

Molded Case Switch Disconnect

UEM1EG-320



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.



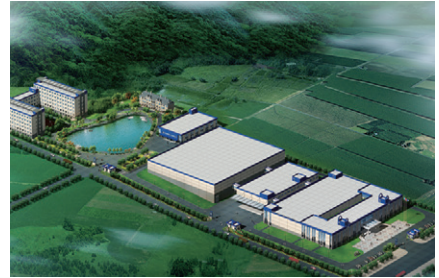
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Donglin Industrial Park



Haicang Industrial Park



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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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UEM1EG-320 MOLDED CASE SWITCH DISCONNECTOR

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Production overview

Scope of Application

UEM1EG-320 DC Molded Case Switch Disconnectors are suitable for distribution circuits with a maximum rated operational voltage of DC1500V and a rated operating current of 200A to 320A. They can be used in new energy, DC energy storage, electric power system, rail transit and electric trolley and other DC distribution systems. They can be equipped with shunt release, auxiliary contact, manual operation mechanism and other accessories.


Product Features

- **Small size:** With a new structural layout, small sized.
- **Low temperature rise:** No derating needed for ambient temperature up to 60 °C.
- **Easy Wiring:** Non-polarized and easy for mounting.

Appearance



Standards

	UL	UL489SC
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Standard Operation and Installation Conditions

Operating temperatur

- Operating environment temperature: -40 °C to +85 °C

(Derating should be considered for temperature higher than 60 °C and uprating can be considered for temperature lower than 40 °C)

- Storage temperature range: -40 °C to +80 °C

- Relative Humidity: 5% to 85%

- Storage: The switch disconnecter is stored in a box

- Storage period: less than 18 months

- If it exceeds the storage period: open the packaging to observe the oxidation condition of the wiring terminals. If the wiring terminals are not oxidized, operate the switch disconnecter for 10 cycles to test whether the incoming and outgoing terminals can conduct. If the wiring terminal is seriously oxidized, do not use it.

- Pollution degree: 3; pollution degree of accessories installed in the switch disconnecter: 2

- Protection degree: IP20

- Installation category: The main circuit of the switch disconnecter is III, and the auxiliary and control circuit is II.

- Installation conditions: The switch disconnecter can be installed vertically or horizontally. The wiring can be upper incoming and lower outgoing, and also upper outgoing and lower incoming. The external magnetic field of the installation place should not exceed 5 times the geomagnetic field in any direction.

- The performance of the switch disconnecter is not affected by the altitude within 2000 meters.

- For above 2000m, the composition, insulation properties, cooling properties and pressure of the atmosphere change with the increase of the altitude. At this time, the performance of the switch disconnecter will be reduced, mainly in some major parameters, such as the maximum operational voltage and rated operating current and dielectric strength.

Technical Parameters

Ordering Information

	UE	M	1E	G	- 320	/320	-2	00	0	-Z4
Manufacturer code: Hongfa										
Product code: Molded case type										
Design code: New energy industry										
Product code: Switch disconnecter										
Frame rating: 320										
Rated current: 200:200A; 250:250A; 275:275A; 300:300A; 320:320A										
Number of poles: 2P										
Internal accessory code: 00: No accessory; 20: Auxiliary contact; 10: Shunt release; 40: Auxiliary contact+ Shunt release;										
Internal accessory voltage 0: No voltage 1: AC220V; 2: AC380V; 3: DC24V; 4: DC110V; 5: DC220V; Note: No voltage requirement indicates that the product is not equipped with a shuntrelease										
Mode of operation mechanism: Blank:without manual operating mechanism Circular manual handle Z4: SC2-Y type (The long handle is used by default) Square manual handle Z3: SC2-F type (The long handle is used by default)										

Example:

UEM1EG-320/320-2000-Z4: Switch disconnecter model UEM1EG, frame rating: 320, high voltage, rated current 320A, 2P, no accessories, no voltage requirement for internal accessories, SC2-Y circular manual handle

Technical Parameters

Accessory type list

	SHT1	-400	R	Y	/AC220V
Accessory model: Shunt release: SHT1 Auxiliary contact: AX1					
Frame size: 400A					
Installation position: R: Right side					
Wiring: Y: Lead type					
Shunt release operational voltage: AC220V; AC380V; DC24V; DC110V; DC220V					

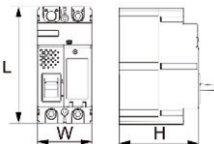
Accessory type example:

- SHT1-400RY/AC220V: 400A frame size, shunt release installed on the right, lead type, operational voltage AC220V
- AX1-400RY: 400A frame, auxiliary contact installed on the right, lead type

Internal Accessory			External Accessory		
Shunt release	SHT1		Manual operating mechanism	SC2-Y	Essentric type, circular handle
Auxiliary contact	AX1	1 Auxiliary		SC2-F	Essentric type, square handle

Technical Parameters

Main technical parameters (UEM1EG-320 molded case switch disconnecter)

Frame rating (A)	320	
Rated current I_n (A)	200, 250, 275, 300, 320	
Number of poles	2	
Rated insulation voltage U_i (V)	1500	
Rated operating voltage U_e (Vd.c.)	1500	
Frequency withstand voltage U (Vd.c.)	3820	
Rated impulse withstand voltage U_{imp} (kV)	12	
Pollution degree	3	
Rated short-time withstand current I_{cw} (kA)	5/0.05s	
Electrical durability (cycle)	1000(200), 400(250 and more)	
Mechanical durability (cycle)	1000(200), 400(250 and more)	
Overall dimension (mm)	Length	205
	Width	96
	Height	135
		
Accessories	Shunt release	√
	Auxiliary contact	√
	Manual operating handle	√
Weight (kg)	3.8	

Technical Parameters

Accessory code



Code	Accessories	Install Position
00	No accessory	—
20	Auxiliary contact	
10	Shunt release	
40	Auxiliary contact / Shunt release	

Connecting wire requirement

The cross-sectional area of the connecting wire and the corresponding rated current are shown in the following table

Rated current (A)	200	250	275	300	320
UL conductor selection (AWG or kcmil)	3/0	250	300	350	400
Wire cross-sectional area (mm ²)	85	127	152	177	203

Derating factor

Derating factor of the ambient temperature

Ambient temperature	+40°C	+45°C	+50°C	+60°C	+70°C	+85°C
Operational current correction factor	1	1	1	1	0.9	0.8

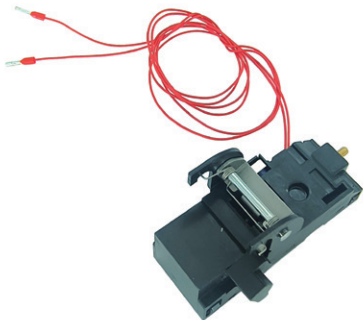
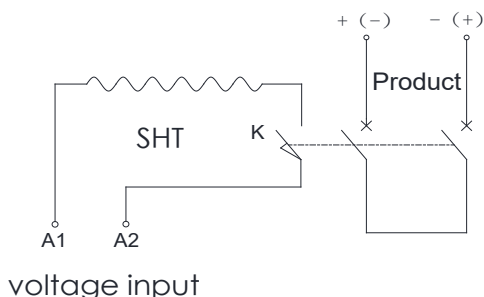
Altitude (m)	2000	2500	3000	3500	4000	5000
Operational current correction factor	1	0.988	0.973	0.954	0.933	0.886
Operational voltage correction factor	1	1	1	1	1	1
Power frequency withstand voltage correction factor	1	1	1	1	1	1

Accessories and functions

Internal accessories

Shunt release

- Shunt release is used to remotely control the opening of the switch disconnecter.
- When the external voltage of the shunt release is 70% to 110% of the rated control voltage of the shunt release, the shunt release should reliably make the switch disconnecter trip.

Appearance	Wiring diagram
	

Voltage (V)	Duration of power on (ms)	Power (W)	Time from being energized of the shunt release to be completely opened of the contacts (ms)
DC24	< 50	< 20	< 20
DC220	< 50	< 20	< 20
AC220	< 50	< 20	< 40
AC380	< 50	< 30	< 40

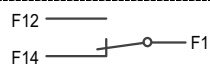
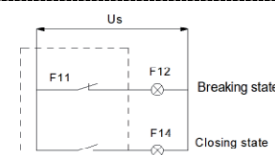

Auxiliary contact

- The auxiliary contact is used for automatic control of the control circuit of the switch disconnecter, such as signal indication of switch disconnecter opening and closing.
- Operational voltage: AC 50Hz, 220V or 380V; DC 220V.

Technical parameters of auxiliary contact

Type	Frame rating	Conventional thermal current $I_{th}(A)$	Rated operating current $I_e(A)$	
			AC380V	DC220V
Auxiliary contact	$\leq 400A$	3	0.30	0.15
Minimum switching capacity	24V, 100mA			

Auxiliary contact wiring diagram

Switch disconnecter status	Auxiliary contact status	Auxiliary contacts wiring diagram
The switch disconnecter is in the "On" position	One auxiliary contact 	
The switch disconnecter is in the "OFF" position	One auxiliary contact 	

Accessories and functions


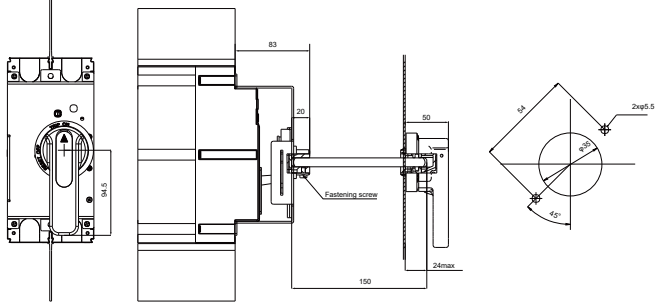
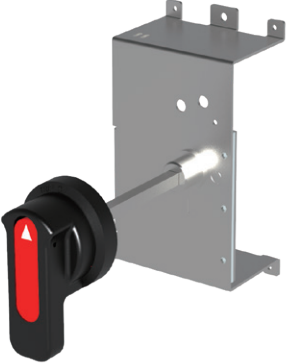
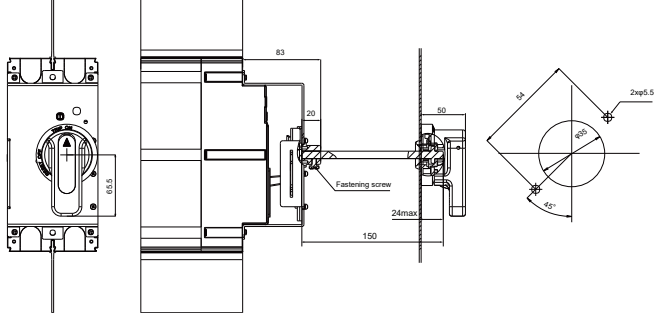
External accessories

Manual operating handle

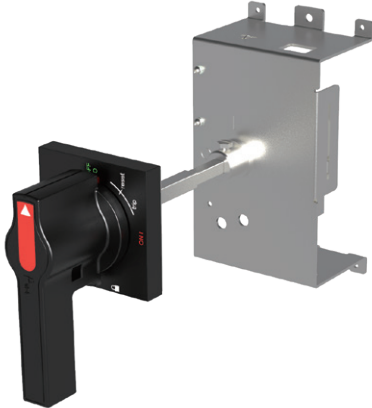
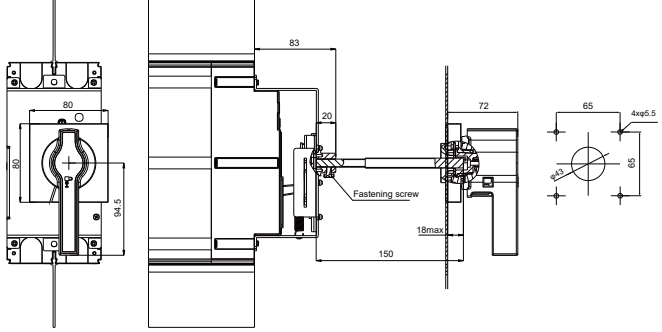
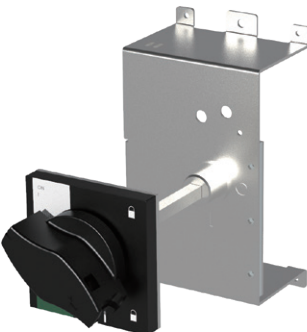
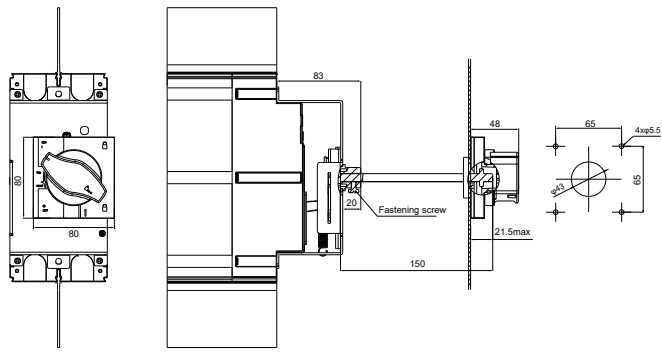
The manual operating handle is installed on the outer cover of the switch disconnecter, which is suitable for the switch disconnecter installed in the cabinet, and realizes the closing, resetting and opening of the switch disconnecter by rotating the handle, and has position limiting, which can prevent the switch disconnecter handle from breaking due to improper operation.

Manual operating handle:

SC2—Essentric type Y—Circular handle F—Square handle

Z4:SC2-Y	Z4 type circular long handle manual operation mechanism (IP20 protection grade, default selection)
<p>Default selection</p> 	
Z4:SC2-Y	Z4 circular short handle manual operation mechanism (IP20 protection grade)
	

Accessories and functions

Z3:SC2-F	Z3 type square long handle manual operation mechanism (IP65 protection grade, default selection)
<p data-bbox="407 378 552 398">Default selection</p> 	
Z3:SC2-F	Z3 Type square short handle manual operation mechanism (IP65 protection grade)
	

Warning: manual operation mechanism must be purchased from us to ensure product quality and reliable coordination. If it is purchased from other manufacturers, we will not assume responsibility for all consequences.

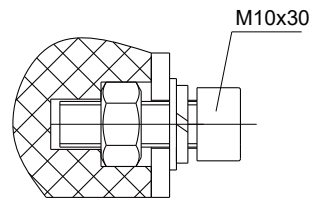
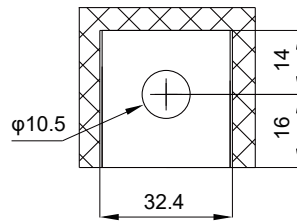
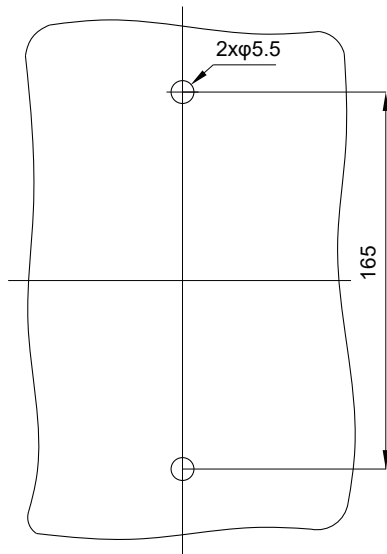
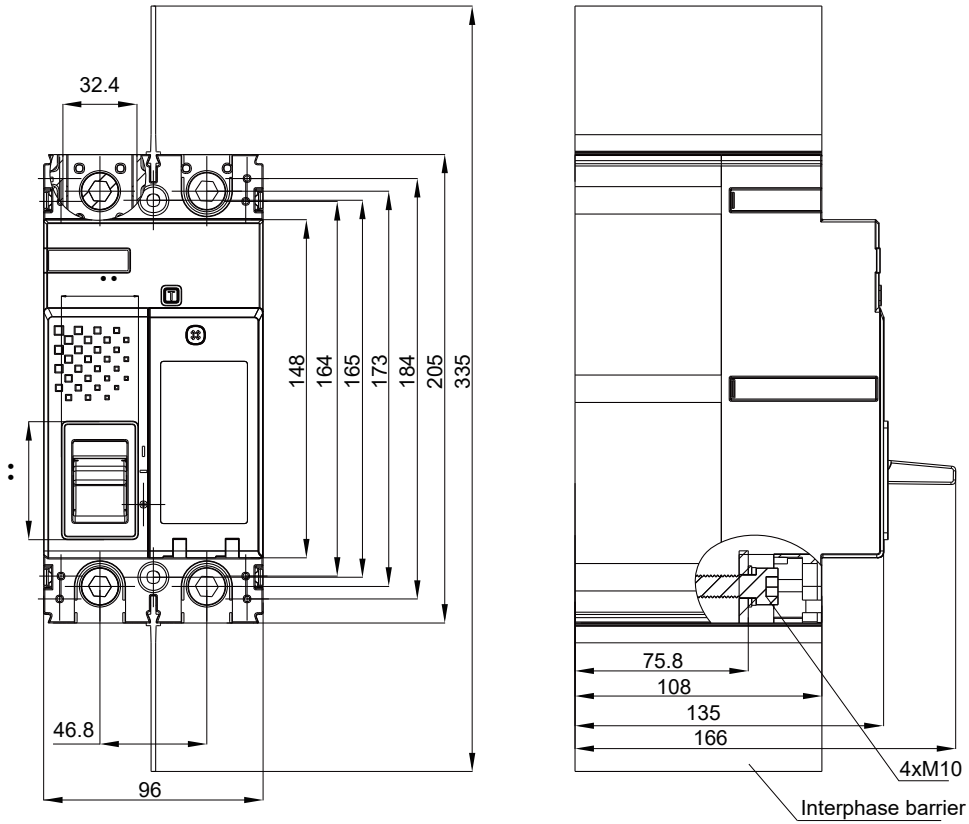
Note:

1. The default length of the square shaft is 150mm. Special demand can be customized (An integer multiple of 50mm is recommended).
2. The handle of the manual operation mechanism is a long handle by default. If a short handle is required, special remarks are required.

Product outline dimensions and opening hole diagrams

UEM1EG-320 Standard product

Unit: mm



Ordering instruction

Model Code

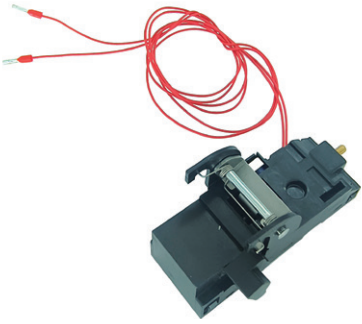
	UE	M	1E	G	- 320	/320	-2	00	0	-Z4
Manufacturer code UE:Hongfa										
Product code M: Molded case type										
Design code: 1E: New energy industry										
Product code G: Switch disconnecter										
Frame size: 320										
Rated current: 200:200A; 250:250A; 275:275A; 300:300A; 320:320A										
Number of poles: 2: 2P										
Internal accessory code: 00: No accessory; 20: Auxiliary contact; 10: Shunt release; 40: Auxiliary contact+ Shunt release;										
Internal accessory voltage 0: No voltage 1: AC220V; 2: AC380V; 3: DC24V; 4: DC110V; 5: DC220V; Note: No voltage requirement indicates that the product is not equipped with a shuntrelease										
Mode of operation mechanism: Blank: without manual operating mechanism Circular manual handle: Z4: SC2-Y type (The long handle is used by default) Square manual handle Z3: SC2-F type (The long handle is used by default)										


Quick reference table

Model	Frame size	Rated current (In)					Number of poles	Internal accessory				Utility voltage code					Operating mode		
		200	250	275	300	320		00	20	10	40	0	1	2	3	4	5	Z3	Z4
UEM1EG	320						2					0	1	2	3	4	5	Z3	Z4
	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

Ordering instruction





Internal accessory

Shunt release SHT1		
Accessory name	Model	
	Shunt release mounted on the right, AC220V, lead type	SHT1-400RY/AC220V
	Shunt release mounted on the right, AC380V, lead type	SHT1-400RY/AC380V
	Shunt release mounted on the right, DC24V, lead type	SHT1-400RY/DC24V
	Shunt release mounted on the right, DC220V, lead type	SHT1-400RY/DC220V

Auxiliary contact AX1		
Accessory name	Model	
	Auxiliary contact mounted on the right, 1NO 1NC, lead type	AX1-400RY

Ordering instruction

External accessory

Manual operating mechanism		
Accessory name		Model
<p>Default selection</p> 	<p>Manual operating mechanism, essentric type operating mechanism, circular handle ,</p>	<p>SC2-Y/400</p>
		
<p>Default selection</p> 	<p>Manual operating mechanism, essentric type operating mechanism, square handle</p>	<p>SC2-F/400</p>
		

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