

BYT Series Non-polarity DC Isolator Switches

4P 1200V 32A



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



Accessories

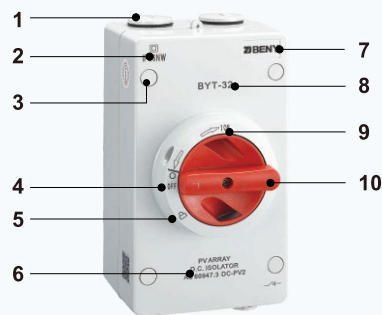
Application

ZBENY BYT-32 true DC isolator switch in IP66 enclosure is developed for solar residential and commercial PV rooftop systems, should be installed between solar panels and inverter for DC power isolation. The first DC isolator complies with DC-PV2 AS60947.3 2018 standard. The patent arc-extinguish chamber and quality material ensure the DC isolator's reliable and long working life. Breather valve is attached on the enclosure bottom. Max voltage up to 1200V.

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: 32A up to 1200VDC

Appearance Introduction



Parameter

Electrical Characteristics

Type	BYT-32, BYT-32M1, BYT-32M2 BYT.1-32, BYT.2-32
Function	Isolator, Control
Standard	IEC60947-3, AS60947.3
Utilization category	DC-PV2 / DC-21B
Pole	4P
Rated frequency	DC
Rated operational voltage (U_e)	600V, 800V, 1000V, 1200V
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_{thc})	Same as I_e
Rated short-time withstand current (I_{cw})	1kA, 1s (4, 4B); 1.7kA, 1s (2H)
Rated short-time making capacity (I_{cm})	1.7kA, (4, 4B); 3kA, (2H)
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.

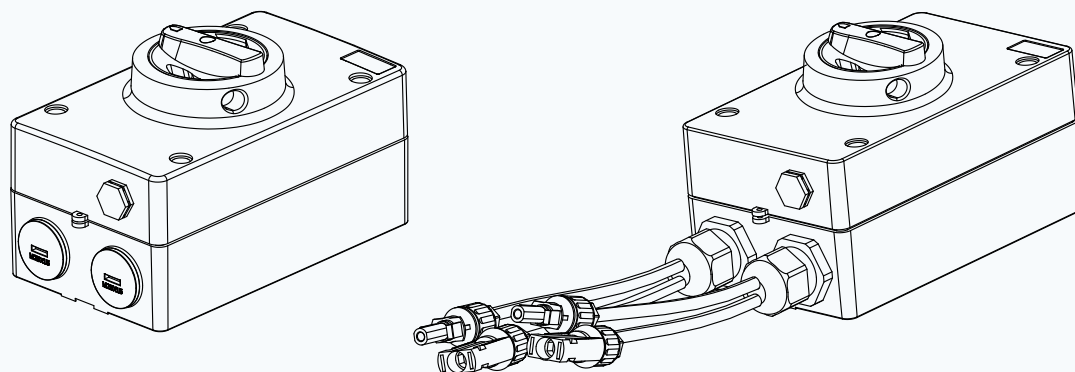
Service Life/Cycle Operation

Mechanical	15000
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

Breathing Valve



Remarks:

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

Identification		Rating data		
Switch, unenclosed - catalogue number (with DC-PV2 rating)		BYT.1-32, BYT.2-32		
Specific dedicated individual enclosure - catalogue number (with minimum IP56NW rating)		BYT-32 IP66NW		
Assembly of switch and specific dedicated individual enclosure - catalogue number		/		
I_{th} rated thermal current, unenclosed, at 40°C shade ambient air temperature		32 amps		
I_{the} rated thermal current, indoors, at 40°C shade ambient air temperature, in a specific dedicated enclosure		32 amps		
I_{the} rated thermal current <u>outdoors</u> at 40°C shade ambient air temperature <u>without solar effects</u> in a specific dedicated enclosure rated IP66NW		32 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		29 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
4-pole 2 pole in series 4	(-1 / -2 / -)	300	32	128
		500	32	128
		600	13	52
		800	13	52
		1000	9	36
		1200	9	36
2-pole 4 pole in series 4B	(-1 / -2 / -3 / -4 / -)	300	32	128
		500	32	128
		600	32	128
		800	32	128
		1000	32	128
		1200	32	128

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

Contacts wiring diagram	300V	600V	800V	1000V	1200V	Poles in series	Number of Strings	Type Number
	32A	32A	13A	9A	9A	2	2	4
	40A	40A	/	/	/	2	1	2H
	32A	32A	32A	32A	32A	2	1	4B

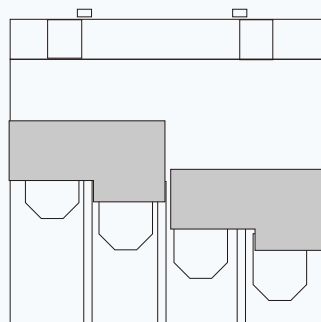
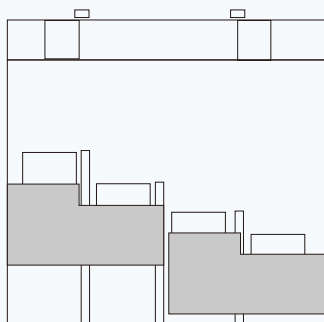
Switching Configurations

Type	4-pole	2-pole 4 Paralleled Poles	4-pole with Input and Output bottom
/	4	2H	4B
Contacts Wiring graph			
Switching example			

Bridging links installation

Installed incorrectly

Installed correctly

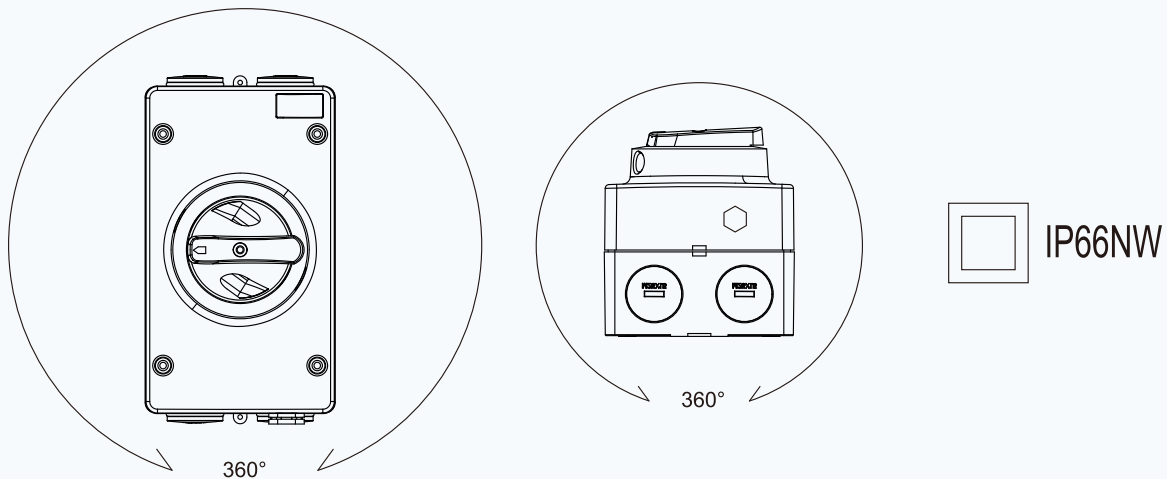


* Warning: Verify that all connections (including bridging link connections) are suitable for the rated current, prepared to ensure only conductive parts are clamped and tightened to the manufacturers required torque before energization.

Terminals / connection

Type	BYT-32, BYT-32M1, BYT-32M2, BYT.1-32, BYT.2-32	
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	

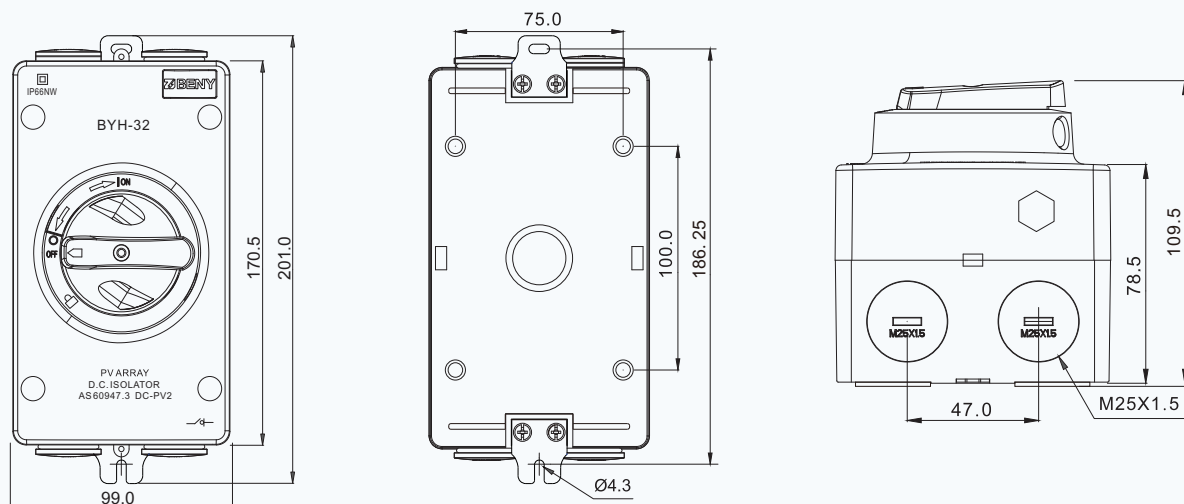
IP Rating



Remarks:

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


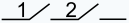
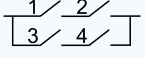
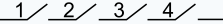
Dimensions(mm)



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Data according to AS60947-3:2018

Main Contacts		Type	BYT-32	Appendix B5	
Rated thermal current I_{the}		A	32	Making &	
Rated insulation voltage U_i		V	1200	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	32
		600V	A	32	128
		700V	A	13	52
		800V	A	13	52
		900V	A	9	36
		1000V	A	9	36
		1200V	A	9	36
2-pole 4 parallel poles 2H 	500V	A	40	160	
	600V	A	40	160	
	700V	A	/	/	
	800V	A	/	/	
	900V	A	/	/	
	1000V	A	/	/	
	1200V	A	/	/	
2-pole 4 pole in series 4B 	500V	A	32	128	
	600V	A	32	128	
	700V	A	32	128	
	800V	A	32	128	
	900V	A	32	32	
	1000V	A	32	32	
	1200V	A	32	32	