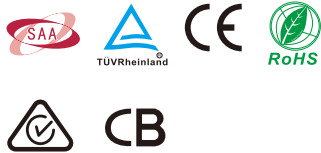


BYSS Series Non-polarity DC Isolator Switches

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



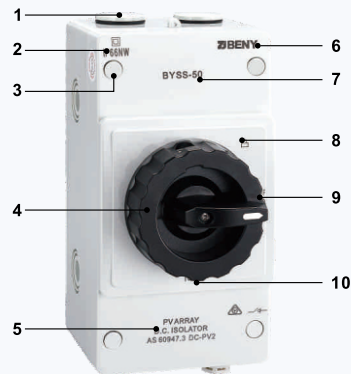
Application

BYSS-50 true DC isolator switch in IP66 enclosure is developed for 1000V 1500V commercial solar rooftop, should be installed between solar panels and inverter for DC power isolation. Each poles up to 35A at 1500V or 50A at 1000V. A breather valve is attached on the enclosure bottom. Patent arc-extinguish chamber and UL listed qualify material ensure a highest level quality and solar DC safety.

Feature

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

Appearance Introduction



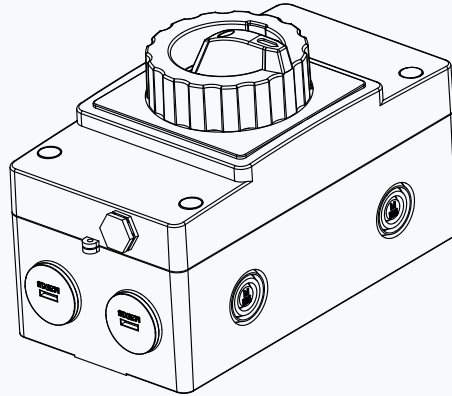
Parameter

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_o)	500V, 600V, 800V, 1000V, 1200V, 1500V
Rated operational current (I_o)	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_o
Rated short-time withstand current (I_{cn})	1.5kA, 1s
Rated short-time making capacity (I_{cm})	2kA
Rated conditional short-circuit current (I_{cn})	3kA
Rated impulsive 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	Enclosure 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

BYSS Series

Non-polarity DC Isolator Switches

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_{tho} rated thermal current, indoors, at 40°C shade ambient air temperature, in a specific dedicated enclosure	50 amps		
I_{tho} rated thermal current outdoors at 40°C shade ambient air temperature <u>without solar effects</u> in a specific dedicated enclosure rated IP66NW	50 amps		
I_{tho} 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 $I_{(break)}$ DC-PV2 4 x I_e Amps
2 pole (_1 / _2 / _)	≤300	50	200
	600	50	200
	1000	50	200
	1200	32	128
	1500	16	64
4 pole (_1 / _2 / _3 / _4 / _)	≤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)

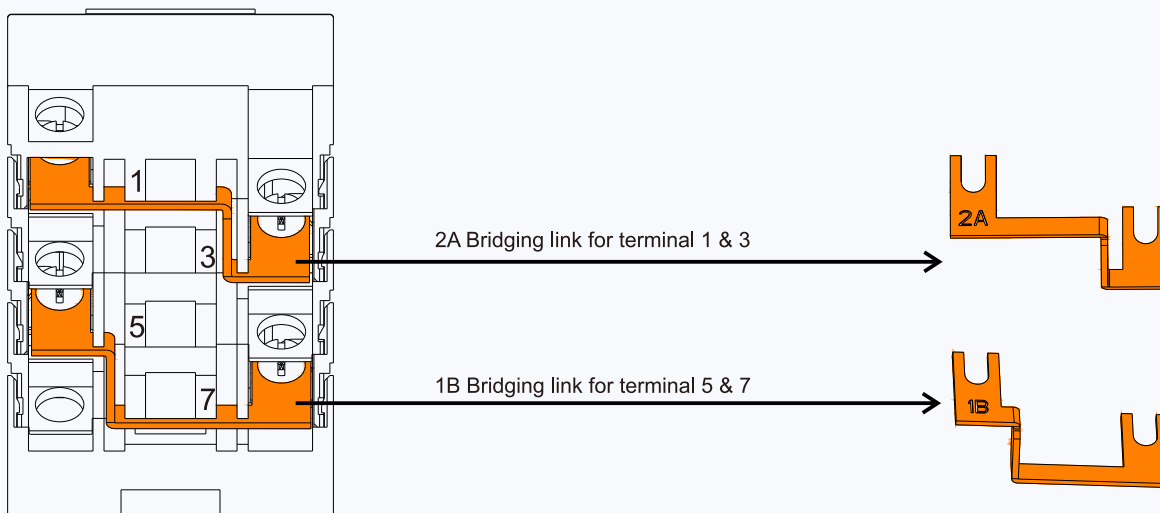
Contacts wiring diagram	300V	600V	1000V	1200V	1500V	Poles in series	Number of Strings	Type Number
	50A	50A	50A	32A	16A	2	2	4
	50A	50A	50A	50A	35A	4	1	4B

Switching Configurations

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

Bridging links installation

Installed incorrectly





*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.

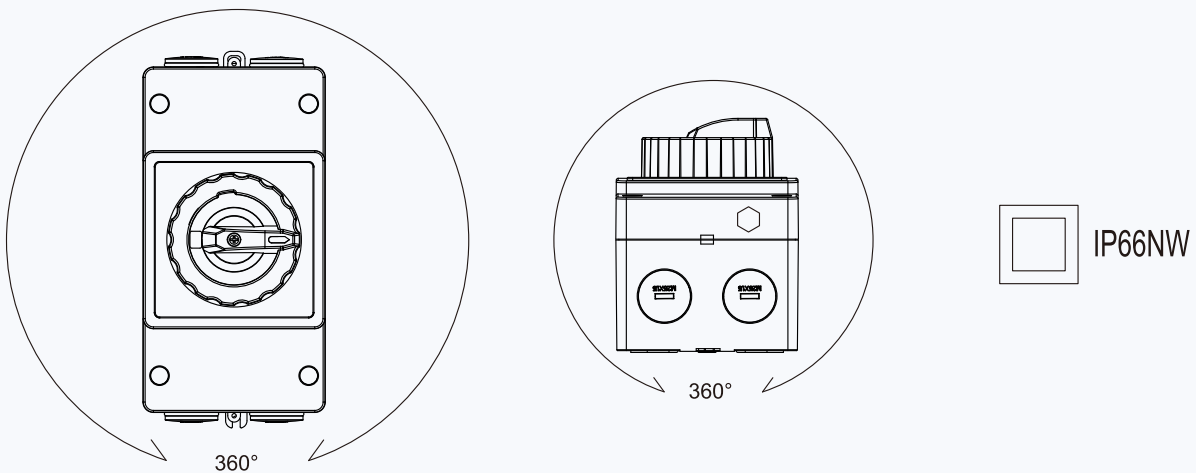
BYSS Series

Non-polarity DC Isolator Switches

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 Conductor	 	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	

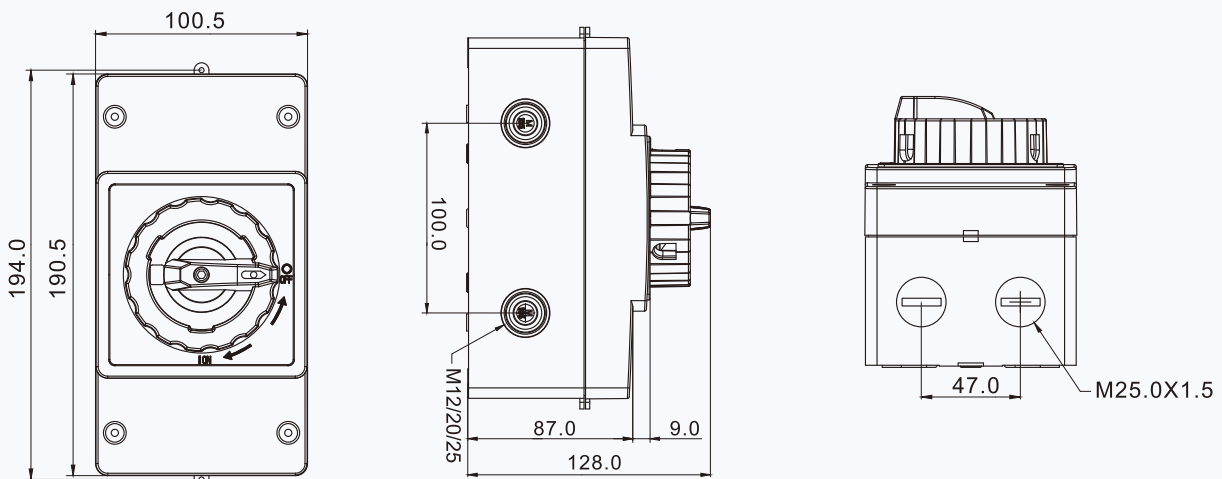
IP Rating



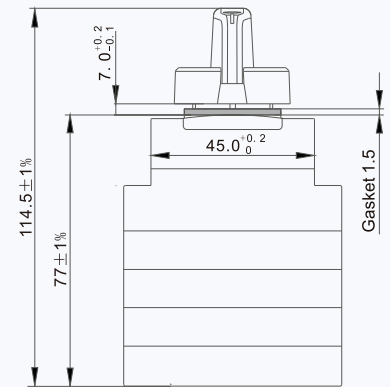
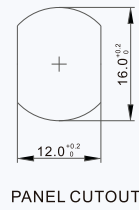
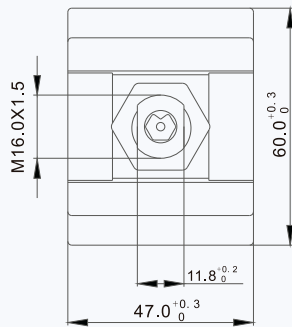
Remarks:

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

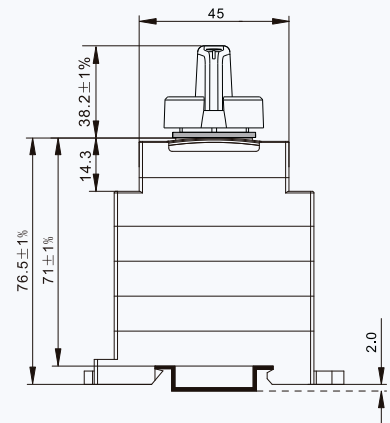
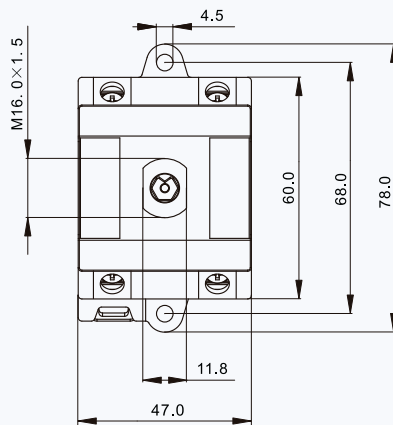
Dimensions(mm)



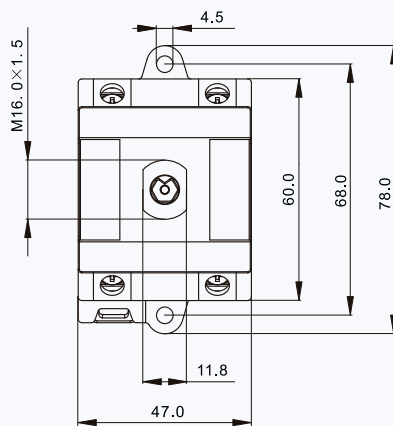
BYSS.1-50
Panel Mounting
IP66



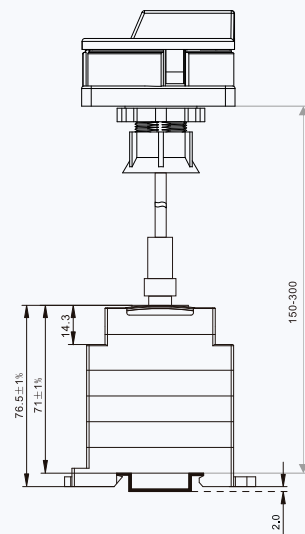
BYSS.2-50
DIN Rail Mounting
Lockable handle
IP40



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



Remarks: The handle length can be custom-made.



BYSS Series

Non-polarity DC Isolator Switches

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 <u>1/</u>	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 <u>1/ 2/</u>	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	25	100
1500V	A	16	64	
2-pole 4 pole in series 4B <u>1/ 2/ 3/ 4/</u>	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	