

## DC power distribution product

# YCW8G-□DC DC Frame Isolation Switch



### General

The YCW8G-DC DC frame isolation switch is suitable for DC systems with a rated operating voltage of DC1500V and below, and a rated current of 4000A and below. It is used for infrequent switching on and off of circuits, serving the purpose of isolating circuits.

Standards: IEC 60947-2

### Operating conditions

1. Ambient temperature: -40°C to +70°C, with a 24-hour average not exceeding +35°C. For temperatures above +40°C, derating is required. Refer to Appendix 1 <Temperature Derating Factor Table>.
2. Atmospheric conditions: At an ambient temperature of +40°C, the relative humidity should not exceed 50%. Higher relative humidity is permissible at lower temperatures, e.g., at +25°C, the relative humidity can reach up to 90%. Condensation caused by temperature changes should be addressed with dehumidification or appropriate measures.
3. Corrosion resistance Grade: Salt mist level 2.
4. Pollution degree: Level 3.
5. Altitude: ≤2000m. For altitudes above 2000m, the isolating switch can be customized. Refer to Appendix 2 <Altitude Correction Table>.
6. Seismic resistance: Amplitude: 2–9Hz ±1.5mm, constant acceleration: 9–200Hz 5m/s<sup>2</sup>. Excessive vibration may damage internal mechanical components of the operating mechanism, potentially affecting the reliable operation of the isolating switch.
7. Electromagnetic interference: Capable of withstanding overvoltage caused by electromagnetic interference, aging of the distribution system, or environmental disturbances, including radio waves, static discharge, etc.
8. Installation conditions: The vertical tilt should not exceed 5°. It should be installed in locations free of explosion hazards, conductive dust, and substances that could corrode metal or damage insulation.
9. Installation category: Installation category IV for the isolating switch's main circuit; category III for the control circuit.
10. Protection rating: IP30; IP40 when installed in a cabinet compartment with an additional protective door frame.

### Type designation

YCW8G - 2500 DC / 2 630A F H DC1500

Product name	Shell frame	DC	Number of poles	Rated current	Installation type	Wiring method	Working voltage
YCW8G	2500	DC	2	630A	F	H	DC1500
YCW8G	2500 4000	DC	2:2P	630A 800A 1000A 1250A 1600A 2000A 2500A 2900A 3200A 3600A 4000A	F:Fixed type	H:Horizontal connection	DC1500

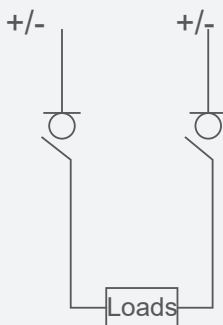
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### Technical data

Basic parameters	Unit	Data	
Switch model		YCW8G-2500DC	YCW8G-4000DC
Conventional free air thermal current (I <sub>th</sub> )	A	2500	4000
Number of poles	P	2	
Rated operational current (I <sub>e</sub> ) [A]	A	630,800,1000,1250,1600,2000,2500	2500,2900,3200,3600,4000
Rated operational voltage (U <sub>e</sub> ) [VDC]	VDC	1500	1500
Rated insulation voltage (U <sub>i</sub> ) [VDC]	VDC	1600	2000
Rated impulse withstand voltage (U <sub>imp</sub> ) [kV]	KV	12	12
Rated short-time withstand current (I <sub>cw</sub> ) [kA]	KA	65KA/1s	100KA/1s, 150KA/0.2s,
Rated short-circuit making capacity (I <sub>cm</sub> ) [kA]	KA	65	100
Closing time	ms	≤70	
Total breaking time	ms	≤40	
Utilization category		DC-PV2,DC-22A,DC-23A	
Mechanical life	times	10000	
Electrical life	times	500	
Overall dimensions (WDH)	mm	286*302.5*400	312*302.5*400

### Wiring method

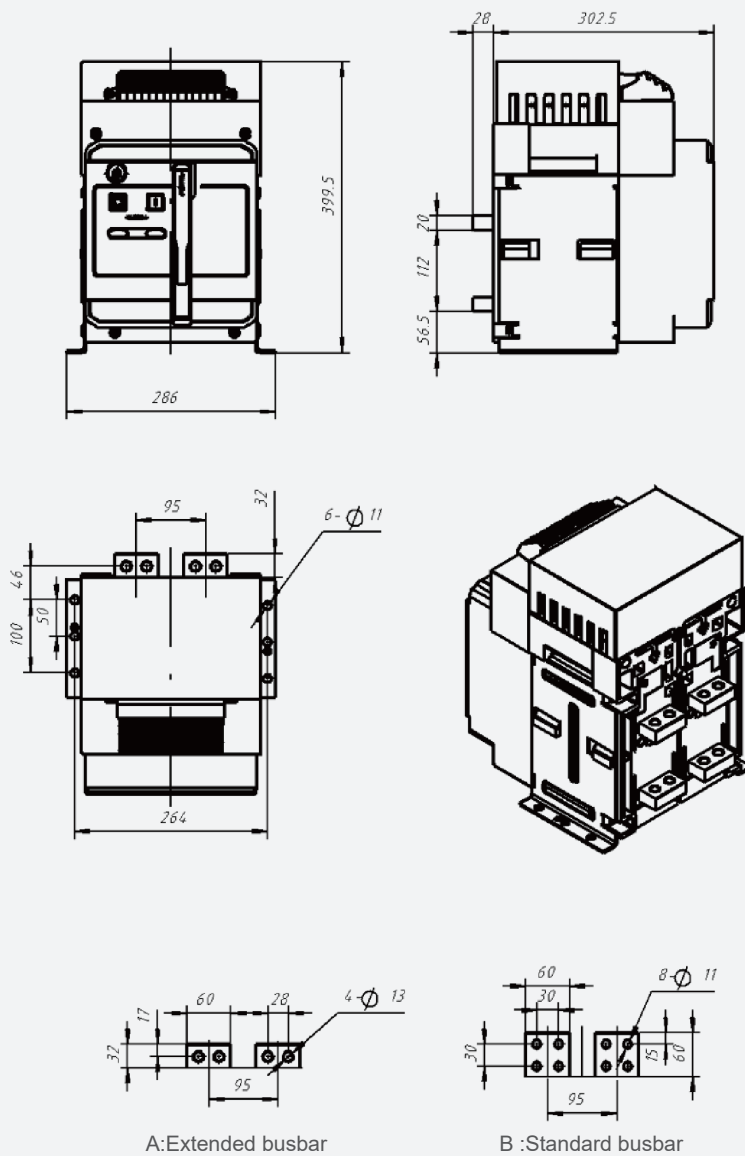


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### Overall and mounting dimensions

YCW8G-2500DC overall and mounting dimensions



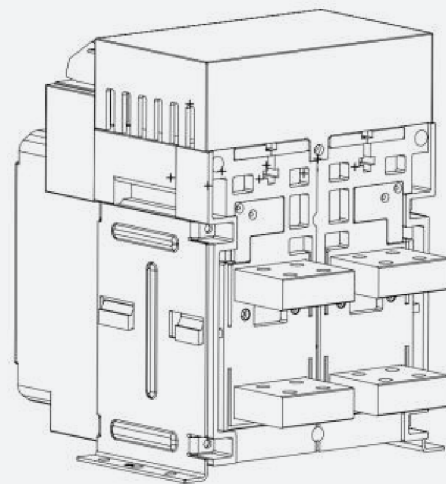
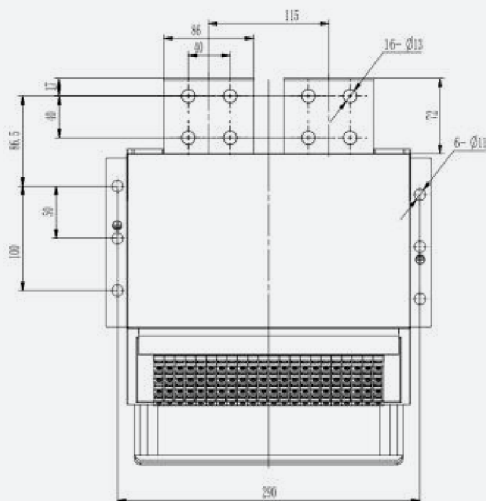
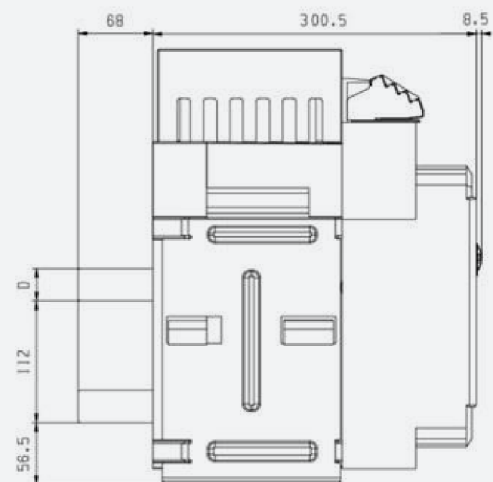
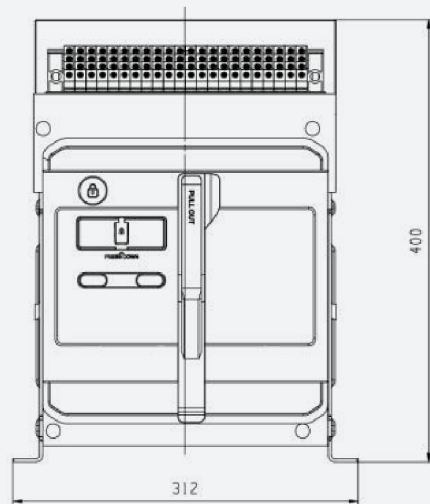
Rated current(A)	D(mm)
630~1600	15
1600~2500	20

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### Overall and mounting dimensions

YCW8G-4000DC overall and mounting dimensions



Rated current(A)	D(mm)
630~2500	20
3200~4000	30

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### Appendix 1: Derating Factor Table

Current range	Ambient temperature	+40°C	+45°C	+50°C	+60°C	+65°C	+70°C
2500A	630A	1.0In	1.0In	1.0In	1.0In	1.0In	1.0In
	800A	1.0In	1.0In	1.0In	1.0In	1.0In	1.0In
	1250A	1.0In	1.0In	1.0In	1.0In	1.0In	1.0In
	1600A	1.0In	1.0In	1.0In	1.0In	1.0In	0.98In
	2000A	1.0In	1.0In	1.0In	1.0In	1.0In	0.79In
	2500A	1.0In	0.95In	0.89In	0.85In	0.97In	0.63In
4000A	2500A	1.0In	1.0In	1.0In	1.0In	0.78In	1.0In
	2900A	1.0In	1.0In	1.0In	1.0In	1.0In	0.86In
	3200A	1.0In	1.0In	1.0In	1.0In	0.97In	0.78In
	3600A	1.0In	1.0In	0.98In	0.94In	0.86In	0.7In
	4000A	1.0In	0.95In	0.89In	0.85In	0.78In	0.63In

### Appendix 2: Altitude Correction Table

Current range	Altitude	2000m	3000m	4000m	5000m
	Ambient temperature	3820V	3440V	2730V	2180V
1600A	630A	1.0In	1.0In	1.0In	1.0In
	800A	1.0In	1.0In	1.0In	1.0In
	1250A	1.0In	1.0In	1.0In	1.0In
	1600A	1.0In	0.93In	1.0In	0.82In
2500A	1600A	1.0In	1.0In	0.88In	1.0In
	2000A	1.0In	1.0In	1.0In	1.0In
	2500A	1.0In	0.93In	0.88In	0.82In

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### Order specification table

User unit		Order quantity	Order date
Basic parameters	Frame current	<input type="checkbox"/> 2500	<input type="checkbox"/> 4000
	Rated current	<input type="checkbox"/> 630 <input type="checkbox"/> 800 <input type="checkbox"/> 1000 <input type="checkbox"/> 1250 <input type="checkbox"/> 1600 <input type="checkbox"/> 2000 <input type="checkbox"/> 2500	<input type="checkbox"/> 2500 <input type="checkbox"/> 2900 <input type="checkbox"/> 3200 <input type="checkbox"/> 3600 <input type="checkbox"/> 4000
	Installation method	<input type="checkbox"/> Fixed type	
	Connection method	<input type="checkbox"/> Horizontal connection	
Accessories	<input type="checkbox"/> Undervoltage release	<input type="checkbox"/> AC220V <input type="checkbox"/> AC380V <input type="checkbox"/> DC110V <input type="checkbox"/> DC220V <input type="checkbox"/> Undervoltage instantaneous release <input type="checkbox"/> Undervoltage delay release <input type="checkbox"/> 1s <input type="checkbox"/> 3s <input type="checkbox"/> 5s <input type="checkbox"/> Voltage loss delay release <input type="checkbox"/> 1s <input type="checkbox"/> 3s <input type="checkbox"/> 5s	
	<input type="checkbox"/> Shunt release	<input type="checkbox"/> AC220V <input type="checkbox"/> AC380V <input type="checkbox"/> DC110V <input type="checkbox"/> DC220V <input type="checkbox"/> Shunt release (instantaneous type) <input type="checkbox"/> Shunt release (holding type)	
	<input type="checkbox"/> Closing electromagnet (instantaneous)	<input type="checkbox"/> AC220V <input type="checkbox"/> AC380V <input type="checkbox"/> DC110V <input type="checkbox"/> DC220V	
	<input type="checkbox"/> Electric operating mechanism	<input type="checkbox"/> AC220V <input type="checkbox"/> AC380V <input type="checkbox"/> DC110V <input type="checkbox"/> DC220V	
	<input type="checkbox"/> Key lock	<input type="checkbox"/> One lock, one key <input type="checkbox"/> Other	
	<input type="checkbox"/> Push-button lock		
	<input type="checkbox"/> Phase separator		
	Auxiliary switches	<input type="checkbox"/> Four sets of changeover (conventional)	<input type="checkbox"/> 3NO3NC <input type="checkbox"/> 4NO4NC <input type="checkbox"/> 6NO6NC
Remarks			