

DC SWITCH-DISCONNECTOR

HFUW3DG



INTRODUCTION



Sunban Industrial Park

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.



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

HFUW3DG DC air switch-disconnectors

01	Product Overview	05
02	Product introduction	06
03	Working and installation conditions	14
04	Product Features	15
05	Accessories	23
06	Overall Dimensions and Installation Dimensions	27
07	Wiring diagram	30
08	Busbar for the switches	32
09	Mounting screws and torque	32
10	Ordering specification	33

HFUW3DG DC

Production Overview

Scope

The HFUW3DG air DC switch-disconnectors are applicable in the photovoltaic power generation system with working voltage up to DC1500V, and working current up to 3200A. It is used for isolating the incoming of the inverter. The switch-disconnector, with stable performance, precise protection capacity, can improve the reliability and power safety and avoid power failure.

Product Features

- 2P structure, small size
- High reliability
- non-polarity installation
- Low temperature rise, no derating @+55°C
- Low power consumption

Standards Compliance

	CCC	GB/T 14048.1, GB/T 14048.3
CB	CB	IEC 60947-3
	TUV	EN 60947-3
CE	CE	EN 60947-3
UKCA	UKCA	BSEN60947-2
	UL	UL489B (Only applicable to HFUW3DG-2500XUA)

Product introduction

Product Structure

HFUW3DG-1600XU front view



1. Terminal Busbar

2. Front Cover

3. OFF Button(O)

4. ON Button(I)

5. Charging Handle

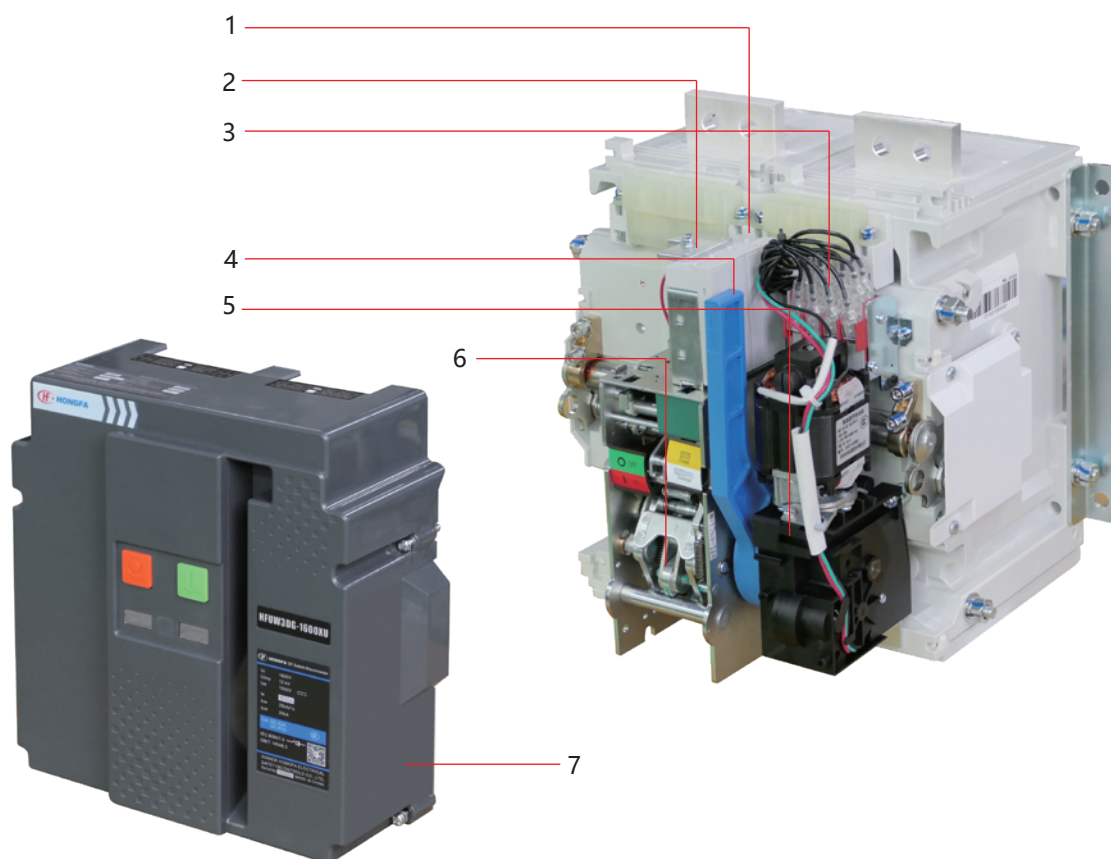
6. Close(I)\Open(O) Indicator

7. Charged\Discharged Indicator

8. Fixing plate

Product Structure

HFUW3DG-1600XU internal view

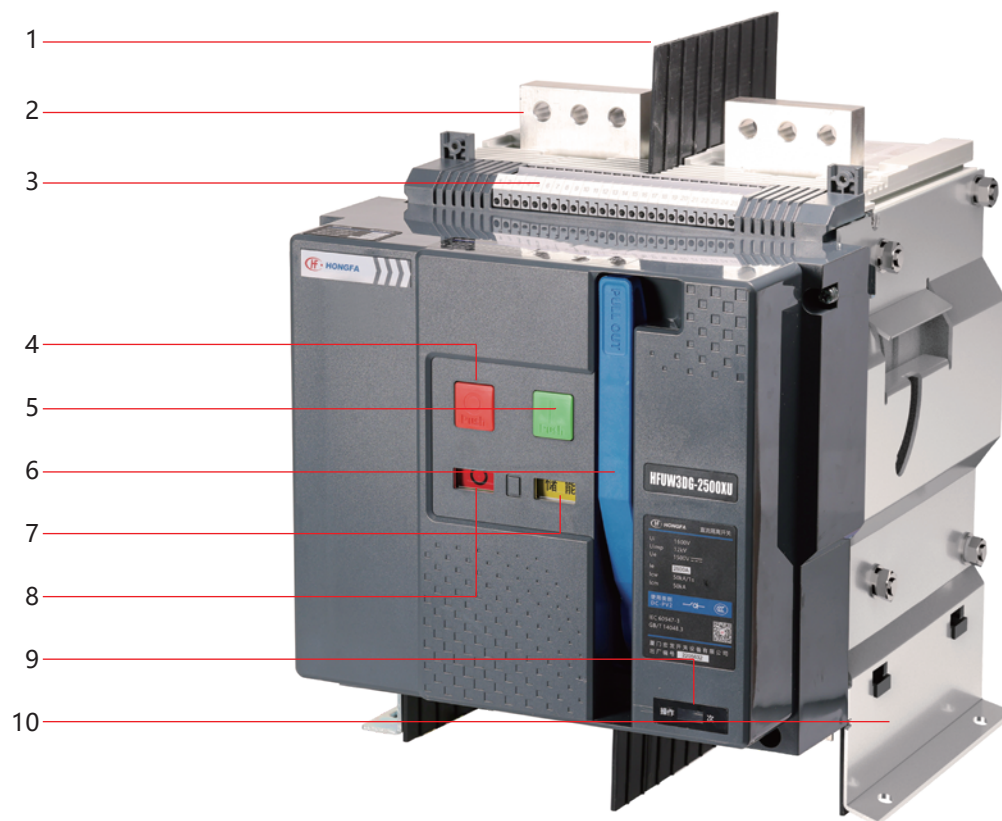


- 1. Shunt Trip
- 2. Closing Coil
- 3. Auxiliary contact

- 4. Charging Handle
- 5. Charging Motor
- 6. Operation Mechanism
- 7. Front Cover

Product Structure

HFUW3DG-2500XU front view



1. Interphase barrier

2. Terminal Busbar

3. Terminal Blocks

4. OFF Button(O)

5. ON Button(I)

6. Charging Handle

7. Close(I)\Open(O) Indicator

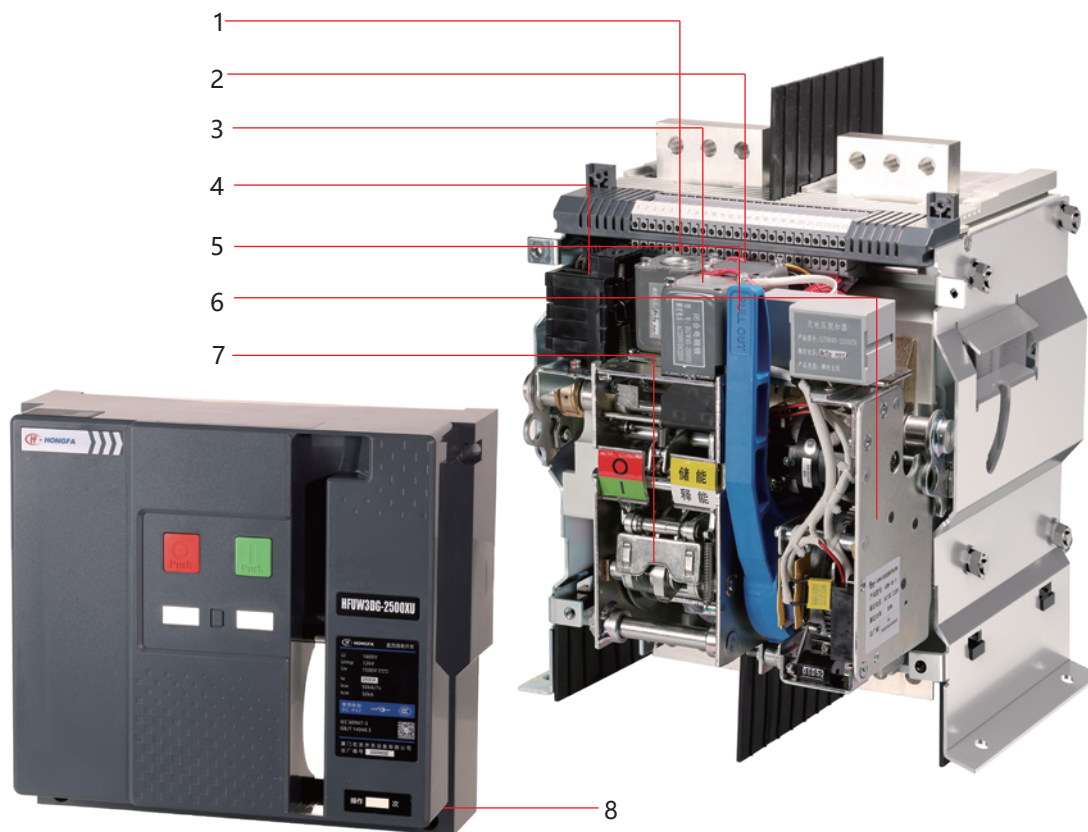
8. Charged\Discharged Indicator

9. Counter Window

10. Side Panel

Product Structure

HFUW3DG-2500XU internal view



- 1. Under-voltage Trip Device
- 2. Shunt Trip
- 3. Closing Coil
- 4. Auxiliary contact

- 5. Charging Handle
- 6. Charging Motor
- 7. Operation Mechanism
- 8. Front Cover

Product Structure

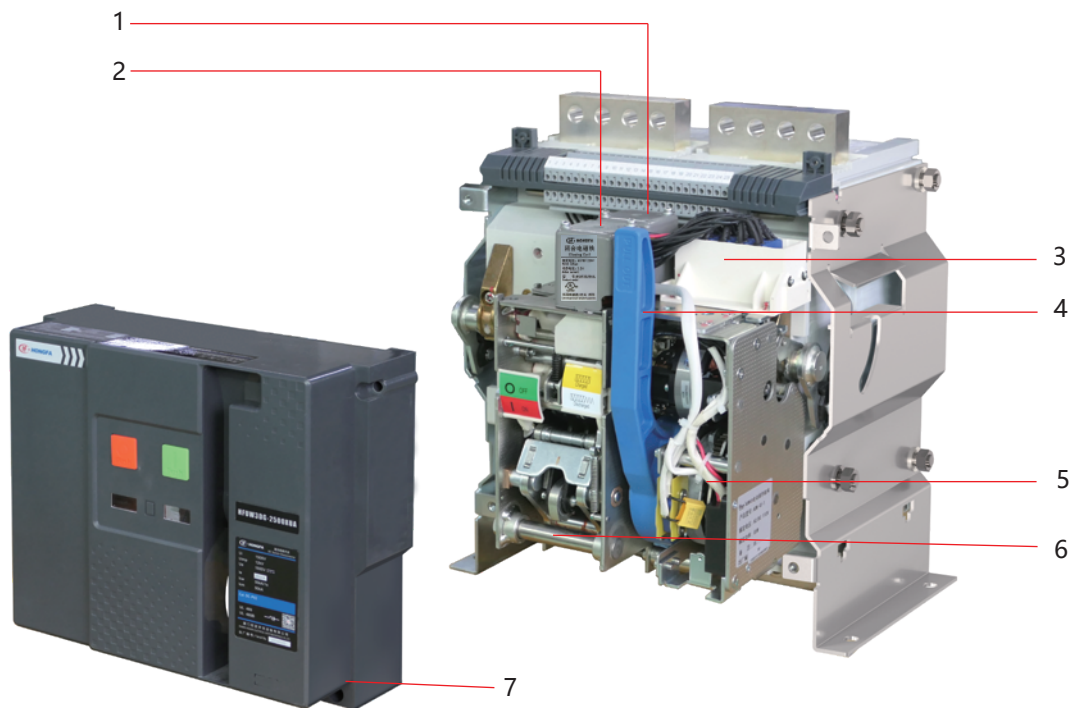
HFUW3DG-2500XUA front view



- 1. Terminal Busbar
- 2. Terminal Blocks
- 3. OFF Button(O)
- 4. ON Button(I)

- 5. Charging Handle
- 6. Close(I)\Open(O) Indicator
- 7. Charged\Discharged Indicator
- 8. Side Panel

HFUW3DG-2500XUA internal view

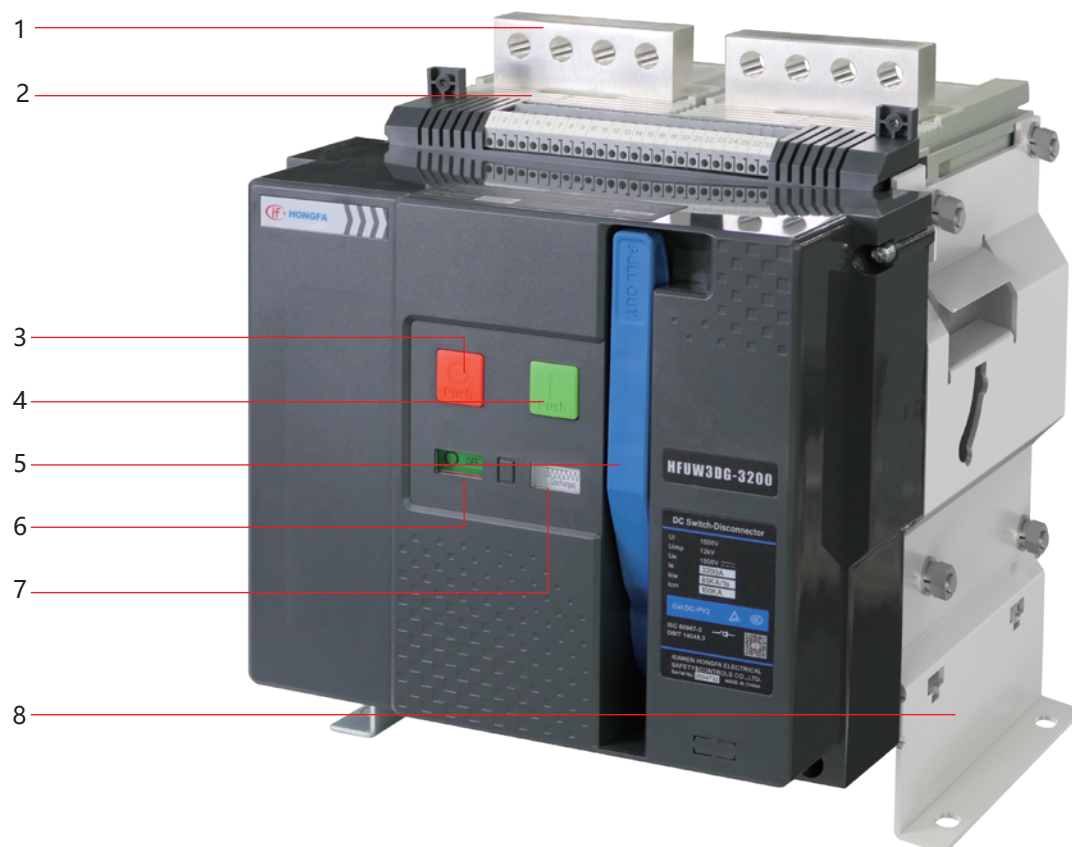


- 1. Shunt Trip
- 2. Closing Coil
- 3. Auxiliary contact

- 4. Charging Handle
- 5. Charging Motor
- 6. Operation Mechanism
- 7. Front Cover

Product Structure

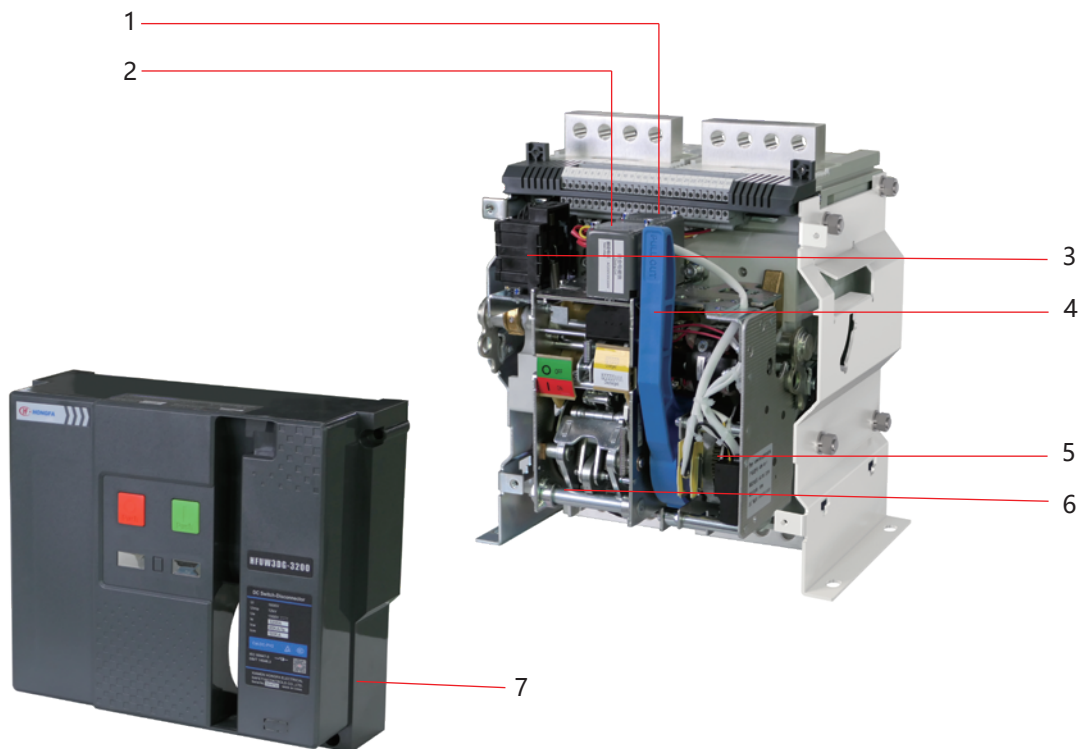
HFUW3DG-3200XU front view



- | | |
|--------------------|---------------------------------|
| 1. Terminal Busbar | 5. Charging Handle |
| 2. Terminal Blocks | 6. Close(I)\Open(O) Indicator |
| 3. OFF Button(O) | 7. Charged\Discharged Indicator |
| 4. ON Button(I) | 8. Side Panel |

Product Structure

HFUW3DG-3200XU internal view



- 1. Shunt Trip
- 2. Closing Coil
- 3. Auxiliary contact

- 4. Charging Handle
- 5. Charging Motor
- 6. Operation Mechanism
- 7. Front Cover

Working and installation conditions

- The ambient temperature is - 40°C ... + 70 °C, and the average value in 24 hours does not exceed + 35 °C.
Derating shall be applied when the ambient temperature exceeds +55°C.
- Derating shall be applied when the working altitude exceeds 4000m.
- When the ambient air temperature is + 40 °C, the relative humidity of the atmosphere does not exceed 50%.
Higher relative humidity is allowed at lower temperatures. e.g., at + 20 °C, the atmospheric relative humidity can be 90%. Dehumidification or corresponding measures shall be taken for condensation due to temperature change.
- Pollution degree:3.
- The installation category of the main circuit of the switch is IV, and the installation category of other auxiliary circuits and control circuits is III. The vertical inclination of the switch shall not exceed 5 °. The switch shall be installed in a place without explosion hazard, conductive dust, sufficient corrosion of metal and damage to insulation.
- The ambient temperature of the storage condition is -40°C...+80°C.

Product Features

Part number and meaning

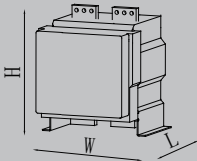
	HFUW	3	DG	-3200	XU	/□	2	G	00	0	□	□	□	□	6	E	□	0	-□	□	(□)
Air circuit																					
Breaker Series																					
Design code: 3																					
Derived Product:																					
DG: DC Switch-Disconnecter																					
Frame Size: 1600:1600A; 2500:2500A;																					
Voltage Grade: XU:1500V ---IEC																					
Rated Current: 08:800A; 10:1000A 12:1250A;																					
16:1600A; 25:2500A; 29:2900A 32:3200A																					
Poles: 2:2P																					
Installation method: G: Fixed type																					
Trip unit type code: 00: Without trip unit																					
Trip unit voltage: 0: Not applicable																					
Charging motor: D0: No motor; D1:380VAC; D2:220VAC; D6: 220VDC;																					
D7:110VDC; D9:24VDC; DX: Special voltage, defined by special																					
Shunt trip: F0: Without shunt trip																					
Not holding type F1:380VAC; F2:220VAC; F6:220VDC; F7:110VDC; F9:24VDC;																					
FX: Special voltage, defined by special code.																					
Closing coil: B0: No closing coil; B1:380VAC; B2:220VAC; B6:220VDC; B7:110VDC;																					
B9:24VDC; BX: Special voltage, defined by special code.																					
Auxiliary contacts: 0: No auxiliary contact; 4: 4 changeover; 6: 6 changeover; D: 4NO+4NC;																					
E: 5NO+5NC; (not applicable to 1600XU) F:6NO+6NC																					
Wiring method: 6: Front terminals																					
Busbar type: E: Standard type F: Extended type (only applicable to 1600XU)																					
Ambient Temperature: 1: Normal temperature (-5°C...70°C); 2: Low temperature (-40°C...70°C)																					
Working frequency: 0: DC																					
Undervoltage trip device (optional)																					
Device Type		Voltage code				Delay code															
Q: Undervoltage Trip Device S: No-voltage Trip Device		1:380VAC				0: Instantaneous															
		2:220VAC				1: 1s															
		3:110VAC				3: 3s															
		6:220VDC				5: 5s															
		7:110VDC				X: Special delay time, defined by special code.															
		9:24VDC																			
		X: Special voltage, defined by special code.																			
Note: The combination code is Device type code + Voltage code + Delay code. For example, 'Q10' is AC380 instantaneous undervoltage release.																					
Accessories (optional) 1B: Interphase barrier (built-in) 1C:Button lock; 1D:1 lock 1key; 1E: 2 locks 1 key; 1F:3 locks 2 key; 1H: 5locks 3 key; 1L: Counter; 1M: Terminal barrier; (not applicable to 1600XU) 1N:Ready to close switch (Cannot be selected with auxiliary contact of '6NO+6NC' simultaneously)																					
Special code: 198: High short-time withstand current (Icw=100kA/1s, only applicable to 3200XU)																					

Note: Multiple accessories are allowed to select, and the accessory codes should follow the alphabetic sequence like '1B1C1N'.

Check up list

		HFU3WDG-1600XU	HFU3WDG-2500XU	HFU3WDG-2500XUA	HFU3WDG-3200XU
Rated Current	800	√	√	√	-
	1000	√	√	√	-
	1250	√	√	√	-
	1600	√	√	√	-
	2000	-	√	√	-
	2500	-	√	√	-
	2900	-	-	-	√
	3200	-	-	-	√
Auxiliary Contacts	4 change over	√	√	√	√
	4NO+4NC	-	√	√	√
	5NO+5NC	-	√	-	√
	6 change over	-	√	√	√
	6NO+6NC	-	√	√	√
Wiring Method	Front terminals	√	√	√	√
Busbar Type	Standard type	√	√	√	√
	Extended type	√	-	-	-
Installation Method	Fixed type	√	√	√	√

Product Features

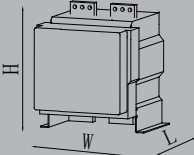
Features			
Type			HFUW3DG-1600XU
Frame size			1600
Rated current I _n (A)			800, 1000, 1250, 1600
Rated voltage U _e (V)			DC1500
Rated insulation withstand voltage U _i (V)			DC1600
Rated impulse withstand voltage U _{imp} (kV)			12
Poles			2
Rated short current making capacity I _{cm} (kA)		DC1500V	25
Rated short-time withstand current I _{cw}		DC1500V	25 kA/1s
Breaking time (No additional delay) (ms) ^a			≤50
Closing Time(ms) ^b			≤70
Operational performance	Electrical Durability (20 cycles/hour)	DC1500V	500 cycles
	Mechanical Durability (20 cycles/hour)	Maintenance-free	12,000 cycles
	Product size: H×W×L (mm×mm×mm)		Standard busbar:
			294×266×256
			Extended busbar:
			358×266×256

Note:

a: Breaking Time: Under normal temperature, the time from the shunt trip is energized to the main circuit being disconnected.

b: Closing Time: Under normal temperature, the time from the start of the closing operation to the complete contact of all pole contacts. It is recommended to start calculate after the system stabilizes (200ms).

Features

Type		HFUW3DG-2500XU	
Frame size		2500	
Rated current I_n (A)		800, 1000, 1250, 1600, 2000, 2500	
Rated voltage U_e (V)		DC1500	
Rated insulation withstand voltage U_i (V)		DC1600	
Rated impulse withstand voltage U_{imp} (kV)		12	
Poles		2	
Rated short current making capacity I_{cm} (kA)	DC1500V	50	
Rated short-time withstand current I_{cw}	DC1500V	50 kA/1s	
Breaking time (No additional delay) (ms) ^a		≤50	
Closing Time(ms) ^b		≤70	
Operational performance	Electrical Durability (20 cycles/hour)	DC1500V	500
	Mechanical Durability (20 cycles/hour)	Maintenance-free	10000
	Product size: H×W×L (mm×mm×mm)		389×346×343

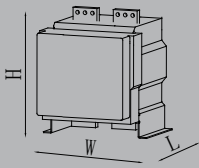
Note:

a: Breaking Time: Under normal temperature, the time from the shunt trip is energized to the main circuit being disconnected.

b: Closing Time: Under normal temperature, the time from the start of the closing operation to the complete contact of all pole contacts. It is recommended to start calculate after the system stabilizes (200ms).

Product Features

Features

Type		HFUW3DG-2500XUA	
Frame size		2500	
Rated current I_n (A)		800, 1000, 1250, 1600, 2000, 2500	
Rated voltage U_e (V)		DC1500	
Rated insulation withstand voltage U_i (V)		DC1600	
Rated impulse withstand voltage U_{imp} (kV)		12	
Poles		2	
Rated short current making capacity I_{cm} (kA)	DC1500V	50	
Rated short-time withstand current I_{cw}	DC1500V	50 kA/1s	
Breaking time (No additional delay) (ms) ^a		≤50	
Closing Time(ms) ^b		≤70	
Operational performance	Electrical Durability (60 cycles/hour)	DC1500V	500
	Mechanical Durability (60 cycles/hour)	Maintenance-free	10000
	Product size: H×W×L (mm×mm×mm)		389×346×343

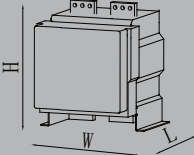
Note:

a: Breaking Time: Under normal temperature, the time from the shunt trip is energized to the main circuit being disconnected.

b: Closing Time: Under normal temperature, the time from the start of the closing operation to the complete contact of all pole contacts. It is recommended to start calculate after the system stabilizes (200ms).

Product Features

Features

Type		HFUW3DG-3200XU	
Frame size		3200	
Rated current I_n (A)		2900, 3200	
Rated voltage U_e (V)		DC1500	
Rated insulation withstand voltage U_i (V)		DC1600	
Rated impulse withstand voltage U_{imp} (kV)		12	
Poles		2	
Rated short current making capacity I_{cm} (kA)	DC1500V	100	
Rated short-time withstand current I_{ow}	DC1500V	85 kA/1s, 100 kA/0.5s	
Breaking time (No additional delay) (ms) ^a		≤50	
Closing Time(ms) ^b		≤70	
Operational performance	Electrical Durability (20 cycles/hour)	DC1500V	500
	Mechanical Durability (20 cycles/hour)	Maintenance-free	10000
	Product size: H×W×L (mm×mm×mm)		389×346×343

Note:

a: Breaking Time: Under normal temperature, the time from the shunt trip is energized to the main circuit being disconnected.

b: Closing Time: Under normal temperature, the time from the start of the closing operation to the complete contact of all pole contacts. It is recommended to start calculate after the system stabilizes (200ms).

Product Features

Ambient temperature derating factor (Current)

Ambient temperature		+55°C	+60°C	+65°C	+70°C
HFUW3DG-1600XU	800A...1000A	1	1	1	1
	1600A	1	0.98	0.92	0.87
HFUW3DG-2500XU	800A...2000A	1	1	1	1
HFUW3DG-2500XUA	2500A	1	0.99	0.94	0.89
HFUW3DG-3200XU	2900A	1	1	1	0.98
	3200A	1	0.99	0.94	0.89

Product Features

Altitude derating factor (Current and Voltage)

	Altitude		2000	3000	4000	5000
HFUW3DG-1600XU	Service current	800A...1250A	1	1	1	1
		1600A	1	0.98	0.93	0.87
	Rated Impulse Withstand Voltage Uimp (kV)		12	12	12	12
	Rated Insulation Voltage Ui (V)		1500	1500	1500	1500
	Rated Voltage Ue (V)		1500	1500	1500	1500
	High Voltage Withstand Uw (V)		3820	3820	3820	3000
HFUW3DG-2500XU	Altitude		2000	3000	4000	5000
	Service current	800A...2000A	1	1	1	1
		2500A	1	1	1	0.97
	Rated Impulse Withstand Voltage Uimp (kV)		12	12	12	12
	Rated Insulation Voltage Ui (V)		1500	1500	1500	1500
HFUW3DG-2500XUA	Altitude		2000	3000	4000	5000
	Service current	800A...2000A	1	1	1	1
		2500A	1	1	1	0.97
	Rated Impulse Withstand Voltage Uimp (kV)		12	12	12	12
	Rated Insulation Voltage Ui (V)		1500	1500	1500	1500
HFUW3DG-3200XU	Altitude		2000	3000	4000	5000
	Service current	2900A	1	1	1	1
		3200A	1	1	1	0.97
	Rated Impulse Withstand Voltage Uimp (kV)		12	12	12	12
	Rated Insulation Voltage Ui (V)		1600	1600	1600	1600
HFUW3DG-3200XUA	Rated Voltage Ue (V)		1500	1500	1500	1500
	High Voltage Withstand Uw (V)		3820	3820	3820	3000

Accessories

Accessories Parameters

Shunt Trip (built-in) HFUW3DG-1600XU

	Rated voltage(V)	AC220	AC380	DC24	DC110	DC220
	Instantaneous current(A)	2.2	1.5	8.2	1.5	2.2
	Operating voltage(V)	(0.7...1.1) U _e				

Shunt Trip (built-in) HFUW3DG-2500XU/ HFUW3DG-3200XU

	Rated voltage (V)	AC220	AC380	DC24	DC110	DC220
	Instantaneous current (A)	2.2	2.5	12.2	5.5	2.5
	Operating voltage (V)	(0.7...1.1) U _e				

Shunt Trip (built-in) HFUW3DG-2500XUA

	Rated voltage (V)	AC220	AC380	DC24	DC110	DC220
	Instantaneous current (A)	2.2	2.5	12.2	5.5	2.5
	Operating voltage (V)	(0.7...1.1) U _e				

Closing Coil (built-in) HFUW3DG-1600XU

	Rated voltage(V)	AC220	AC380	DC24	DC110	DC220
	Instantaneous current(A)	2.2	1.5	8.2	1.5	2.2
	Operating voltage(V)	(0.7...1.1) U _e				

Closing Coil (built-in) HFUW3DG-2500XU/ HFUW3DG-3200XU

	Rated voltage (V)	AC220	AC380	DC24	DC110	DC220
	Instantaneous current (A)	2.2	2.5	12.2	5.5	2.5
	Operating voltage (V)	(0.7...1.1) U _e				

Closing Coil (built-in) HFUW3DG-2500XUA

	Rated voltage (V)	AC220	AC380	DC24	DC110	DC220
	Instantaneous current (A)	2.2	2.5	12.2	5.5	2.5
	Operating voltage (V)	(0.7...1.1) U _e				

Accessories Parameters

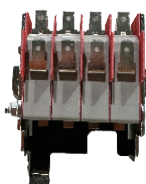
Charging Motor (built-in) HFUW3DG-1600XU

	Rated voltage(V)	AC220	AC380	DC24	DC110	DC220
	Rated operating current (A)	0.8	0.7	7	2.1	0.8
	Starting current (A)	2.8	1.7	28	9.1	2.8
	Operating voltage(V)	(0.85...1.1) U _e				

Shunt Trip (built-in) HFUW3DG-2500XU/ HFUW3DG-2500XUA/ HFUW3DG-3200XU

	Rated voltage(V)	AC220	AC380	DC24	DC110	DC220
	Rated operating current (A)	1.1	0.6	10	2.3	1.1
	Starting current (A)	3.8	2.6	20	7.2	4.5
	Operating voltage (V)	(0.85...1.1) U _e				

Auxiliary contact (built-in) HFUW3DG-1600XU

	Conventional thermal current (A)	I _{th} =16				
	Rated insulation voltage (V)	U _i =250				
	Capacity (U _e /I _n)	AC250V/10A DC30V/10A				
	Minimum switching capacity	24V, 0.1A				

Auxiliary contact (built-in) HFUW3DG-2500XU/ HFUW3DG-3200XU

	Conventional thermal current (A)	I _{th} =16				
	Rated insulation voltage (V)	U _i =400				
	Capacity (U _e /I _n)	AC-12: 400V 10A DC-12: 250V 1A AC-15: 400V 2A DC-13: 250V 0.3A				
	Minimum switching capacity	24V, 0.1A				

Auxiliary contact (built-in) HFUW3DG-2500XUA

	Conventional thermal current (A)	I _{th} =16				
	Rated insulation voltage (V)	U _i =380				
	Capacity (U _e /I _n)	AC-12: 380V 16A DC-12: 250V 5A AC-15: 400V 3A DC-13: 250V 1.2A, 48V 6A				
	Minimum switching capacity	24V, 0.1A				

Lock & key (optional)

	Lock the switch dis-connector in the opening position to ensure that it cannot be closed
	1 lock 1 key: 1 lock 1 key for 1 switch dis-connector 2 locks 1 key: 2 identical locks and 1 key for 2 switch dis-connectors 3 locks 2 keys: 3 identical locks and 2 keys for 3 switch dis-connectors 5 locks 3 keys: 5 identical locks and 3 keys for 5 switch dis-connectors

Accessories

Accessories Parameters

Under-voltage Trip Device (optional) HFUW3DG-1600XU

	Rated voltage(V)	AC220	AC380	DC24	DC110	DC220
	Start-up current(A)	2.3	1.12	12	6	2.3
	Hold-on current (mA)	16	8	100	22	16
	Operating voltage(V)	(0.35...0.7) Ue				
	Reliable closing Voltage(V)	(0.85...1.1) Ue				
	Unreliable closing voltage(V)	$\leq 0.35 U_e$				
	Delay time	Instantaneous, 1s, 3s, 5s				
	Operating voltage(V)	Note: when the voltage is less than 0.35 Ue, time-delay under voltage trip device will instantaneously operate. If the power-off time delay is required, the no voltage trip device shall be selected.				

Under-voltage Trip Device (optional) HFUW3DG-2500XU/ HFUW3DG-3200XU

	Rated voltage(V)	AC110	AC220	AC380	DC24	DC110	DC220
	Start-up current(A)	2.1	2.1	1.3	10	2.5	2.1
	Hold-on current (mA)	90	21	21	250	90	21
	Operating voltage(V)	(0.35...0.7) Ue					
	Reliable closing Voltage(V)	(0.85...1.1) Ue					
	Unreliable closing voltage(V)	$\leq 0.35 U_e$					
	Delay time	Instantaneous, 1s, 3s, 5s					
	Operating voltage(V)	Note: when the voltage is less than 0.35 Ue, time-delay under voltage trip device will instantaneously operate. If the power-off time delay is required, the no voltage trip device shall be selected.					

No voltage Trip Device (optional)

	Rated voltage (V)	AC110	AC220	AC380	DC24	DC110
	Instantaneous current(A)	0.95	0.46	0.68	5.8	1.18
	Stable current (mA)	30	21	21	255	15
	Operating voltage (V)	(0...0.65) Ue				
	Reliable closing voltage	(0.85...1.1) Ue				
	Unreliable closing voltage	$\leq 0.35 U_e$				
	Time-delay time	1s, 3s, 5s				

Accessories Parameters

Interphase barrier



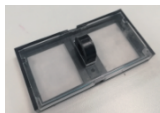
It can increase the insulation between adjacent phases.

Mechanical counter



Record the opening and closing cycles of the circuit breaker

Button lock



The ON and OFF button on the cover can be locked to prevent mis-operation

Terminal barrier



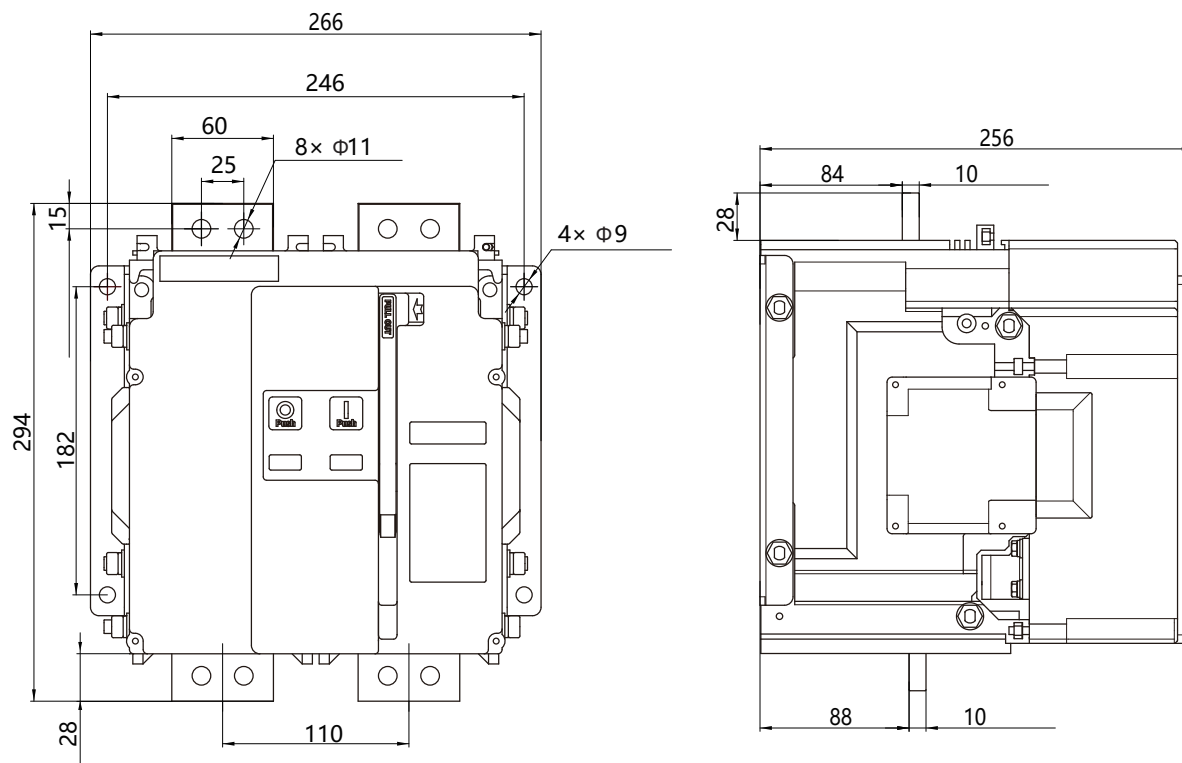
It reduces the risk of direct contact with live parts of the product.

Overall Dimensions and Installation Dimensions

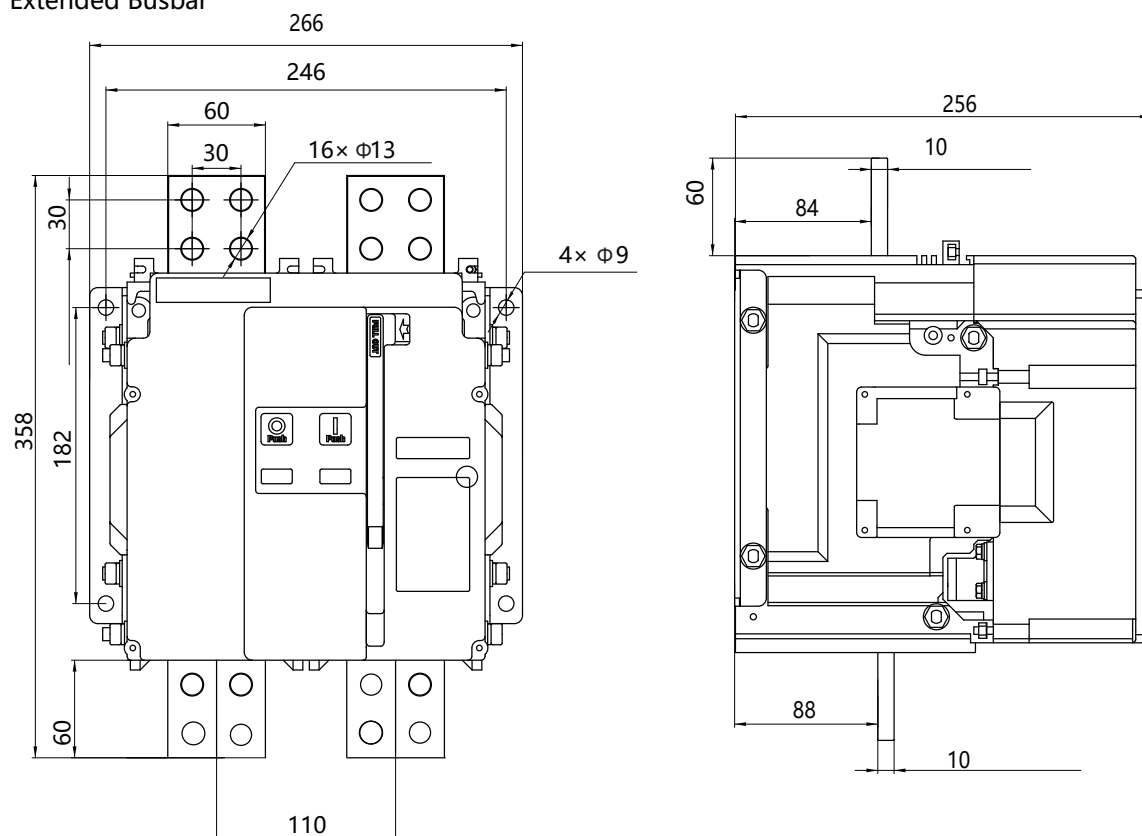
HFUW3DG-1600XU

Standard Busbar

Unit: mm

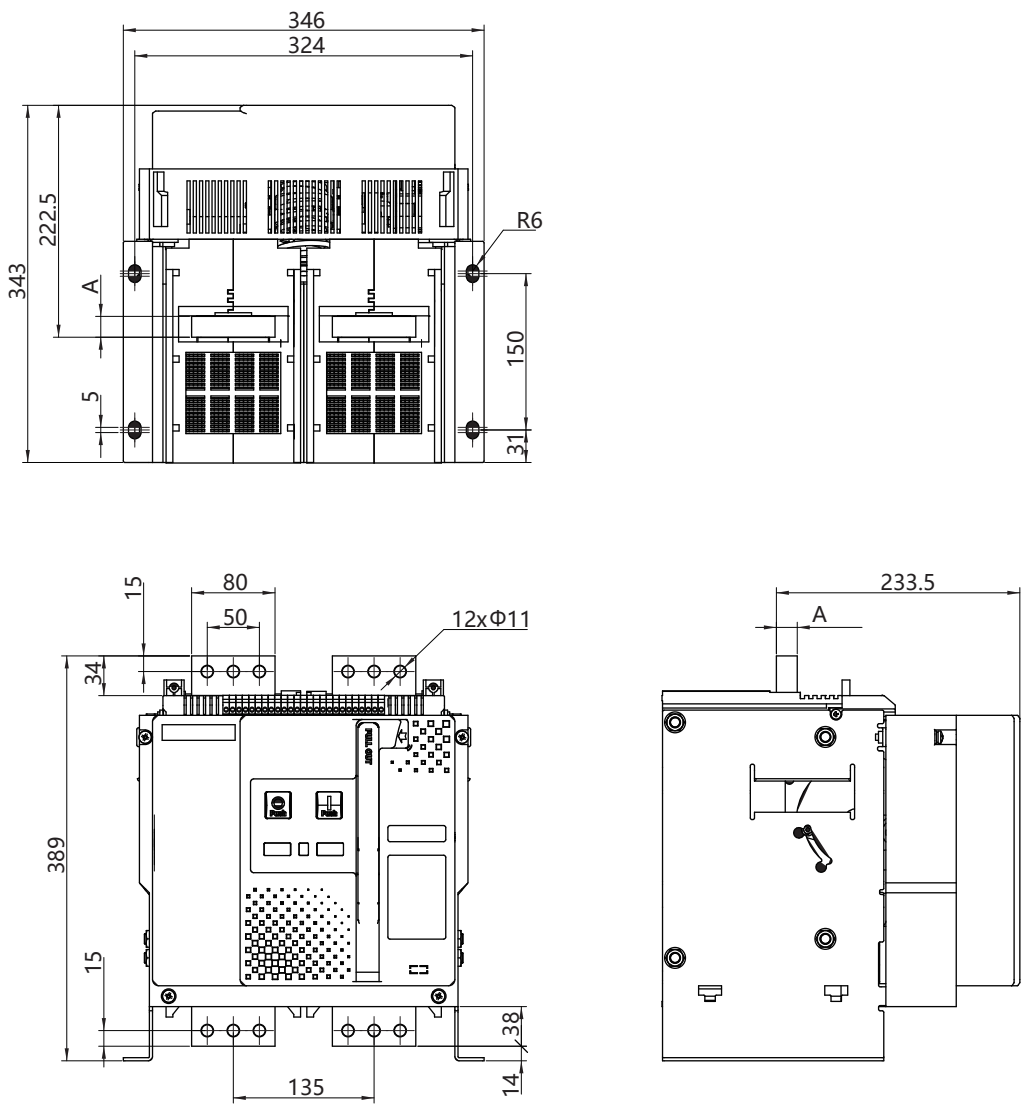


Extended Busbar



HFUW3DG-2500XU/HFUW3DG-2500XUA(800~2000A)

Unit: mm



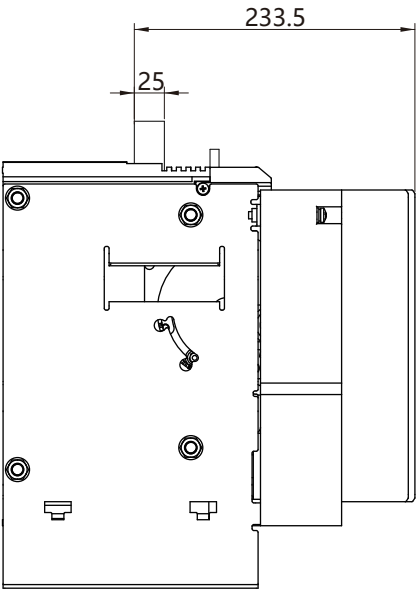
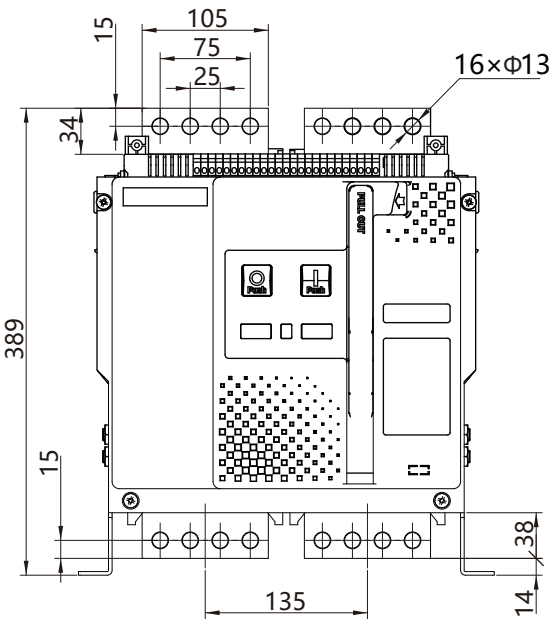
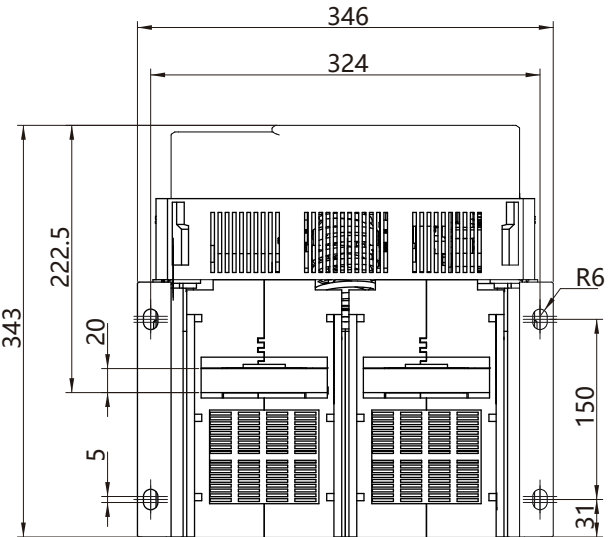
Rated Current	Dimension A	
	HFUW3DG - 2500XU	HFUW3DG-2500XUA
800A	10	20
1000A		
1250A		
1600A	15	
2000A		
2500A	20	-

Overall Dimensions and Installation Dimensions

HFUW3DG-2500XUA(2500A)/HFUW3DG-3200XU

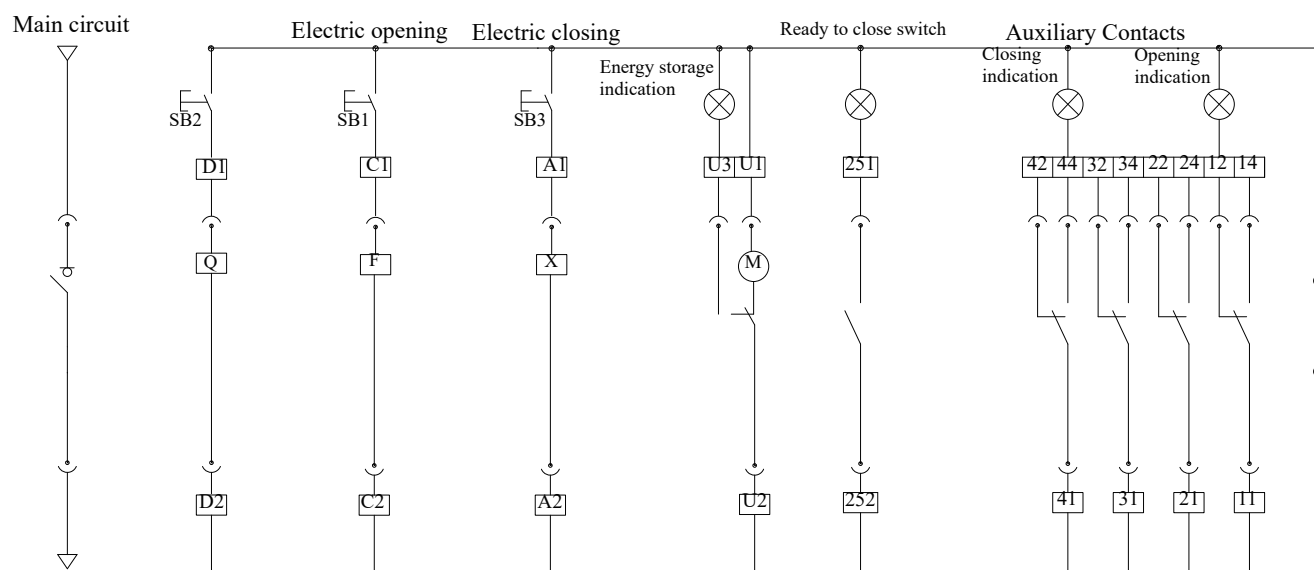
Unit: mm

Ie=2500A



Wiring diagram

HFUW3DG-1600XU



Note: The auxiliary contacts type in the wiring diagram above is "4 changover" .

SB1: Open button (Not provided)

SB2: Close button (Not provided)

X: Closing Coil

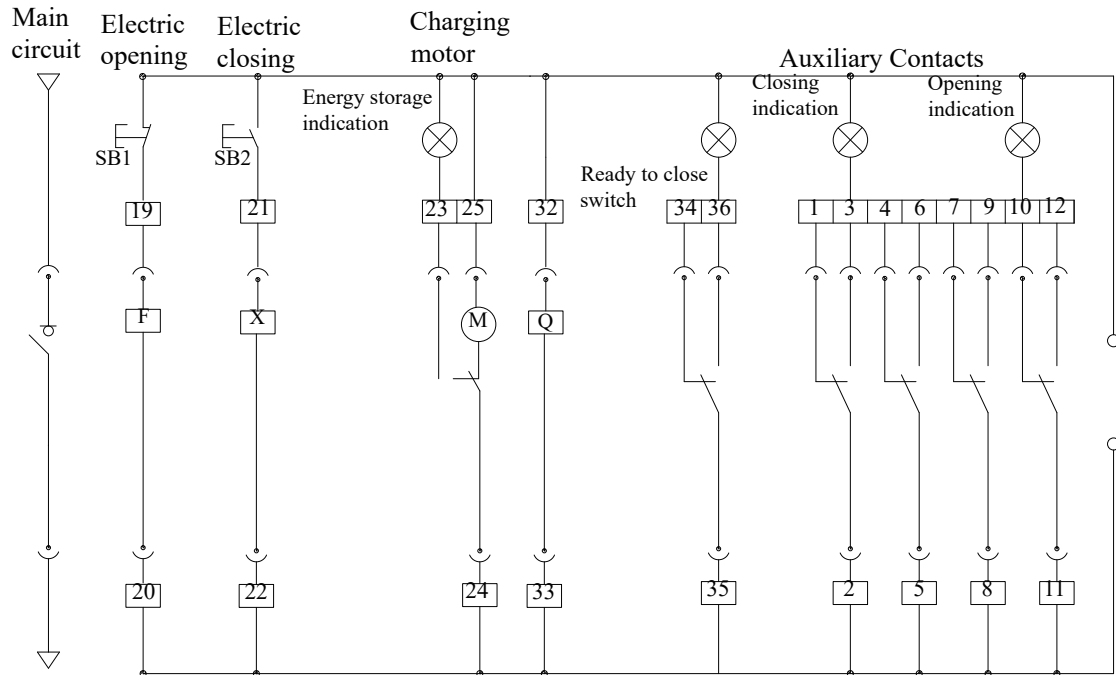
F: Shunt Trip

M: Charging Motor

Q: Undervoltage trip device

Wiring diagram

HFUW3DG-2500XU/HFUW3DG-2500XUA/HFUW3DG-3200XU



Note: The auxiliary contacts type in the wiring diagram above is "4 changover" .

SB1: Open button (Not provided)

SB2: Close button (Not provided)

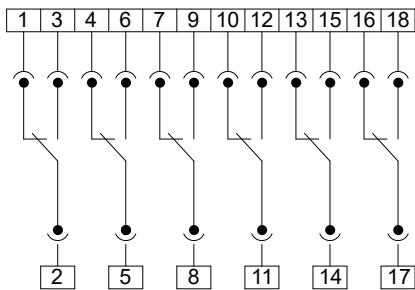
X: Closing Coil

F: Shunt Trip

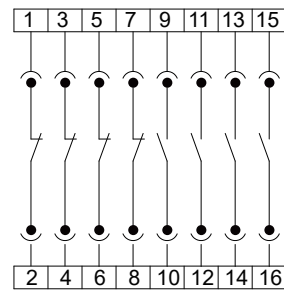
M: Charging Motor

Q: Undervoltage trip device

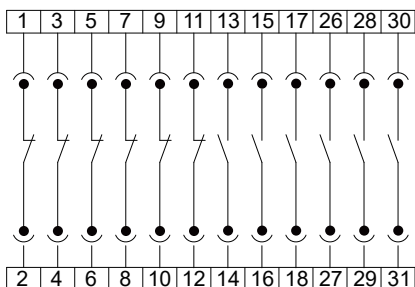
6 Change over



4NC+4NO



6NC+6NO



Busbar for the switches

Frame Size	Rated Current	Busbar	
		QTY	Size (mm x mm)
HFUW3DG-1600XU	800	2	50 x 5
	1000	2	60 x 5
	1250	2	80 x 5
	1600	2	100 x 5
HFUW3DG-2500XU	800	1	80 x 5
	1000	2	80 x 5
	1250	2	80 x 5
	1600	2	100 x 5
	2000	3	100 x 5
	2500	4	100 x 5
HFUW3DG-2500XUA	800	2	6.4 x 76.2
	1000	2	6.4 x 76.2
	1250	2	6.4 x 76.2
	1600	2	6.4 x 76.2
	2000	2	6.4 x 102
	2500	2	6.4 x 127
HFUW3DG-3200XU	2900	3	100 x 10
	3200	3	100 x 10

Note:

1. The length of the contact area between the busbars of the switchgear and those of the dis-connector shall be more than 30mm.;
2. In any case, the temperature of the wiring busbar should not exceed +110°C.
3. The specifications in the table are for the IEC switch dis-connector which is installed in open condition meeting the heating conditions in IEC 60947-3, where the maximum ambient temperature is 40 °C.
4. The ambient temperature of the UL switch dis-connector is 50 °C.

Mounting screws and torque

1. Tightening torque of screw for secondary circuit: 0.3N. m...0.4N. m.
2. The recommended specification of busbar mounting bolts and switch anchor bolts is M10, and the tightening torque is 37.5N. m.

Ordering specification

Company		QTY		Date	
Project type	☐ Industry ☐ PV ☐ Building ☐ Power grid ☐ Wind power ☐ Others				
Model	☐ HFUW3DG-1600XU ☐ HFUW3DG-2500XU ☐ HFUW3DG-2500XUA ☐ HFUW3DG-3200XU	Rated voltage : DC1500V			
Rated Current	☐ 800A ☐ 1000A ☐ 1250A ☐ 1600A ☐ 2000A ☐ 2500A ☐ 2900A ☐ 3200A				
Environment temperature	☐ Normal temperature(-5°C...70°C) ☐ Low temperature(-40°C...70°C)				
Busbar	☐ Standard type ☐ Extended type (only applicable to 1600XU)				
Accessories	Shunt Trip	☐ AC220 ☐ AC380 ☐ DC110 ☐ DC220 ☐ DC24			
	Closing Coil	☐ AC220 ☐ AC380 ☐ DC110 ☐ DC220 ☐ DC24			
	Electric motor	☐ AC220 ☐ AC380 ☐ DC110 ☐ DC220 ☐ DC24			
	Auxiliary contacts	☐ 4 Changeover ☐ 6 Changeover ☐ 4NO + 4NC ☐ 6NO + 6NC			
	☐ Undervoltage trip device	☐ AC220 ☐ AC380 ☐ DC110 ☐ DC220 ☐ DC24			
		☐ Instantaneous undervoltage Trip Device ☐ Under voltage Trip Device (time delay) ☐ 1s ☐ 3s ☐ 5s ☐ No-voltage Trip Device (time delay) ☐ 1s ☐ 3s ☐ 5s Note: When the voltage is less than 0.35 Ue, time-delay under voltage release will instantaneously operate. If the power-off time delay is required, no voltage trip device shall be selected.			
	☒ Interphase barrier				
	☐ Button lock ☐ 1 lock 1 key ☐ 2 locks 1 key ☐ 3 locks 2 keys ☐ 5 locks 3 keys ☐ Mechanical counter ☐ Terminal Barrier (not applicable to 1600XU) ☐ Ready to close switch (Cannot be selected with auxiliary contact of '6NO+6NC' simultaneously)				

Note: The HFUW3DG series switch-disconnectors have been reliably operating for over three years in more than 20GW of photovoltaic projects worldwide..

Xiamen Hongfa Electroacoustic Co. Ltd

Add: No.560-578, Donglin Rd., Jimei North Ind. Dist., Xiamen, China

TEL: +86-592-6106688

FAX: +86-592-6106678

E-mail: marketing@hongfa.com

Marketing & Sales Network

Hongfa Europe GmbH

ADD: Marie-Curie-Ring 26, D-63477

Maintal, Germany

TEL: +49-6181-4306-0

E-mail: info@hongfa-europe.com

Hongfa America, Inc.

ADD: 20381 Hermana Circle, Lake

Forest, CA92630, USA

TEL: +1-714-669-2888

E-mail: sales@hongfaamerica.com

KG Technologies, Inc.

ADD: 6028 Stat Farm Drive

Rohnert Park, CA 94928, USA

TEL: +1-888-513-1874

E-mail: info@kgtechnologies.com

Hongfa Electroacoustic (Hongkong) Co., Ltd.

ADD: Rm 1810-12, 18/F., Shatin Galleria,

18-24 Shan Mei St., Fotan, N.T., HongKong

TEL: +852-2947-7889

E-mail: hongkong@hongfa.com

Shanghai Hongfa Electroacoustic Co., Ltd.

ADD: NO.51.341, Jiuxin Rd., Jiuting

Town, Songjiang Dist., Shanghai

TEL: +86-21-37693111

E-mail: shanghai@hongfa.com

Beijing Hongfa Electroacoustic Relay Co., Ltd.

ADD: 111Bldg, Phase IV Westside of Lian

-dong U Valley, Tongzhou Dist., Beijing

TEL: +86-10-56495556

E-mail: beijing@hongfa.com

Sichuan Hongfa Relay Co., Ltd.

ADD: 12F, Hongfa Building, No.6 Wuxing 4th

Road, Wuhou District, Chengdu

TEL: +86-28-86627550

E-mail: sichuan@hongfa.com

Hongfa India Branch

TEL: +86-592-6196714

E-mail: power-sa@hongfa.com

TEL: +91-9971187792

E-mail: rohit@hongfa.com

Hongfa Philippine Branch

TEL: +63-9177189352

E-mail: nia-videna@hongfa.com

Hongfa Korea Branch

ADD: Sanggadong 203, 24, Cheonghak-ro

68beon-gil, Byeollae-myeon,

Namyangju-si, Gyeonggi-do,

Republic of Korea

TEL: +82-10-8704-4706

E-mail: khlee@hongfa.com

Hongfa Brazil Branch

Non-automotive relay project

TEL: +86-592-6196714

E-mail: southamerica@hongfa.com

Automotive relay project

TEL: +86-592-6196751

E-mail: auto-asia3@hongfa.com

Hongfa Turkey Branch

TEL: +90-535-0221881

E-mail: info-turkey@hongfa.com

The relevant information on the products contained is for reference only.
For details, please consult our business staff.

December 2025

Headquarter's Marketing & Sales Center

ADD: No.566-578, Donglin Rd., Jimei North Ind. Dist., Xiamen

E-mail: marketing@hongfa.com

SALES SERVICE HOTLINE

400-600-1502



HONGFA GROUP



HONGFA ELECTRIC