BYH Series
DC Isolator Switches

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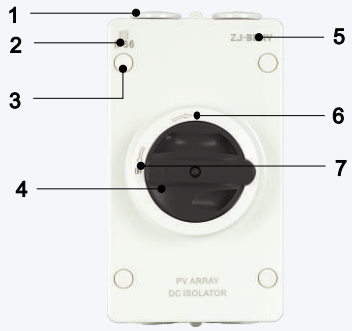
Application

ZBENY BYH Series DC Isolator Switch in plastic enclosure is applied 1~20KW Residential or Commercial Photovoltaic system, placed between photovoltage modules and inverters. Arcing time less than 3ms, that keep solar system more safe. To ensure its stability and long service life, our products are made by components with optimum quality. Max voltage up to 1000V DC It holds a safe lead among similar products.

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: 32A up to 1000VDC

Appearance Introduction



1 Waterproof Plug
2 IP66 Ingress Protection
3 Sealed Plug
4 Knob
5 Brand
6 ON
7 OFF

Parameter

Electrical Characteristics		
Type		BYH-32, BYH-32M1, BYH-32M2
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
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})		1kA,1s (4, 4S,4B); 1.7kA, 1s (2H)
Rated short-time making capacity (I_{cm})		1.7kA,1s (4, 4S,4B); 3kA, 1s (2H)
Rated conditional short-circuit current (I_{cn})		3kA
Rated impulsed 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		20000
Electrical		2000
Installation Environment		
Ingress Protection	Enclsoure	IP66
	Switch body	IP20
Storage Temperature		-5°C ~ +85°C
Mounting Type		Vertically or horizontally
Pollution degree		3
Suitable environment		Outdoor / Indoor

BYH-32

Accessories

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BYH Series
PV DC Isolator Switches

Identification	Rating data		
Switch, unenclosed - catalogue number (with DC-PV2 rating)	BYH.1-32, BYT.2-32		
Specific dedicated individual enclosure - catalogue number (with minimum IP56NW rating)	BYH-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 outdoors at 40°C shade ambient air temperature without solar effects 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 $I_{c(break)}$ DC-PV2 4 x I_e Amps
2 pole (1/2/)	≤500	32	128
	600	32	128
	800	32	128
	1000	13	52
4 pole (1/2/3/4/)	≤500	32	128
	600	32	128
	800	32	128
	1000	32	128

NOTE 1 The rating data in the table is example data, it is intended to be replaced by the relevant actual data.

NOTE 2 The ratings section of this table for U_e, I_e and $I_{(make)}$ and $I_{c(breaker)}$ may have other number of poles or pole configurations than that shown, based on the test evidence obtained.

NOTE 3 The other data required in D.5.2.4 need not be in a table format.

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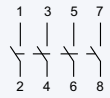
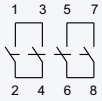
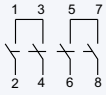
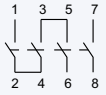
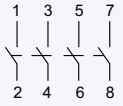
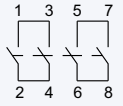
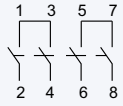
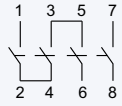
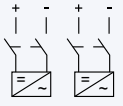
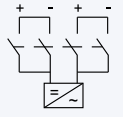
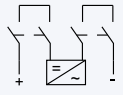
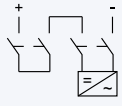
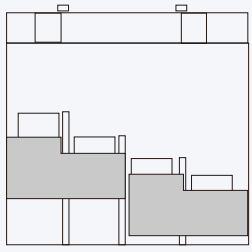
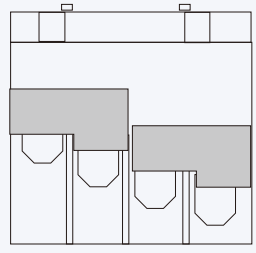
Wiring Diagram for Rated operational voltage Ue (V) & Rated operational current Ie (A)

Contacts wiring diagram	500V	600V	800V	1000V	Poles in series	Number of Strings	Type Number	Weight kg/PCS
	32A	32A	32A	13A	2	2	4	0.70
	50A	50A	45A	13A	2	1	2H	0.70
	32A	32A	32A	32A	2	1	4B	0.70
	32A	32A	32A	32A	4	1	4S	0.70

Switching Configurations

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

Bridging links installation

installed incorrectly	installed correctly
	

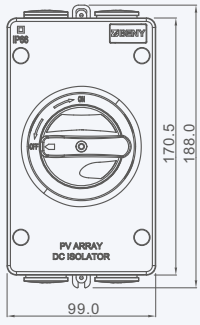
* Please note that all connections (including bridging link connections) should be tightening before energization.

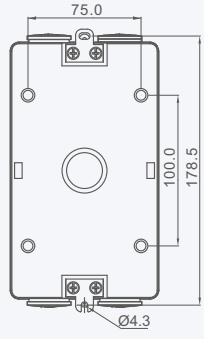
BYH Series
PV DC Isolator Switches

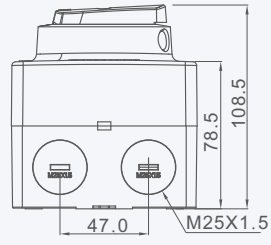
Terminals / connection

Type		BYH-32, BYH-32M1, BYH-32M2
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

Dimensions(mm)







Non-polarity DC Isolator Switch

BYH-32 Technical Data

Data according to IEC 60947-3

BYH-32 with IP66NW Enclosure

				DC-PV2	DC-PV2 AS5033:2014
Main Contacts			**Type**	**BYH-32**	**Appendix B5**
Rated thermal current I_{the}			A	32	Making &
Rated insulation voltage U_i			V	1000	Breaking
Distance of contacts (per pole)			mm	8	5x
					operations
Rated operational current Ie		300V	A	25	40.5
DC21A	1 pole	400V	A	16	24
& DC21B	1	500V	A	13	19.5
	1/	600V	A	10	15
		800V	A	5	7.5
L/R = 1ms		1000V	A	2.5	3.75
DC21B	2 poles in series	500V	A	32	48
	2	600V	A	32	48
	1/2/	700V	A	27	40.5
		800V	A	23	34.5
		900V	A	20	30
		1000V	A	13	19.5
	2 poles in series	500V	A	58	87
	+ 2 poles parallel	600V	A	50	75
	2+2	700V	A	27	40.5
	1/2/	800V	A	23	34.5
	3/4/	900V	A	20	30
		1000V	A	13	19.5
	3 poles in series	500V	A	32	48
	3	600V	A	32	48
	1/2/3/	700V	A	32	48
		800V	A	32	48
		900V	A	32	48
		1000V	A	32	48
	3 poles in series	500V	A	58	87
	+ 2 poles parallel	600V	A	50	75
	3+2	700V	A	45	67.5
	1/2/3/	800V	A	45	67.5
	4/5/6/	900V	A	45	67.5
		1000V	A	45	67.5
	4 poles in series	500V	A	32	48
	4	600V	A	32	48
	1/2/3/4/	700V	A	32	48
		800V	A	32	48
		900V	A	32	48
		1000V	A	32	48
	4 poles in series	500V	A	58	87
	+ 2 poles parallel	600V	A	58	87
	4+2	700V	A	58	87
	1/2/3/4/	800V	A	58	87
	5/6/7/8/	900V	A	58	87
		1000V	A	58	87