63A); 4000 (In=80A, 100A)
IP degree	IP20
Alarm	overload, overvoltage, under-voltage
Protection Functions	short circuit protection, overload protection, overload setting current protection, over-voltage protection, under voltage protection
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.
Information collection	current, voltage, power, quantity of electricity
Fault information	can record 10 entries
Communication function	RS485
Additional function	timing
	cost control function
	life monitoring
Weight (g)	193
Packaging information	Carton: 405mm×223mm×248mm
Incoming line	Upper incoming (with overvoltage and undervoltage protection function, no self- recovery function) Lower incoming (with overvoltage and undervoltage protection and self recovery function)

Tripping Characteristic



Derating coefficient

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

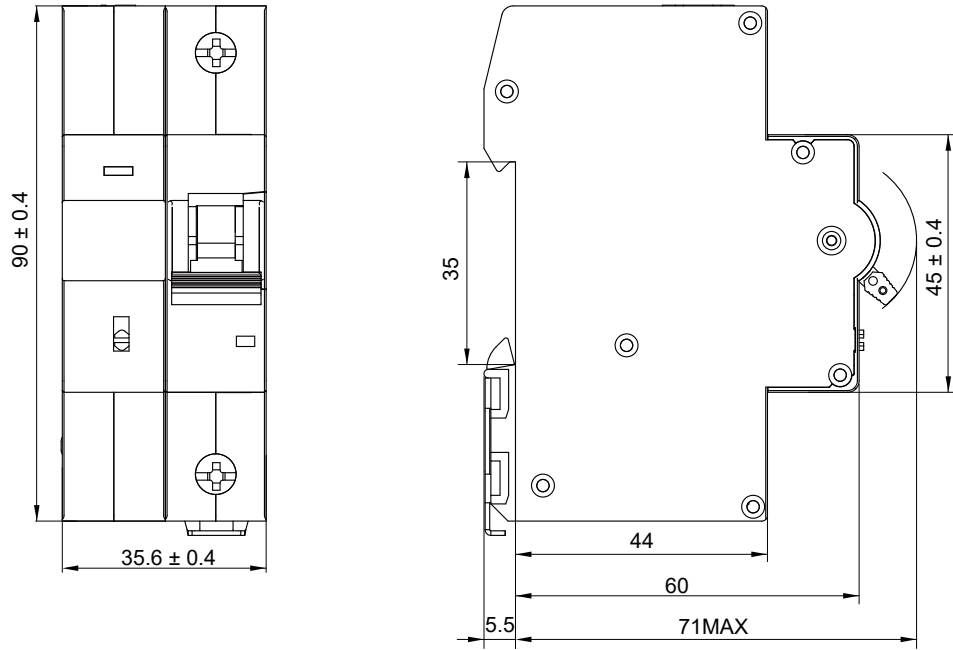
Wiring Capability

Clamped type, capable 1.0 mm²~35 mm²

Screw specification	Rated torque	iL mit torque	Standard torque	Rigid cable (Solid or stranded)	Flexible cable
M7	3.5N·m	4.5N·m	3.5N·m	1.0mm ² ~ 35mm ²	1.0mm ² ~ 25mm ²

Overall Dimensions

Unit: mm





Learn more information, please visit our website

www.hongfa.com



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