

# PV DC Isolator Switches



BYS series is DC isolator switch for PV application.  
Comply with kinds of electrical standard.  
Rated current is 5A to 63A, Rated working voltage is 600V to 1500V  
Module design can match with many wire ways.  
Mounting: Standard Din Rail/Panel mounting/Fix installation

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# BYS Series DC Isolator Switches



- 1 Waterproof Plug
- 2 IP66 Ingress Protection
- 3 Sealed Plug
- 4 Type
- 5 Application Category
- 6 Knob
- 7 BE LOCKABLE
- 8 Electrical Diagram
- 9 Brand
- 10 ON
- 11 OFF

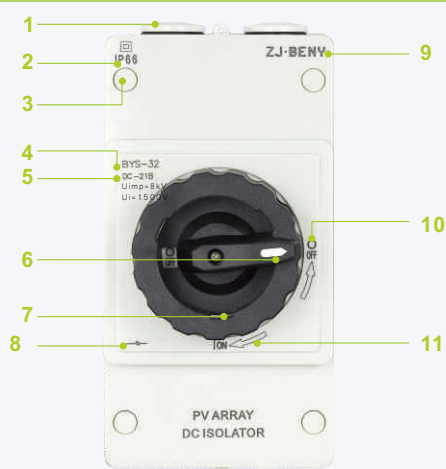
## Application

**ZBENY** BYS-63 DC isolator switch is applied to 1kw to 20kw PV systems. The enclosure protection degree is IP66 for outdoor installation.

## Feature

- Compact structure
- UV resistant, IP66 enclosure
- Non polarity
- Arcing time < 3ms
- "OFF" position Lockable
- IEC60947-3 Standard
- 4P,6P
- DC-21B
- Ui:1500V/Uimp:8kV

## Appearance Introduction



Technical data	Symbol	Merit	Unit
Rated operational voltage (DC poles)	Ue		V DC
Rated operational current (DC poles)	Ie		A DC
Conventional free air thermal current	Ith	63	A
Rated impulse withstand voltage	Uimp	8	kV
Rated short-time withstand current (1s)	Icw	8	kA
Rated short-circuit making capacity	Icm	8	kA
Rated conditional short-circuit current		8	kA
Standard Short Circuit Rating		5	kA
High-Fault Short Circuit Rating		8	kA
Insulation voltage	Ui	1500	v
Utilization category DC	DC-21B		
Number of cycles of operation(With current)		3000 times (6T Type is 2200 times only)	
Number of cycles of operation(Without current)		7000	
Number of DC poles		4/6	
Method of mounting		Standard TH35-7.5 DIN rail mounting	
Method of operation		independent manual operation	
Knob operation force		max.	1.4 Nm
Tightening torque terminal screws M4 , min. - max.M4		1.2	1.8 Nm
Tightening torque panel mounting nut, min. - max.		1.0	1.5 Nm
Tightening torque M3 screw in the standard black knob, min. - max.		0.5	0.7 Nm
Ambient temperature allowed between		-40to+70 °C	
Storage temperature allowed between		-40to+80 °C	
Maximum relative humidity, without condensation at 20°C		90 %	
Pollution degree		2	
IP rating terminals		IP66	

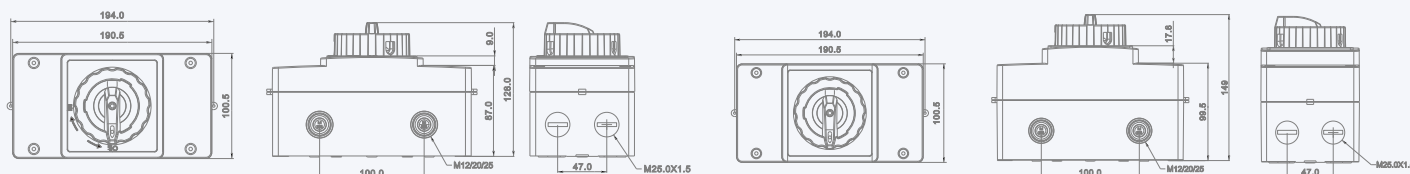
## Wiring Diagram

Contact Configuration	DC-21B Rating						Poles in series	Number of Strings	Type Number	Weight kg/pcs
	600V	800V	900V	1000V	1200V	1500V				
	50A						2	1	BYS-63-2H	0.91
	32A	23A		16A	10A	5A	2	2	BYS-63-4	0.91
	40A	40A		40A	32A	16A	4	1	BYS-63-4S	0.91
	40A	40A		40A	32A	16A	4	1	BYS-63-4B	0.91
	32A	32A		32A	32A	16A	4	1	BYS-63-4T	0.91
	32A	23A		16A	10A	5A	2	3	BYS-63-6	1.05
	63A						2	1	BYS-63-3H	1.05
	32A	32A		32A	32A	32A	6	1	BYS-63-6S	1.05
	32A	32A		32A	32A	32A	6	1	BYS-63-6B	1.05
	40A	40A		40A			3	2	BYS-63-6T	1.05

## Switching Configurations

Type	2-pole 4Parlleled poles	4-pole	2-pole with input on top Output bottom	2-pole with Input and Output bottom	2-pole with Input and Output on top	6-pole	2-pole 6Parlleled poles	2-pole with input on top Output bottom	2-pole with Input and Output bottom	4-pole with Input and Output bottom
BYS-63	2H	4	4S	4B	4T	6	3H	6S	6B	6T
Contacts Wiring diagram										
Switching example										

## Dimensions(mm)



# BYS

## Series DC Isolator Switches

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# BYS Series

## DC Isolator Switches

- 1 Brand
- 2 Type
- 3 OFF
- 4 Application Category
- 5 Insulation voltage
- 6 Rated impulse withstand voltage
- 7 Rated Current
- 8 ON
- 9 Certificate Symbol
- 10 Knob
- 11 Standard Code

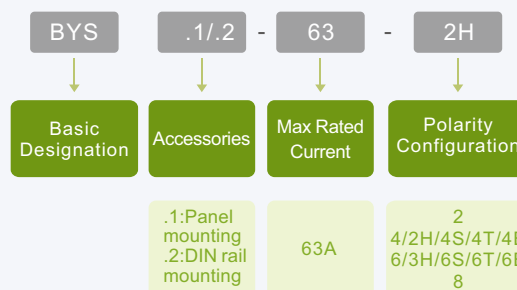


### Application

**BENY** BYS series DC isolator switch for PV system. Rated current is 5A to 63A, Rated working voltage is 600V to 1500V. Double design can match with many wire ways. Mounting: Standard Din Rail/Panel mounting/Fix installation



### Type Instruction



Technical data	Symbol	Merit	Unit
Rated operational voltage (DC poles)	Ue		V DC
Rated operational current (DC poles)	Ie		A DC
Conventional free air thermal current	Ith	63	A
Rated impulse withstand voltage	Uimp	8	kV
Rated short-time withstand current (1s)	Icw	8	kA
Rated short-circuit making capacity	Icm	8	kA
Rated conditional short-circuit current		8	kA
Standard Short Circuit Rating		5	kA
High-Fault Short Circuit Rating		8	kA
Insulation voltage	Ui	1500	V
Utilization category DC	DC-21B		
Number of cycles of operation (With current)	3000 times (6T Type is 2200 times only)		
Number of cycles of operation (Without current)	7000		
Number of DC poles		1/2/3/4/6/8	
Method of mounting	Panel mounting/Standard TH35-7.5 DIN rail mounting		
Method of operation	independent manual operation		
Knob operation force		max.	1.4 Nm
Tightening torque terminal screws M4, min. - max. M4		1.2	1.8 Nm
Tightening torque panel mounting nut, min. - max.		1.0	1.5 Nm
Tightening torque M3 screw in the standard black knob, min. - max.		0.5	0.7 Nm
Ambient temperature allowed between		-40to+70 °C	
Storage temperature allowed between		-40to+80 °C	
Maximum relative humidity, without condensation at 20 °C		90 %	
Pollution degree		2	
IP rating terminals		IP20	
IP rating gland of the shaft in case of single hole panel mounting		IP66	



# BYS.1 DC Isolator Switches

- Panel Mounting
- Compact Structure
- Arcing time < 3ms
- Busbar Design, Easy Installation
- Flame-Retardant
- Modular Design
- Non polarity
- IEC60947-3 Standard
- 2P,4P,6P,8P
- DC-21B/U<sub>i</sub>:1500V/U<sub>imp</sub>:8kV
- NAME Type 4X Handle



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## Wiring Diagram

Contact Configuration	DC-21B Rating						UL Ratings UL508i			Poles in series	Number of Strings	Type Number	Weight kg/pcs
	600V	800V	900V	1000V	1200V	1500V	500V	600V	1000V				
	12A	8A	6A	4A						2	1	BYS.1-63-2	0.18
		25A	20A	16A	16A	5A	32A	25A		2	1	BYS.1-63-2	0.18
	20A	16A	13A	11A	9A	3A				2	2	BYS.1-63-3	0.18
	50A							45A		2	1	BYS.1-63-2H	0.26
	32A	23A		16A	10A	5A	32A	25A		2	2	BYS.1-63-4	0.26
	40A	40A		40A	32A	16A	32A	32A	32A	4	1	BYS.1-63-4S	0.26
	40A	40A		40A	32A	16A	32A	32A	32A	4	1	BYS.1-63-4B	0.26
	32A	32A		32A	32A	16A	32A	32A	32A	4	1	BYS.1-63-4T	0.26
	32A	23A		16A	10A	5A	32A	25A		2	3	BYS.1-63-6	0.33
	63A							50A		2	1	BYS.1-63-3H	0.33
	32A	32A		32A	32A	32A	40A	40A	40A	6	1	BYS.1-63-6S	0.33
	32A	32A		32A	32A	32A	40A	40A	40A	6	1	BYS.1-63-6B	0.33
	40A	40A		40A			32A	25A	20A	3	2	BYS.1-63-6T	0.33
	32A	23A	20A	16A	10A	5A	32A	25A		2	4	BYS.1-63-8	0.4
		63A						58A		4	1	BYS.1-63-4H	0.4

## Switching Configurations

Type	1-pole	2-pole	3-pole	2-pole 4Parlleled poles	4-pole	2-pole with Input on top Output bottom	2-pole with Input and Output bottom	2-pole with Input and Output on top
Part Number	BYS.1-63-1	BYS.1-63-2	BYS.1-63-3	BYS.1-63-2H	BYS.1-63-4	BYS.1-63-4S	BYS.1-63-4B	BYS.1-63-4T
Contacts Wiring diagram								
Switching example								

Type	6-pole	2-pole 6Parlleled poles	2-pole with Input on top Output bottom	2-pole with Input and Output bottom	4-pole with Input and Output bottom	8-pole	2-pole 8Parlleled poles
Part Number	BYS.1-63-6	BYS.1-63-3H	BYS.1-63-6S	BYS.1-63-6B	BYS.1-63-6T	BYS.1-63-8	BYS.1-63-4H
Contacts Wiring diagram							
Switching example							

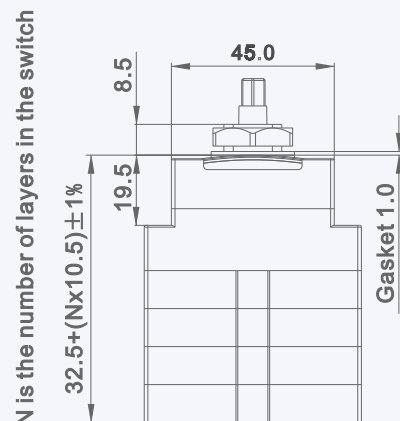
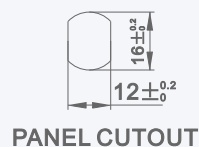
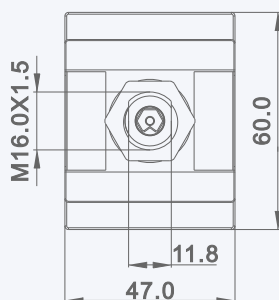
## Bus-barwire A and Bus-barwire A for series and parallel switching of contacts

Type	Weight	
Bus-barwire A	2.9g/pc	
Bus-barwire B	2.9g/pc	

## WIRING RATINGS

Wires per pole	Conductor material	Wire size(AWG)	Wire size(mm <sup>2</sup> )	Torque
1	Copper (Cu)	14 AWG-8 AWG, Stranded	2.5mm <sup>2</sup> ~10.0mm <sup>2</sup>	1.2N·m~1.8N·m

## Dimensions(mm)





# BYS.2 DC Isolator Switches

- Din Rail Mounting And Fixed Mounting
- Compact Structure
- Arcing Time < 3ms
- Busbar Design, Easy Installation
- Flame Resistance
- Modular Design
- Non polarity
- IEC60947-3 Standard
- 2P, 4P, 6P,8P
- DC-21B/Ui:1500V/Uimp:8kV



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## Wiring Diagram

Contact Configuration	DC-21B Rating						UL Ratings UL508i			Poles in series	Number of Strings	Type Number	Weight kg/pcs
	600V	800V	900V	1000V	1200V	1500V	500V	600V	1000V				
		25A	20A	16A	16A	5A	32A	25A		2	1	BYS.2-63-2	0.17
	50A							45A		2	1	BYS.2-63-2H	0.25
	32A	23A		16A	10A	5A	32A	25A		2	2	BYS.2-63-4	0.25
	40A	40A		40A	32A	16A	32A	32A	32A	4	1	BYS.2-63-4S	0.25
	40A	40A		40A	32A	16A	32A	32A	32A	4	1	BYS.2-63-4B	0.25
	32A	32A		32A	32A	16A	32A	32A	32A	4	1	BYS.2-63-4T	0.25
	32A	23A		16A	10A	5A	32A	25A		2	3	BYS.2-63-6	0.32
	63A							50A		2	1	BYS.2-63-3H	0.32
	32A	32A		32A	32A	32A	40A	40A	40A	6	1	BYS.2-63-6S	0.32
	32A	32A		32A	32A	32A	40A	40A	40A	6	1	BYS.2-63-6B	0.32
	40A	40A		40A			32A	25A	20A	3	2	BYS.2-63-6T	0.32
	32A	23A	20A	16A	10A	5A	32A	25A		2	4	BYS.2-63-8	0.4
		63A						58A		4	1	BYS.2-63-4H	0.4

## Switching Configurations

Type	2-pole	2-pole 4Parlleled poles	4-pole	2-pole with Input on top Output bottom	2-pole with Input and Output bottom	2-pole with Input and Output on top
Part Number	BYS.2-63-2	BYS.2-63-2H	BYS.2-63-4	BYS.2-63-4S	BYS.2-63-4B	BYS.2-63-4T
Contacts Wiring diagram						
Switching example						

Type	6-pole	2-pole 6Parlleled poles	2-pole with Input on top Output bottom	2-pole with Input and Output bottom	4-pole with Input and Output bottom	8-pole	2-pole 8Parlleled poles
Part Number	BYS.2-63-6	BYS.2-63-3H	BYS.2-63-6S	BYS.2-63-6B	BYS.2-63-6T	BYS.2-63-8	BYS.2-63-4H
Contacts Wiring diagram							
Switching example							

## Bus-barwire A and Bus-barwire A for series and parallel switching of contacts

Type	Weight	
Bus-barwire A	2.9g/pc	
Bus-barwire B	2.9g/pc	

## WIRING RATINGS

Wires per pole	Conductor material	Wire size(AWG)	Wire size(mm <sup>2</sup> )	Torque
1	Copper (Cu)	14 AWG-8 AWG, Stranded	2.5mm <sup>2</sup> ~10.0mm <sup>2</sup>	1.2N·m~1.8N·m

## Dimensions(mm)

