

4P 1500V 35A



- 1 Waterproof Plug
- 2 IP66 Ingress Protection
- 3 Sealed Plug
- 4 Knob
- 5 Standard
- 6 Brand
- 7 Type
- 8 LOCK
- 9 ON
- 10 OFF

BYSS-50



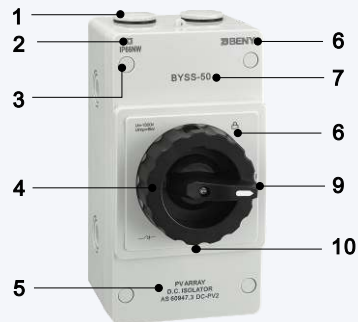
Application

ZBENY BYSS Series DC Isolator is application for 1000V, 1500V commercial system or solar ground. Up to 35A at 1500V, 50A at 1000V. As the solar panels current rating increasing, the solar PV systems require higher voltage and current rating isolators. ZJBENY developed compact BYSS-50 for solar commercial systems and solar ground.

Feature

- IP66 , UV Resistance
- Arcing Time < 3ms
- Earth Terminal
- IEC60947-3, AS60947.3
- 2 Pole, 4 Poles Available(Single | Double String)
- DC-PV2 / DC-21B: 35A up to 1500VDC

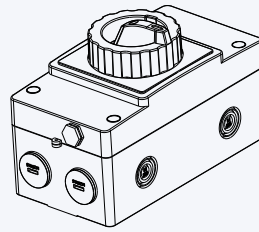
Appearance Introduction



Parameter

Electrical Characteristics		
Type	BYSS-50, BYSS.1-50, BYSS.2-50	
Function	Isolator, Control	
Standard	IEC60947-3, AS60947.3	
Utilization category	DC-PV2 / DC-21B	
Pole	4P	
Rated frequency	DC	
Rated operational voltage (U_e)	500V, 600V, 800V, 1000V, 1200V, 1500V	
Rated operational current (I_e)	See the next page	
Rated insulation voltage (U_i)	1200V	
Conventional free air thermal current (I_{th})	//	
Conventional enclosed thermal current (I_{the})	Same as I_e	
Rated short-time withstand current (I_{cw})	1.5kA, 1s	
Rated short-time making capacity (I_{cm})	2kA	
Rated conditional short-circuit current (I_{cn})	3kA	
Rated impuled withstand voltage (U_{imp})	8.0kV	
Overvoltage category	II	
Suitability for isolation	Yes	
Polarity	No polarity, "+" and "-" polarities could be interchanged.	
Service Life/Cycle Operation		
Mechanical	10000	
Electrical	1000	
Installation Environment		
Ingress Protection	Enclsoure	IP66
	Switch body	IP20
Storage Temperature	-50°C ~ +90°C	
Operation Temperature	-40°C ~ +85°C	
Mounting Type	Vertically or horizontally	
Pollution degree	3	
Suitable environment	Outdoor / Indoor	

Breathing Valve



Remarks:

ZJBENY DC Isolator has a breathing valve already, to avoid the condensation issue.

Identification	Rating data		
Switch, unenclosed - catalogue number (with DC-PV2 rating)	BYSS.1-50, BYSS.2-50		
Specific dedicated individual enclosure - catalogue number (with minimum IP56NW rating)	BYSS-50 IP66NW		
Assembly of switch and specific dedicated individual enclosure - catalogue number	/		
I_{th} rated thermal current, unenclosed, at 40°C shade ambient air temperature	50 amps		
I_{the} rated thermal current, indoors, at 40°C shade ambient air temperature, in a specific dedicated enclosure	50 amps		
I_{the} rated thermal current <u>outdoors</u> at 40°C shade ambient air temperature <u>without solar effects in</u> a specific dedicated enclosure rated IP66NW	50 amps		
I_{the} solar current value outdoors at 60°C shade ambient air temperature (see D.8.3.11, table D3), with solar effects in a specific dedicated enclosure rated IP66NW	50 amps		
	U_e rated operational voltage DC Volts	I_e ; DC-PV2 rated operational current Amps	$I_{(make)}$ and $I_{c(break)}$ DC-PV2 $4 \times I_e$ Amps
2 pole (<u>1</u> / <u>2</u> / ___)	≤300	50	200
	600	50	200
	1000	50	200
	1200	32	128
	1500	16	64
4 pole (<u>1</u> / <u>2</u> / <u>3</u> / <u>4</u> / ___)	≤300	50	200
	600	50	200
	1000	50	200
	1200	50	200
	1500	35	140

Wiring Diagram for Rated operational voltage U_e (V) & Rated operational current I_e (A)

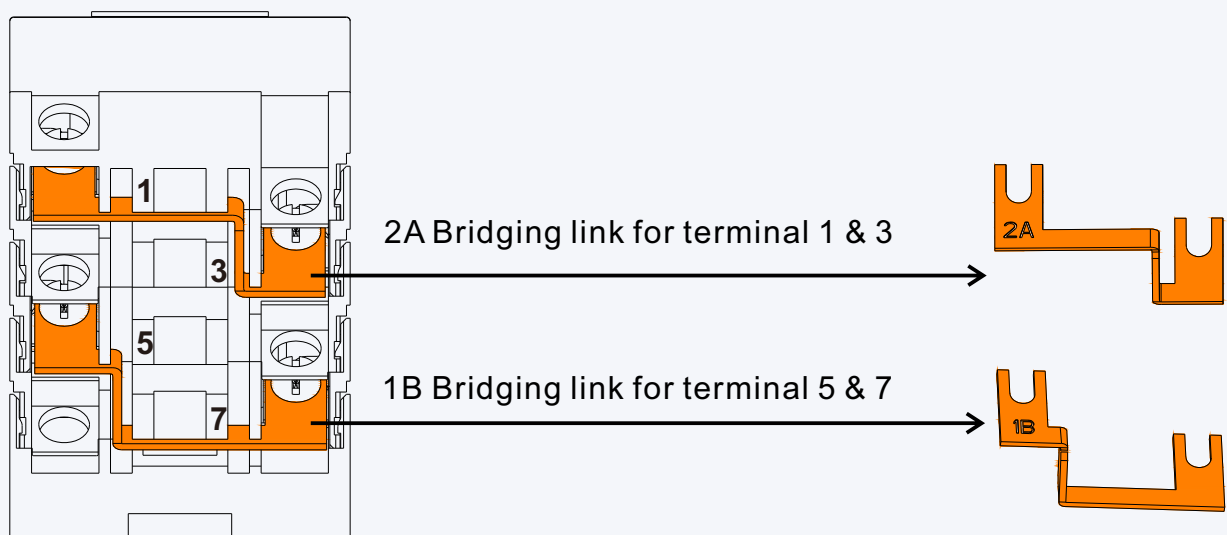
Contacts wiring diagram	300V	600V	1000V	1200V	1500V	Poles in series	Number of Strings	Type Number
	50A	50A	50A	32A	16A	2	2	4
	50A	50A	50A	50A	35A	4	1	4B

Switching Configurations

Type	4-pole	4-pole with Input and Output bottom
/	4	4B
Contacts Wiring graph		
Switching example		



Bridging links installation

installed correctly

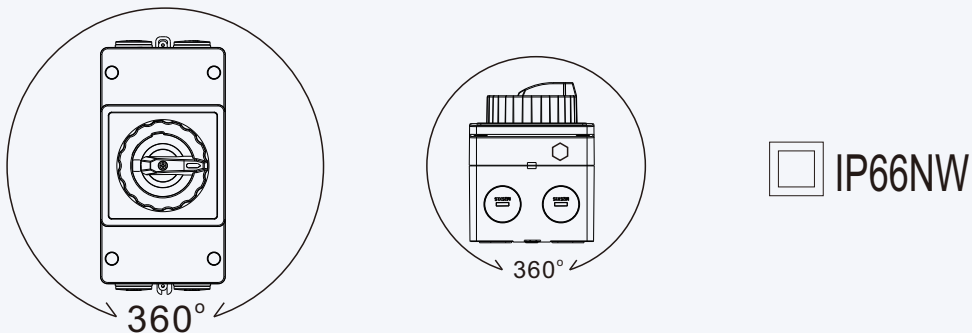


* Warning: Verify that all connections (including bridging link connections) are suitable for the rated current, prepared to ensure only conductive parts are clamped and tightened to the manufacturers required torque before energization.

Terminals / connection

Type		BYSS-50, BYSS.1-50, BYSS.2-50
Number of poles		4-pole
Terminal designation, main circuit		1; 3; 5; 2; 4; 6; 7; 8
Type of terminal, main circuit		Screw terminal
Rated cross section area, main circuit		4.0-16mm ²
Type of onductor		4-16mm ² (Rigid: Solid or Stranded)
		4-10mm ² (Flexible)
Number of conductors per terminal		1
Required preparation of the conductor		Yes
Stripping length (mm), main circuit		8mm
Tightening torque (M4), main circuit		Min: 1.2Nm
		Max: 1.8Nm

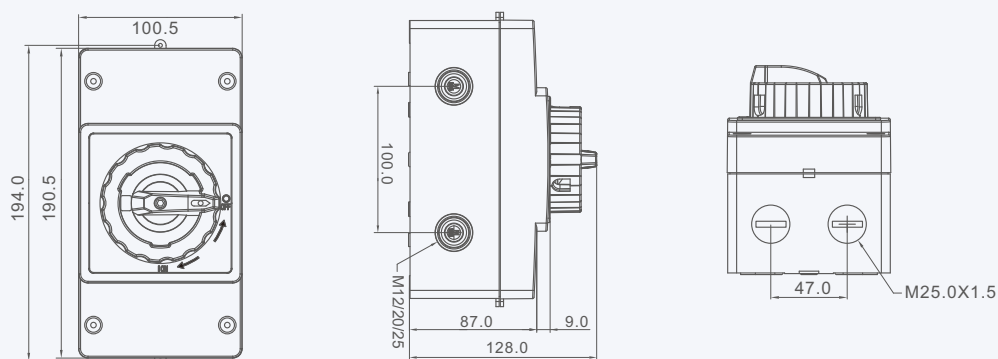
IP Rating



Remarks:

ZJBENY DC Isolator can be installed in any direction, but must do well performance for waterproof.

Dimensions(mm)



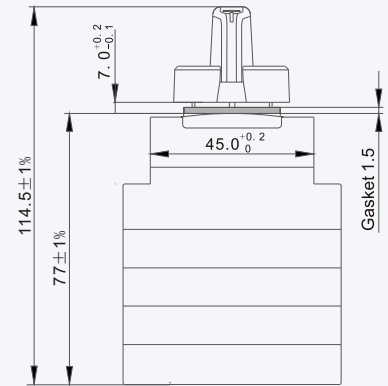
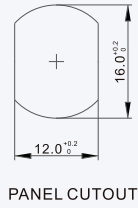
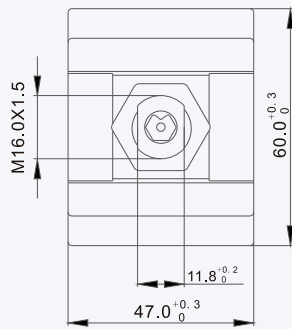
Data according to AS60947-3: 2018

Main Contacts		Type	BYSS-50	Appendix B5
Rated thermal current I_{the}		A	35	Making &
Rated insulation voltage U_i		V	1500	Breaking
Distance of contacts (per pole)		mm	8	5x
Rated operational current I_e (DC-PV2)				operations
1 pole 1	300V	A	25	100
	400V	A	10	40
	500V	A	8	32
	600V	A	8	32
	800V	A	3	12
	1000V	A	2	8
4-pole 2 pole in series 4	500V	A	50	200
	600V	A	50	200
	700V	A	50	200
	800V	A	50	200
	900V	A	50	200
	1000V	A	50	200
	1200V	A	32	128
	1500V	A	16	64
2-pole 4 pole in series 4B	500V	A	50	200
	600V	A	50	200
	700V	A	50	200
	800V	A	50	200
	900V	A	50	200
	1000V	A	50	200
	1200V	A	50	200
	1500V	A	35	140

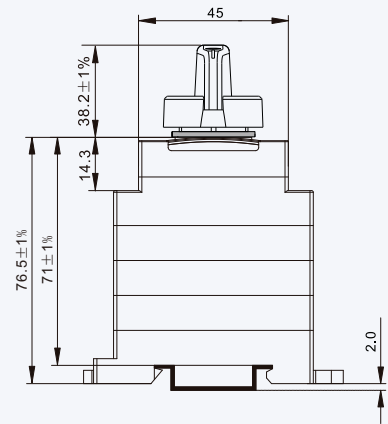
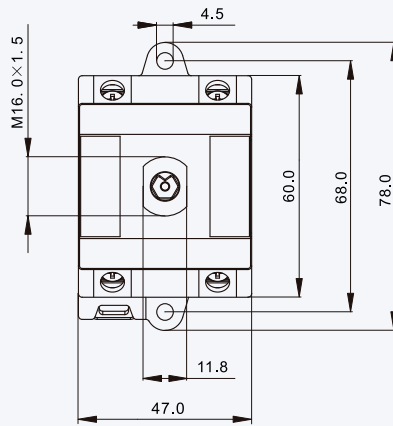
Dimensions(mm)

BYSS.1-50
Panel Mounting
IP66

BYSS.1-50



BYSS.2-50
DIN Rail Mounting
Lockable handle
IP40



BYSS.2-50
Base Mounting
(Door coupling)
Lockable handle
IP66

Remarks: The handle length can be custom-made.

