



LEADING MANUFACTURER PROVIDES SOLAR POWER SAFETY



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If the models and specifications in this product catalogue is changed due to the change of products, we will not inform.



Leading Supplier for Solar Photovoltaic Components



COMPANY PROFILES



Leading Manufacturer for
PV Solution

ZBENY is top 1 DC switch brand in solar PV industry.

The first DC switch listed by UL508i in China.

The first DC isolator in full range complies with AS60947.3:2018 DC-PV2.

Recommend to solar PV installers by top inverter companies worldwide and Clean Energy Council Australia.

We are developing true DC components at 1000V 1500V, supplying DC string level safety to solar PV industry.

Mission:

Making Solar PV Power System More Reliable and Safe

Value:

Honesty, Responsibility, Innovation

Faith:

People-oriented, creating value; Scientific management, keeping developing

Quality policy:

Create the Best Products and Superb Service

Social Responsibility:

Devote us to improve the quality of life of the workforce and their families as well as the local community and society at large and to behave ethically in business and contribute to economic development.

Making Superb Product ,Creating Top Brand

MANUFACTURING

The **ZBENY** Quality Management System, which includes this Policy, provides the framework through which a formal and continuing program of review is adopted and fully supported so that products, services and the effectiveness of systems, policies, objectives and targets may be continually measured and improved as far as possible.

ZBENY defines Quality as conformance to our Customers' needs, both internally and externally, and as conformance to all defined quality system requirements. Consequently, we recognise the value of our customers and the impact of our activities upon them.



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Safety



CERTIFICATE



BYH/BYT

Series DC Isolator Switches

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BYH Series DC Isolator Switches



ZBENY

Application

ZBENY BYH-32 1000V 32A is the first DC isolator comply with AS 60947.3:2018 DC-PV2. The true DC isolator use widely in residential and commercial solar PV installations. With the most suitable material and specific switch instruction design, the DC arc is extinguished in 3ms. Also means a reliable and durable DC isolator for the solar PV systems.

Feature

- IP66, UV Resistance
- Arcing Time < 3ms
- Breather Valve
- 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_n)	500V, 600V, 800V, 1000V
Rated operational current (I_n)	See the next page
Rated insulation voltage (U_i)	1200V
Conventional free air thermal current (I_{th})	II
Conventional enclosed thermal current (I_{thn})	Same as I_n
Rated short-time withstand current (I_{sw})	1kA, 1s (4, 4S, 4B); 1.7kA, 1s (2H)
Rated short-time making capacity (I_{sm})	1.7kA, (4, 4S, 4B); 3kA, (2H)
Rated conditional short-circuit current (I_{sc})	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 Switch body	IP66 IP20
Storage Temperature		-40°C ~ +85°C
Mounting Type		Vertically or horizontally
Pollution degree		3
Suitable environment		Outdoor / Indoor



BYH-32M1



Accessories

BYH Series PV DC Isolator Switches

Identification	Rating data		
Switch, unenclosed - catalogue number (with DC-PV2 rating)	BYH.1-32, BYH.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_{th} rated thermal current, indoors, at 40°C shade ambient air temperature, in a specific dedicated enclosure	32 amps		
I_{th} rated thermal current outdoors at 40°C shade ambient air temperature without solar effects in a specific dedicated enclosure rated IP66NW	32 amps		
I_{th} 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_o rated operational voltage DC Volts	I_o , DC-PV2 rated operational current Amps	$I_{(make)}$ and $I_{(break)}$ DC-PV2 4 x I_o Amps
2 pole (1 / 2 / ___)	≤500	32	128
	600	13	52
	800	9	36
	1000	9	36
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_o , I_o and $I_{(make)}$ and $I_{(break)}$ 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.

Wiring Diagram for Rated operational voltage U_o (V) & Rated operational current I_o (A)

Contacts wiring diagram	500V	600V	800V	1000V	Poles in series	Number of Strings	Type Number	Weight kg/PCS
	32A	13A	9A	9A	2	2	4	0.70
	40A	/	/	/	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

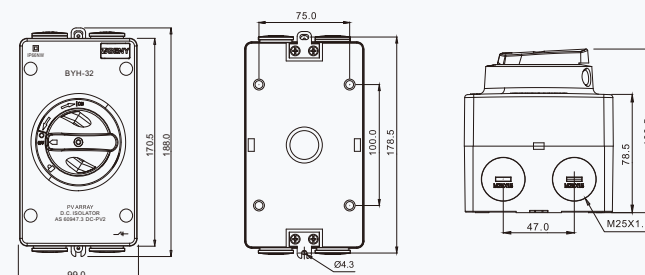
Installed incorrectly	Installed correctly

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

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)



BYT Series
DC Isolator Switches



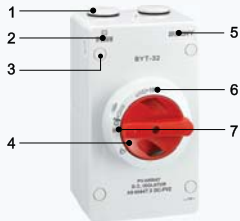
Application

ZBENY BYT-32 1200V 32A is the first DC isolator comply with AS 60947.3:2018 DC-PV2. The true DC isolator use widely in residential and commercial solar PV installations. With the most suitable material and specific switch instruction design, the DC arc is extinguished in 3ms. Also means a reliable and durable DC isolator for the solar PV systems.

Feature

- IP66, UV Resistance
- Arcing Time < 3ms
- Breather Valve
- Earth Terminal
- IEC60947-3, AS60947.3
- 2 Pole, 4 Poles Available(Single | Double String)
- DC-PV2 / DC-21B: 32A up to 1200VDC

Appearance Introduction



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

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_{fa})	II	
Conventional enclosed thermal current(I_{fe})	Same as I_{fa}	
Rated short-time withstand current (I_{ws})	1kA, 1s (4, 4S, 4B); 1.7kA, 1s (2H)	
Rated short-time making capacity (I_{ms})	1.7kA, (4, 4S, 4B); 3kA, (2H)	
Rated conditional short-circuit current (I_{ca})	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	15000	
Electrical	1000	
Installation Environment		
Ingress Protection	Enclosure	IP66
	Switch body	IP20
Storage Temperature	-40°C ~ +85°C	
Mounting Type	Vertically or horizontally	
Pollution degree	3	
Suitable environment	Outdoor / Indoor	



BYT-32M1



Accessories

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_{th} rated thermal current, indoors, at 40°C shade ambient air temperature, in a specific dedicated enclosure	32 amps		
I_{th} 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_{th} 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_{max} and I_{cbmax} DC-PV2 4 x I_e Amps
2 pole (1 / 2 / _)	≤600	32	128
	800	13	52
	1000	9	36
	1200	9	36
4 pole (1 / 2 / 3 / 4 / _)	≤600	32	128
	800	32	128
	1000	32	128
	1200	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_{max} and I_{cbmax} 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.

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

Contacts wiring diagram	600V	800V	1000V	1200V	Poles in series	Number of Strings	Type Number	Weight kg/PCS
	32A	13A	9A	9A	2	2	4	0.70
	40A	/	/	/	2	1	2H	0.70
	32A	32A	32A	32A	2	1	4B	0.70
	32A	32A	32A	32A	4	1	4S	0.70

BYT Series
PV DC Isolator Switches

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

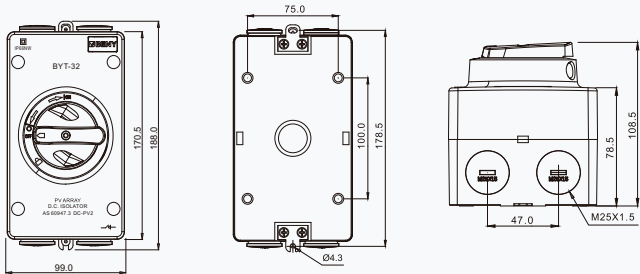
Installed incorrectly	Installed correctly

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

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 ondutor	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)



PV DC Isolator Switches



IP66 DC isolator for commercial systems

BYSS-50 DC isolator can hold 1500V at 35A, 1000V at 50A per pole.
As the solar panels current rating is increasing day by day, the commercial systems require higher voltage and current rating isolators.
ZJBENY developed compact BYSS-50 for solar commercial systems.

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



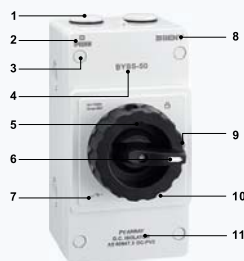
Application

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

Feature

- IP66, UV Resistance
- Arcing Time < 3ms
- Breather Valve
- 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
Function	Isolator, Control
Standard	IEC60947-3, AS60947.3
Utilization category	DC-PV2 / DC-21B
Pole	4P
Rated frequency	DC
Rated operational voltage (U_e)	300V, 600V, 1000V, 1200V, 1500V
Rated operational current (I_e)	See the next page
Rated insulation voltage (U_i)	1500V
Conventional free air thermal current (I_a)	II
Conventional enclosed thermal current (I_{en})	Same as I_e
Rated short-time withstand current (I_{sn})	1.5kA, 1s
Rated short-time making capacity (I_{sm})	2kA
Rated conditional short-circuit current (I_{sc})	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	-40°C ~ +85°C
Mounting Type	Vertically or horizontally
Pollution degree	3
Suitable environment	Outdoor / Indoor

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</u> in 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	$I_{(maker)}$ and $I_{(breaker)}$ 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

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 $I_{(maker)}$ and $I_{(breaker)}$ 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.

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

Contacts wiring diagram	600V	1000V	1200V	1500V	Poles in series	Number of Strings	Type Number	Weight kg/PCS
	50A	50A	32A	16A	2	2	4	0.70
	50A	50A	50A	35A	4	1	4B	0.70

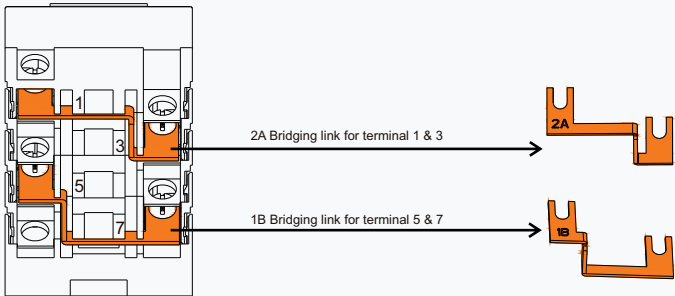
Switching Configurations

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

BYSS Series
PV DC Isolator Switches

Bridging links installation

Installed incorrectly

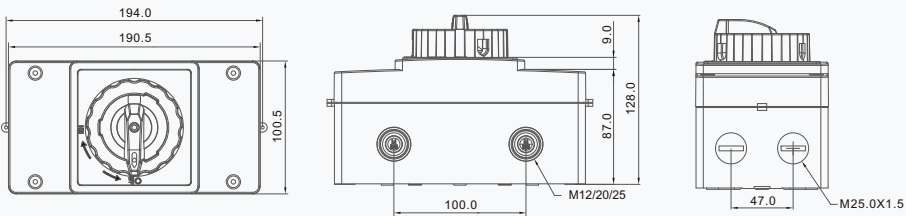


* Please note that all connections (including bridging link connections) should be tightening before energization.

Terminals / connection

Type	BYSS-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

Dimensions(mm)



BYT.2
Series DC Isolator Switches

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BYT.2 Series DC Isolator Switches



Accessories

Application

ZBENY BYT.2 series DC Isolator Switches are applied to 1-20KW Inverter, Controller, DC Combiner Box, used for Residential or Commercial PV solar power system(on-grid/off-grid). Arcing time less than 3ms, that make PV solar system effectively disconnected.

BYT.2-32 DC Isolator Switches

- DIN Rail Mounting
- BYT.2-32 Rated Voltage 1200V DC
- OFF LOCKABLE
- Flame-Retardant
- Arcing Time < 3ms
- IEC60947-3
- 4Poles(Single|Double Strings Available)
- DC-21B: 16A,25A,32A up to 1200V DC

BYT.2-32 DC Isolator Switches

- DIN Rail Mounting Door Clutch
- BYT.2-32 Rated Voltage 1200V DC
- OFF LOCKABLE
- Flame-Retardant
- Arcing Time < 3ms
- IEC60947-3
- 4 poles(Single|Double Strings Available)
- DC-21B: 16A,25A,32A up to 1200V DC

Parameter

Electrical Characteristics	
Type	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_{fa})	II
Conventional enclosed thermal current(I_{fe})	Same as I_{fa}
Rated short-time withstand current (I_{st})	1kA, 1s (4, 4S, 4B); 1.7kA, 1s (2H)
Rated short-time making capacity (I_{sm})	1.7kA,(4, 4S, 4B); 3kA,(2H)
Rated conditional short-circuit current (I_{sc})	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	IP20
Storage Temperature	-40°C ~ +85°C
Mounting Type	Vertically or horizontally
Pollution degree	3
Suitable environment	Indoor

ZBENY

DC Isolator Switches

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_{th} rated thermal current, indoors, at 40°C shade ambient air temperature, in a specific dedicated enclosure	32 amps		
I_{th} 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_{th} 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
2 pole (1 / 2 / —)	≤600	32	128
	800	13	52
	1000	9	36
	1200	9	36
4 pole (1 / 2 / 3 / 4 / —)	≤600	32	128
	800	32	128
	1000	32	128
	1200	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 $I_{(break)}$ 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.

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

Contacts wiring diagram	600V	800V	1000V	1200V	Poles in series	Number of Strings	Type Number	Weight kg/PCS
	32A	13A	9A	9A	2	2	4	0.70
	40A	/	/	/	2	1	2H	0.70
	32A	32A	32A	32A	2	1	4B	0.70
	32A	32A	32A	32A	4	1	4S	0.70

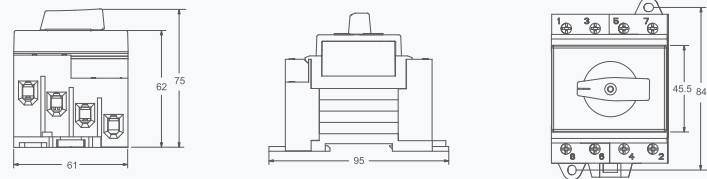
BYT.2 Series
PV DC Isolator Switches

Switching Configurations

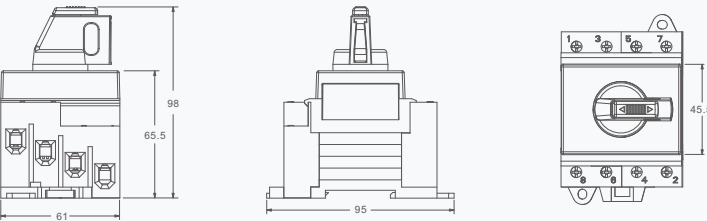
Type	4-pole	2-pole 4 Paralleled Poles	4-pole with Input and Output bottom	4-pole with Input on top Output bottom
/	4	2H	4B	4S
Contacts Wiring graph				
Switching example				

Dimensions(mm)

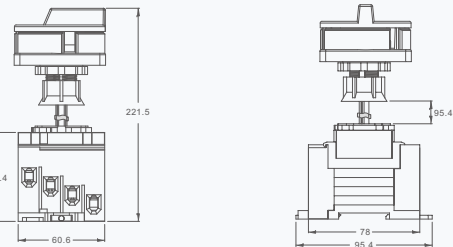
BYT.2-32
DIN Rail Mounting



BYT.2-32
DIN Rail Mounting
Lockable handle



BYT.2-32
DIN Rail Mounting
Door Clutch
Lockable handle



BYSS.1

Series DC Isolator Switches

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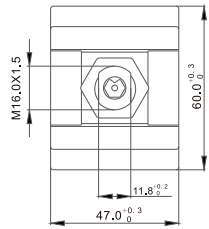
BYSS.1 Series
DC Isolator Switches



IEC/EN 60947-3:2015

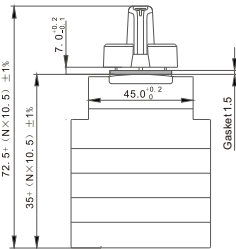
- 1 Brand
- 2 Type
- 3 OFF
- 4 Application
- 5 Insulation voltage
- 6 Rated impulse withstand voltage
- 7 Rated Current
- 8 ON
- 9 Knob

Dimensions(mm)



PANEL CUTOUT

BYSS.1-X



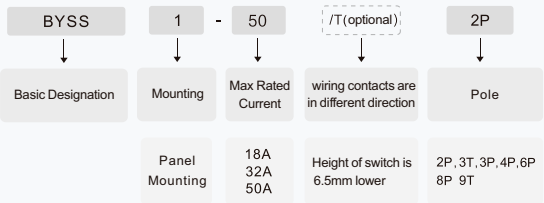
Application

ZBENY BYSS Series DC disconnect switch is used in 1-200KW solar inverter, 2P for 1 load up to 1000V 50A or 1500V 16A, low temperature rising, long worklife and short arcing time. For Multiple independent MPPTs.

Appearance Introduction



Type Instruction



Parameter

Electrical Characteristics		
Rated Working Voltage	Ue	Details in diagram
Rated Current	Ie	Details in diagram
Conventional free air thermal current	Ith	50A
Rated impulse withstand voltage	Uimp	8kV
Rated short-time withstand current(1s)	Icw	1.5kA
Rated short-circuit making capacity	Icm	2.0kA
Rated conditional short-circuit current(kA)		8kA
Installation Environment		
Utilizatin category DC		DC-21B, DC-PV2
Number of cycles of operation(with current)		300
Number of cycles of operation(without current)		10000
Pole		2/3/4/6/8/9
Mounting		Panel Mounting
Tightening torque terminal screws M4, min.-max.	1.2Nm	1.8Nm
Tightening torque panel mounting nut, min.-max.	3.0Nm	3.5Nm
Ambient temperature allowed between		-40°C~+85°C
Storage temperature allowed between		-40°C~+85°C
Relative Humidity		90%
Pollution degree		2
IP rating terminals		IP66

Wiring Diagram

	Type	Contact Configuration					Poles in series	Number of Strings
			800V	1000V	1200V	1500V		
	BYSS.1-18-2P		25A	18A	15A		2	1
	BYSS.1-32-2P		40A	32A	25A			
	BYSS.1-50-2P		50A	50A	40A	16A	2	1
	BYSS.1-32-3P		25A	20A	16A		2	2
	BYSS.1-50-3P		32A	25A	20A		2	2
	BYSS.1-50-3T				50A	40A	3	1
	BYSS.1-18-4P		25A	18A	15A		2	2
	BYSS.1-32-4P		40A	32A	25A		2	2
	BYSS.1-50-4P		50A	50A	40A	16A	2	2
	BYSS.1-18-6P		25A	18A	15A		2	3
	BYSS.1-32-6P		40A	32A	25A		2	3
	BYSS.1-50-6P		50A	50A	40A	16A	2	3
	BYSS.1-50-6T				50A	40A	3	2
	BYSS.1-18-8P		25A	18A	15A		2	4
	BYSS.1-32-8P		40A	32A	25A		2	4
	BYSS.1-50-8P		50A	50A	40A	16A	2	4
	BYSS.1-50-9T				50A	40A	3	3

Switching Configurations

Type	2P	3P	3T	4P	6P	6T	8P	9T
Contacts Wiring diagram								
Switching example								

BYSS.2

Series DC Isolator Switches

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BYSS.2 Series DC Isolator Switches



IEC/EN 60947-3:2015

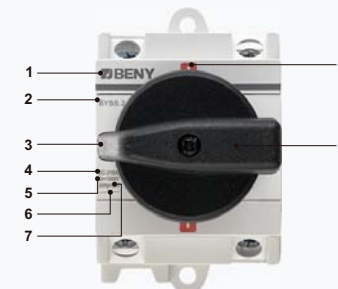
- 1 Brand
- 2 Type
- 3 OFF
- 4 Application
- 5 Insulation voltage
- 6 Rated impulse withstand voltage
- 7 Rated Current
- 8 ON
- 9 Knob

ZBENY

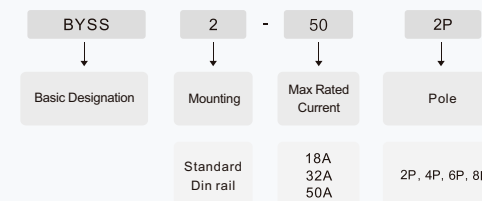
Application

ZBENY BYSS Series DC disconnect switch is used in 1-200KW solar inverter, 2P for 1 load up to 1000V 50A or 1500V 16A. low temperature rising, long work life and short arcing time. For Multiple independent MPPTs.

Appearance Introduction



Type Instruction



Parameter

Electrical Characteristics		
Rated Working Voltage	Ue	Details in diagram
Rated Current	Ie	Details in diagram
Conventional free air thermal current	Ith	50A
Rated impulse withstand voltage	Uimp	8kV
Rated short-time withstand current(1s)	Icw	1.5kA
Rated short-circuit making capacity	Icm	2.0kA
Rated conditional short-circuit current(kA)		8kA
Installation Environment		
Utilization category DC		DC-21B, DC-PV2
Number of cycles of operation(with current)		300
Number of cycles of operation(without current)		10000
Pole		2/3/4/6/8/9
Mounting		Standard Din rail
Tightening torque terminal screws M4, min.-max.	3.0Nm	3.5Nm
Tightening torque panel mounting nut, min.-max.	0.5Nm	0.7Nm
Ambient temperature allowed between		-40°C~+85°C
Storage temperature allowed between		-40°C~+85°C
Relative Humidity		90%
Pollution degree		2
IP rating terminals		IP66

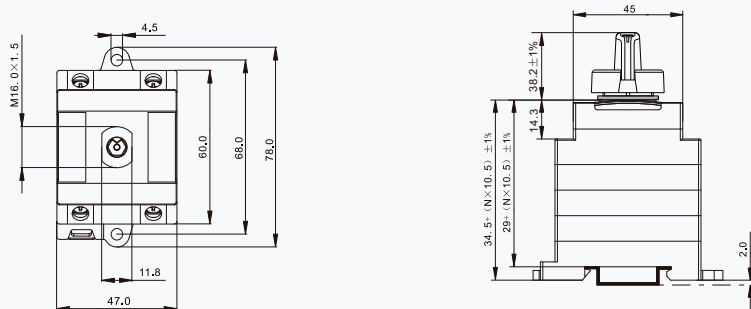
Wiring Diagram

	Type	Contact Configuration					Poles in series	Number of Strings
			800V	1000V	1200V	1500V		
	BYSS.2-18-2P		25A	16A 18A	15A		2	1
	BYSS.2-32-2P		40A	32A	25A		2	1
	BYSS.2-50-2P		50A	40A 50A	40A	16A	2	1
	BYSS.2-18-4P		25A	16A 18A	15A		2	2
	BYSS.2-32-4P		40A	32A	25A		2	2
	BYSS.2-50-4P		50A	40A 50A	40A	16A	2	2
	BYSS.2-18-6P		25A	16A 18A	15A		2	3
	BYSS.2-32-6P		40A	32A	25A		2	3
	BYSS.2-50-6P		50A	40A 50A	40A	16A	2	3
	BYSS.2-50-6T				50A	40A	3	2
	BYSS.2-18-8P		25A	16A 18A	15A		2	4
	BYSS.2-32-8P		40A	32A	25A		2	4
	BYSS.2-50-8P		50A	40A 50A	40A	16A	2	4

Switching Configurations

Type	2P	3P	3T	4P	6P	6T	8P	9T
Contacts Wiring diagram								
Switching example								

Dimensions(mm)



BYSS.1/BYSS.2 Series in UL version



UL508i

- 1 Brand
- 2 Type
- 3 OFF
- 4 ON
- 5 Electrical symbol



Application

ZBENY BYSS Series DC disconnect switch is used in 1-200KW solar inverter, Compliance with UL508i, 2P for 1 load up to 1000V DC 30A or 750V DC 50A. low temperature rising, long worklife and short arcing time. For Multiple independent MPPTs.

Appearance Introduction



Type Instruction

BY	SS	.1	-	50	/T(optional)	2
Manufacturer Code	Product Code	Mounting	Max Rated Current	wiring contacts are in different direction (only .1 series)	Pole	
ZJBENY		.1: Panel Mounting .2: Standard Din rail	50A		2P, 4P, 6P, 8P	

Parameter

Electrical Characteristics		
Rated Working Voltage	Ue	Details in diagram
Rated Current	Ie	Details in diagram
Conventional free air thermal current	Ith	50A
Rated impulse withstand voltage	Uimp	8kV
Rated short-time withstand current(1s)	Icw	1.5kA
Rated short-circuit making capacity	Icm	2.0kA
Standard fault short-circuit current		5kA
High fault short-circuit current		8kA
Installation Environment		
Number of cycles of operation(with current)		6000
Number of cycles of operation(without current)		10000
Pole		2/4/6/8
Mounting	Panel Mounting	Standard Din rail
Tightening torque terminal screws M4, min.-max.		1.2Nm-1.8Nm
Tightening torque panel mounting nut, min.-max.		3.0Nm-3.5Nm
Conventional handle tightening torque screws M3, min.-max.		0.5Nm-0.7Nm
Long lever handle tightening torque screws M3, min.-max.		1.5Nm-1.8Nm
Ambient temperature allowed between		-40°C~+85°C
Storage temperature allowed between		-40°C~+85°C
Relative Humidity		90%
Pollution degree		2
IP rating terminals		IP20
IP rating panel mounting		IP66

BYSS.1/BYSS.2
Series in UL version

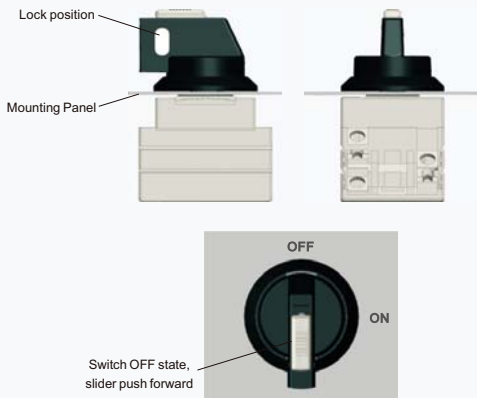
Wiring Diagram

	Type	Max Rated Current(UL508I)			Poles in series	Number of Strings
		350V/500V/600V	750V	1000V		
	BYSS.1-50-2 BYSS.1-50/T-2 BYSS.2-50-2	16A	50A	16A	2	1
		18A				
		20A				
		25A				
		32A				
		38A				
		40A				
		45A				
	BYSS.1-50-4 BYSS.1-50/T-4 BYSS.2-50-4	50A	50A	30A	2	2
		16A				
		18A				
		20A				
		25A				
		32A				
		38A				
		40A				
	BYSS.1-50-6 BYSS.1-50/T-6 BYSS.2-50-6	45A	50A	30A	2	3
		50A				
		16A				
		18A				
		20A				
		25A				
		32A				
		38A				
	BYSS.1-50-8 BYSS.1-50/T-8 BYSS.2-50-8	40A	50A	25A	2	4
		45A				
		50A				
		16A				
		18A				
		20A				
		25A				
		32A				

Switching Configurations

Type	2P	4P	6P	8P
Contacts Wiring diagram				
Switching example				

Operating handle type

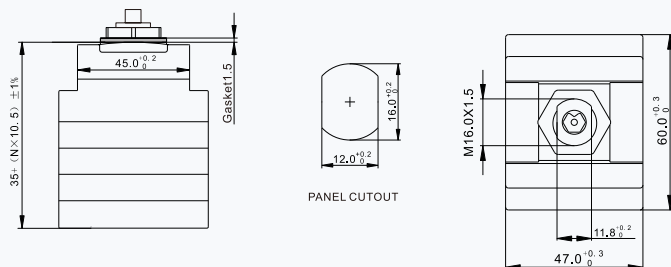
Name	Type	Diagram										
Conventional operating handle	BYSS.1-50 BYSS.1-50/T BYSS.2-50	Lock position Mounting Panel 										
Long lever operating handle	BYSS.2-50	 H  <table><tr><th>Poles</th><th>H(min.-max.)</th></tr><tr><td>2P</td><td>130mm-280mm</td></tr><tr><td>4P</td><td>150mm-300mm</td></tr><tr><td>6P</td><td>170mm-320mm</td></tr><tr><td>8P</td><td>190mm-340mm</td></tr></table>	Poles	H(min.-max.)	2P	130mm-280mm	4P	150mm-300mm	6P	170mm-320mm	8P	190mm-340mm
Poles	H(min.-max.)											
2P	130mm-280mm											
4P	150mm-300mm											
6P	170mm-320mm											
8P	190mm-340mm											

BYSS.1/BYSS.2

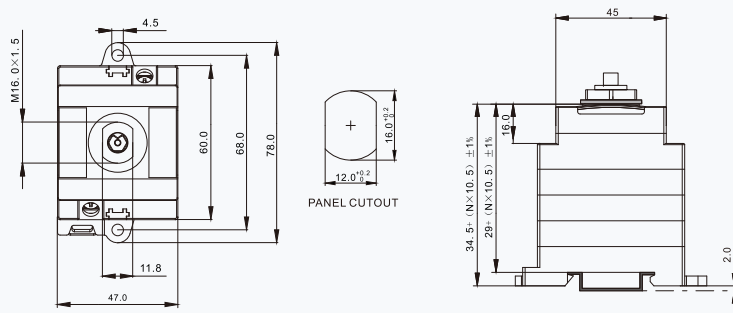
Series in UL version

Dimensions(mm)

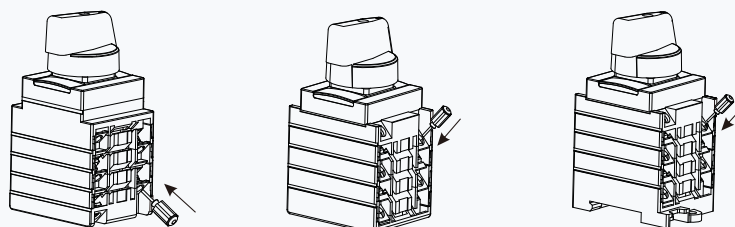
BYSS.1-50



BYSS.2-50



Wiring direction



BYSS.1-50

BYSS.1-50/T

BYSS.2-50

Connection capability

Number of cable	Terminal material	Wire range(AWG/mm ²)	Tightening torque terminal screws
1	Cu	12 AWG-6AWG /2.5-10mm ²	1.8Nm

BB1H-63 PV DC Isolator Switches

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BB1H-63

PV DC Isolator Switches



- 1 Brand
- 2 Type
- 3 Rated Current
- 4 Rated Voltage
- 5 Standard Code
- 6 Certificate Symbol
- 7 Indicator
- 8 Wiring Diagram

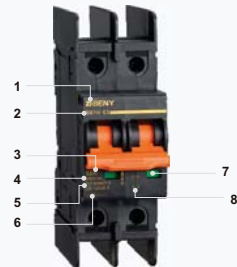
- Nonpolarity
- Functions: Unfrequent operation and Isolation
- Rated Current: Up to 63A
- Rated Voltage: 1200V DC
- Flash Barrier Keep System More Safe
- Comply with :IEC60947-3/GB14048-3



Application

ZBENY BB1 Series PV DC Isolator switches are mainly be used in PV solar power system, which are applied for DC solar combiner box, controller etc. The Max voltage up to 1200V DC, current up to 63A ,with the function of effective disconnection and Anti-reflux protection. Scientific design of arc-extinguishing system keep PV system more safe.

Appearance Introduction



Type Instruction

BB1H	-	63	4P	25	1200V
Product Code		Max Rated Current	Pole	Rated Current	Rated Voltage
PV DC Isolator Switches		63A	1P 2P 3P 4P	25A 40A 63A	300V 600V 900V 1200V

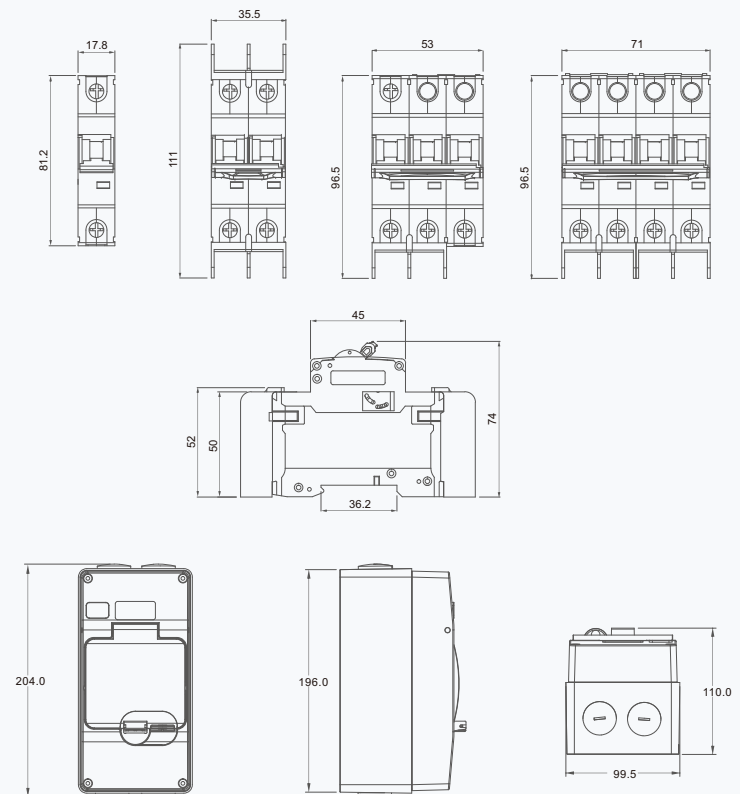
Parameter

Electrical Characteristics					
Type		BB1H-63			
Comply With		IEC60947-3/GB14048.3			
Pole		1P	2P	3P	4P
Rated Working Voltage	Ue	300V DC	600V DC	900V DC	1200V DC
Max Rated Current		63A			
Rated Current	In	25A, 40A, 63A			
Rated Insulated Voltage	Ui	1200V DC			
Rated Impulsed Voltage	Uimp	6KV			
Service Life/cycle Operation					
Mechanical	Actual Value	20000			
	Standard Value	8500			
Electrical	Actual Value	4000			
	Standard Value	1500			
Isolator Function		Yes			
Installation Environment					
Ingress Protection		All Sides IP40 ,Connection Terminal IP20			
Terminal Cross Section		2.5-25mm ²			
Working Temperature		-25°C ~ +70°C			
Storage Temperature		-40°C ~ +85°C			
Resistance to Humidity And Heat		II (when humidity arrived to 55°C,relative humidity95%)			
Resistance to Shock		2.6 IEC60068			
Resistance to Impack		2.27 IEC60068			

Wiring Method

Pole	1P	2P	3P	4P
Type				
Contacts Wiring graph				

Dimensions(mm)



BDH

BDH Series PV DC Moulded Case Isolator Switch

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BDH Series PV DC Moulded Case Isolator Switch



- 1 Brand
- 2 Type
- 3 Rated Current
- 4 Rated Voltage
- 5 Rated Short-time Withstand Current
- 6 Standard Code
- 7 Certificate Symbol
- 8 Wiring Diagram

- High Insulation Performance
- Functions: Unfrequent Operation and Isolation
- Rated Voltage up to 1200V
- Rated Current 125A, 250A, 400A, 630A
- IEC60947-3, GB14048-3

ZBENY

Application

ZBENY BDH series PV DC Moulded Case Isolator Switches are mainly used in large solar power system, such like solar DC combiner box, inverter and DC power distribution cabinet. Rated voltage up to 1200V DC, Rated Current up to 630A with the function of effective isolator.

Appearance Introduction



Type Instruction

BDH	-	630	4P	1200V
Product Code		Max Rated Current	Pole	Rated Voltage
PV DC Moulded Case Isolator Switch		125A, 250A, 400A, 630A	4P	1200V

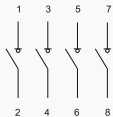
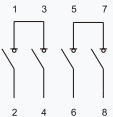
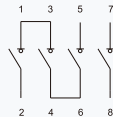
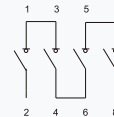
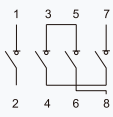
Parameter

BDH series PV DC Moulded Case Isolator Switch					
Type	BDH-125		BDH-250	BDH-400	BDH-630
Pole				4P	
Max Rated Current	125A		250A	400A	630A
Electrical Characteristics					
Rated Working Voltage	U _e		1200V DC		
Rated Current	In(A)	60/80 100/125	125/160 200/250	250/300/315 350/400	400/500/630
Rated Insulated Voltage	U _i		1200V DC		
Rated Impulsed Voltage	U _{imp}		8KV		
1 Min Power Frequency Withstand Voltage					3.8KV
Control And Indication					
Control Mode	Manual	Direct (RHD)		Optional	
		Extended(ERH)		Optional	
	MOD			Optional	
Shunt Release (SHT)				Optional	
Auxiliary Release				Optional	
Terminal End Cover				Yes	
Interphase Barriers				Yes	
Service Life/Cycle Operation					
Mechanical		14000	14000	5000	5000
Electrical		5000	5000	1500	1500
Size (L x W x H)		150x122x92	165x140x89	258x198x107	282x282x115
Ingress Protection		All Sides IP40, Connection Terminal IP20			
Installation Environment					
Comply with			IEC60947-3/GB14048.3		
Storage Temperature			-40°C ~ +85°C		

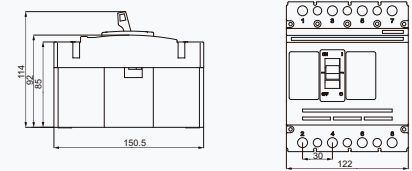
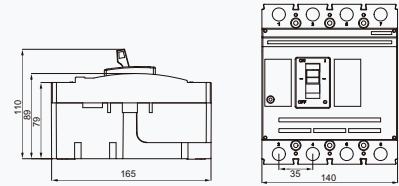
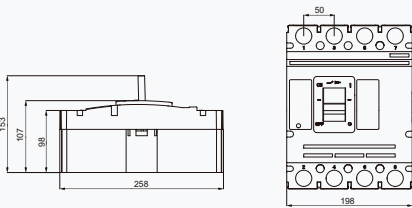
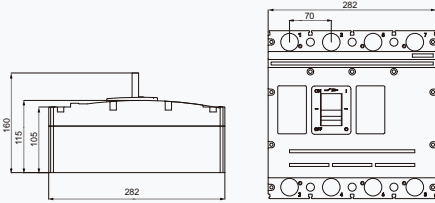
BDH Series
PV DC Moulded Case Isolator Switch

Type	BDH-125	BDH-250	BDH-400	BDH-630
Picture				

Wiring Method

	Type Y MCCB				Type S MCCB
Contacts Wiring graph					

Dimensions(mm)

125A	250A
	
400A	630A
	

BB1-63

PV Mini Circuit Breakers

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BB1-63

PV Mini Circuit Breakers



- 1 Brand
- 2 Type
- 3 Rated Current
- 4 Rated Voltage
- 5 Ultimate Breaking Capacity
- 6 Certificate Symbol
- 7 Standard Code
- 8 Indicator
- 9 Wiring Diagram

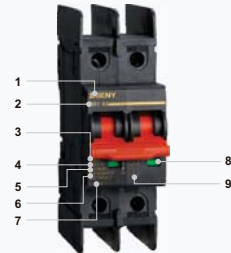
- Nonpolarity
- High Short-Circuit / Breaking Capacity
- Functions: Overload, Short Circuit, Unfrequent Operation and, Anti-reflux Protection
- Rated Voltage: 1200V, Ultimate
- Breaking Capacity : 4.5KA
- Rated Current: 63A
- Comply with : IEC60947-2/GB14048-2



Application

ZBENY BB1 Series PV Mini Circuit Breakers are mainly applied to DC solar combiner box ,Controller etc. The main function include overload protection ,Anti-reflux protection and short-circuit protection. Scientific design of arc-extinguishing system keep solar system more safe. Max Voltage up to 1200V DC, current up to 63A.

Appearance Introduction



Type Instruction

BB1	-	63	4P	25	1200V
Product Code		Max Rated Current	Pole	Rated Current	Rated Voltage
PV Mini Circuit Breakers		63A	1P 2P 3P 4P	3A, 4A, 6A 10A, 13A, 16A 20A, 25A, 32A 40A, 50A, 63A	300V 600V 900V 1200V

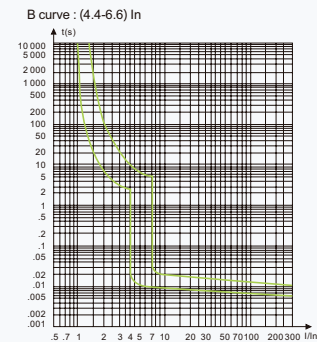
Parameter

Electrical Characteristics					
Type	BB1-63				
Comply with	IEC60947-2/GB14048.2				
Pole		1P	2P	3P	4P
Rated Working Voltage	Ue	300V DC	600V DC	900V DC	1200V DC
Max Rated Current		63A			
Rated Current	In	3A, 4A, 6A, 10A, 13A, 16A, 20A, 25A, 32A, 40A, 50A, 63A			
Rated Insulated Voltage	Ui	1200V DC			
Rated Impulsed Voltage	Uimp	4KV			
Ultimate Breaking Capacity	Icu	4.5KA			
Run Breaking Capacity	Ics	3KA			
Tripping Type		Thermal Magnetic Type			
Service Life/cycle Operation					
Mechanical	Actual Value	20000			
	Standard Value	8500			
Electrical	Actual Value	4000			
	Standard Value	1500			
Installation Environment					
Ingress Protection		All Sides IP40, Connection Terminal IP20			
Terminal Cross Section		2.5-25mm ²			
Working Temperature		-25°C ~ +70°C			
Storage Temperature		-40°C ~ +85°C			
Resistance to Humidity And Heat		II (when Humidity arrived to 55°C, Relative Humidity 95%)			
Resistance to Shock		2.6 IEC60068			
Resistance to Impack		2.27 IEC60068			

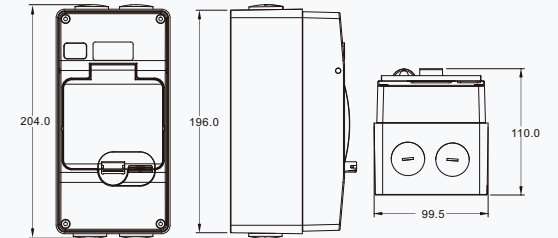
Wiring Method

Pole	1P	2P	3P	4P
Type				
Contacts Wiring graph				

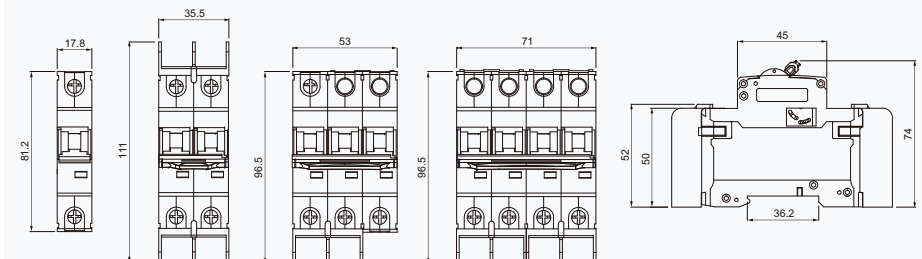
Characteristic Curve



Dimensions(mm)



Dimensions(mm)



BB2-40

PV Mini Circuit Breakers

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BB2-40

PV Mini Circuit Breakers

- 1 Brand
- 2 Type
- 3 Rated Current
- 4 Rated Voltage
- 5 Standard Code
- 6 Ultimate Breaking Capacity
- 7 Indicator
- 8 Wiring Diagram

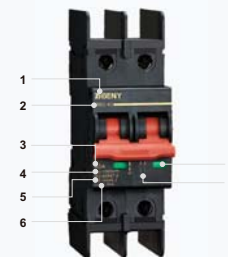
- Nonpolarity
- High Short-Circuit / Breaking Capacity
- Functions: Overload, Short Circuit, Unfrequent Operation and, Anti-reflux Protection
- Rated Voltage: 1200V, Ultimate
- Breaking Capacity : 1.5KA
- Rated Current: 40A
- Comply with : IEC60947-2/GB14048-2

ZBENY

Application

ZBENY BB2-40 Series PV Mini Circuit Breakers are mainly applied to DC solar combiner box ,Controller etc. The main function include overload protection ,Anti-reflux protection and short-circuit protection. Scientific design of arc-extinguishing system keep solar system more safe. Max Voltage up to 1500V DC, current up to 40A.

Appearance Introduction



Type Instruction

BB2	-	40	4P	25	1200V
Product Code		Max Rated Current	Pole	Rated Current	Rated Voltage
PV Mini Circuit Breakers		40A	1P 2P 3P 4P	3A,4A,6A 10A,13A,16A 20A,25A, 32A,40A,	500V 1000V 1200V 1500V

Parameter

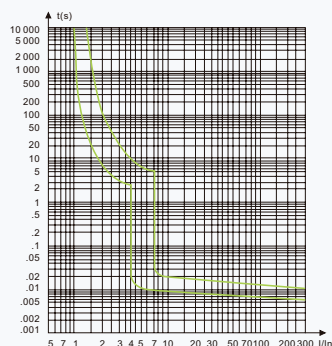
Electrical Characteristics				
Type	BB2-40			
Comply with	IEC60947-2/GB14048.2			
Pole		1P	2P	3P
Rated Working Voltage	Ue	600V DC	1000V DC	1500V DC
Max Rated Current		40A		
Rated Current	In	2A,4A,6A,10A,13A,16A,20A,25A,32A,40A		
Rated Insulated Voltage	Ui	1500V DC		
Rated Impulsed Voltage	Uimp	8KV		
Ultimate Breaking Capacity	Icu	1.5KA		
Run Breaking Capacity	Ics	100%		
Tripping Type		Thermal Magnetic Type		
Service Life/cycle Operation				
Mechanical	Actual Value	20000		
	Standard Value	8500		
	Actual Value	4000		
Electrical	Actual Value	1500		
	Standard Value	1500		
Installation Environment				
Ingress Protection		All Sides IP40 ,Connection Terminal IP20		
Terminal Cross Section		2.5-25mm ²		
Working Temperature		-25°C ~ +70°C		
Storage Temperature		-40°C ~ +85°C		
Resistance to Humidity And Heat		II (when Humidity arrived to 55°C,Relative Humidity95%)		
Resistance to Shock		2.6 IEC60068		
Resistance to Impact		2.27 IEC60068		

BB2-40

PV Mini Circuit Breakers

Characteristic Curve

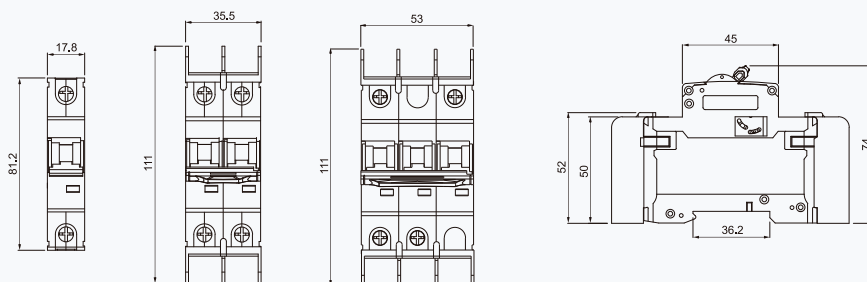
B curve : (4.4-6.6) In



Wiring Method

Pole	1P	2P	3P
Type			
Contacts Wiring graph			

Dimensions(mm)



Series PV DC Moulded Case Circuit Breaker

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BD Series PV DC Moulded Case Circuit Breaker



- 1 Brand
- 2 Type
- 3 Rated Current
- 4 Rated Voltage
- 5 Breaking Capacity
- 6 Operation Breaking Capacity
- 7 Standard Code
- 8 Certificate Symbol
- 9 Wiring Diagram
- 10 Characteristic Curve

- High Short-Circuit/Breaking Capacity
- Protection Functions: Overload, Short circuit, Unfrequent Operation
- Rated Voltage up to 1000V DC
- Rated Current 125A, 250A, 400A, 630A
- IEC60947-2, GB14048-2
- Easy Installation

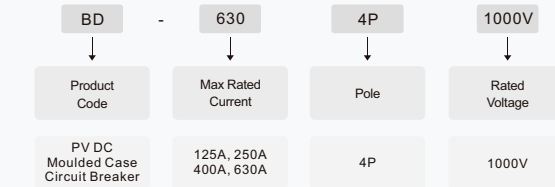
Application

ZBENY BD series PV DC Moulded Case Circuit Breaker (MCCB) are mainly used in large solar power system, which are applied for solar DC combiner box, inverter and DC power distribution cabinet. Rated voltage up to 1000V DC, current up to 630A, with the function of overload protection and short-circuit protection.

Appearance Introduction



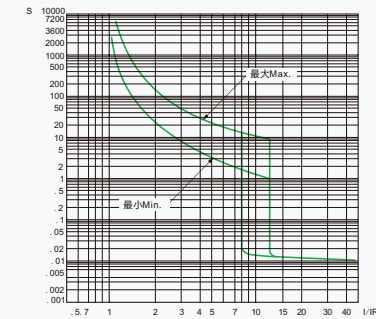
Type Instruction



Parameter

BD series PV DC MCCB				
Type	BD-125	BD-250	BD-400	BD-630
Pole	4P	4P	4P	4P
Max Rated Current	125A	250A	400A	630A
Electrical Characteristics				
Rated Working Voltage	Ue 1000V DC	1000V DC	1000V DC	1000V DC
Rated Current	In(A) 63/80 100/125	125/160 200/250	250/300/315 350/400	400/500/630
Rated Insulated Voltage	Ui	1000V DC 8KV		
Rated Impulsed Voltage	Uimp			
1 Min Power Frequency Withstand Voltage	3.8 KV	3.8 KV	3.8 KV	3.8 KV
Ultimate Breaking Capacity	Icu 20 KA	20 KA	20 KA	20 KA
Run Breaking Capacity	Ics 15 KA	15 KA	15 KA	15 KA
Protection				
Tripping Type	Thermal Magnetic Type			
Control And Indication				
Control Mode	Manual	Direct (RHD)	Optional	
	MOD	Extended(ERH)	Optional	
			Optional	
			Optional	
			Optional	
Shunt Release (SHT)		Optional		
Auxiliary Release		Optional		
Terminal End Cover		Yes		
Interphase Barriers		Yes		
Service Life/Cycle Operation				
Mechanical	14000	14000	5000	5000
Electrical	5000	5000	1500	1500
Size (L x W x H)	150.5x122x92.5	165x140x88	258x198x107	282x282x115
Ingress Protection	All Sides IP40, Connection Terminal IP20			
Installation Environment				
Comply With	IEC60947-2/GB14048.2			
Storage Temperature	-40°C~+85°C			

Characteristic Curve



Type	BD-125	BD-250	BD-400	BD-630
Picture				

Type	Type Y MCCB				Type S MCCB
Contacts Wiring graph					

Dimensions(mm)

125A	250A
400A	630A

BDM Series PV DC Moulded Case Circuit Breaker



- 1 Brand
- 2 Type
- 3 Rated Current
- 4 Rated Voltage
- 5 Breaking Capacity
- 6 Operation Breaking Capacity
- 7 Standard Code

- High Short-Circuit/Breaking Capacity
- Protection Functions: Overload, Short circuit, Unfrequent Operation
- Rated Voltage up to 500V DC
- Rated Current 125A, 250A
- IEC60947-2, GB14048-2
- Easy Installation



BDM-125
with IP65 Enclosure

Application

ZBENY BDM series PV DC Moulded Case Circuit Breaker (MCCB) are mainly used in large solar power system, which are applied for solar DC combiner box, inverter and DC power distribution cabinet. Rated voltage up to 500V DC, current up to 250A, with the function of overload protection and short-circuit protection.

Appearance Introduction



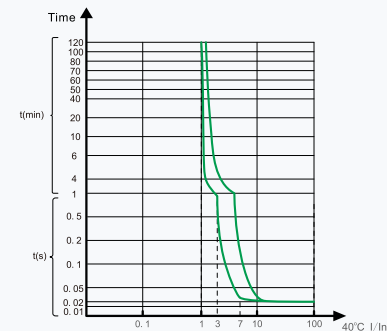
Type Instruction

BDM	-	250	2P	500V
Product Code		Max Rated Current	Pole	Rated Voltage
PV DC Moulded Case Circuit Breaker		125A 250A	2P	500V

Parameter

BD2 series PV DC MCCB				
Type		BDM-125		BDM-250
Pole			2P	
Max Rated Current		125A		250A
Electrical Characteristics				
Rated Working Voltage	Ue		500V DC	
Rated Current	In(A)	65A, 80A 100A, 125A		125A, 160A, 200A, 250A
Rated Insulated Voltage	Ui		500V DC	
Rated Impulsed Voltage	Uimp		8KV	
1 Min Power Frequency Withstand Voltage			3.8 KV	
Ultimate Breaking Capacity	Icu		15 KA	
Run Breaking Capacity	Ics		15 KA	
Protection				
Tripping Type		Thermal Magnetic Type		
Control And Indication				
Control Mode	Manual	Direct (RHD)		Optional
		Extended(ERH)		Optional
	MOD			Optional
Shunt Release (SHT)				Optional
Auxiliary Release				Optional
Terminal End Cover				Yes
Interphase Barriers				Yes
Service Life/Cycle Operation				
Mechanical			10000	
Electrical			2000	
Size (L x W x H)		150.5x64.5x119mm		164.5x79.5x118mm
Ingress Protection		All Sides IP40 ,Connection Terminal IP20		
Installation Environment				
Comply With		IEC60947-2/GB14048.2		
Storage Temperature		-40°C~+85°C		

Characteristic Curve



Type	BDM-125	BDM-250
Picture		
Contacts Wiring graph		

Dimensions(mm)

BDM-125	BDM-250
IP65 Waterproof Enclosure for BDM-125	IP65 Waterproof Enclosure for BDM-250

Surge Protection Device

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BUD-40/2 PV DC Surge Protection Device



- 1 Brand
- 2 Type
- 3 Max. Discharge Current I_{max}
- 4 Nominal Discharge Current I_n
- 5 Voltage Protection Level U_p
- 6 Max. Continuous Operating Voltage U_{cpo}
- 7 Indicator
- 8 Standard Code
- 9 Certificate Symbol

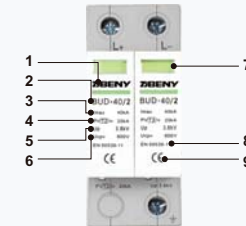
- Suitable For Use in All Photovoltaic Systems
- Prewired Modular Complete Unit, Consisting of A Base Part and Plug-in Protection Modules
- Plug-in Protection Module, Easily Installation and Maintenance
- High Energy Varistor, Response Time Less Than 25 Nanosecond
- Optional Remote Signalling Contact(FM) for Monitoring Device (Floating Changeover Contact)
- Din Rail Mounting TH35-7.5/DIN35
- Comply with :EN 50539-11

ZBENY

Application

ZBENY PV DC BUD-40/2 Surge Protection Device was designed and manufactured, complying the PV standard EN50539-11, It widely used in PV DCcombiner box, inverter, controller and PV DC cabinet. Rated voltage 600V DC,Maximum discharge current 40KA,High Energy Varistor, high effective for lightning protection.

Appearance Introduction



Type Instruction

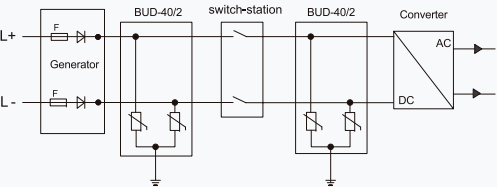
BUD	-	40	/	2	600V	RC
Product code		Max. discharge current		Pole	Rated Voltage	With Remote signalling contact
PV DC Surge Protection Device		40KA		2P	600V	RC: With Remote signalling contact Non: Without contact

Parameter

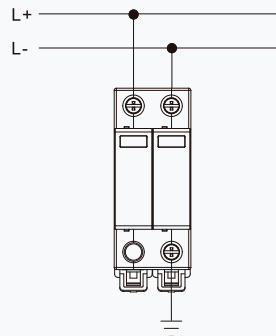
PV DC BUD-40/2 Surge Protection Device		
Pole		2P
Standard		EN 50539-11
Electrical Characteristics		
Category IEC/EN		IEC II/EN2
Open Voltage	Uoc Max	600V DC
Max Continuous Operational Voltage	Uc	600V DC
Nominal Discharge Current	In(8/20)μs	20KA
Maximum Discharge Current	Imax(8/20)μs	40KA
Voltage Protection Level	Up	≤3.8KV
Response Time		≤25ns
Control and Indication		
Operating State/fault Indication		Green/Red
Plug-in Protection Module		■
Remote Signalling Contact(Optional)	Max. Working Voltage(V)	30V DC
	Max. Working Current	1A
Connection and Installation		
Wire	Hard cable mm²	4~25
	Flexible cable mm²	4~16
Terminal Screws		M5
Torque(Nm)	Main Circuit	2.5
	Remote Contact	0.25
Degree of Protection		IP20
Installation Environment		
Operating Temperature Range (TU)		-40°C~+85°C
For Mounting on		TH35-7.5/DIN35
Relative Humidity		30%~90%
Weight kg		0.24

BUD-40/2
PV DC Surge
Protection Device

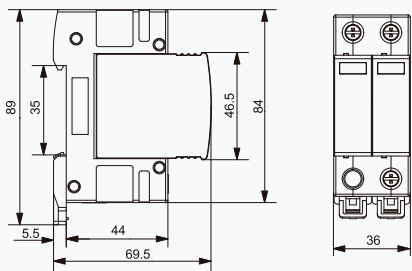
Principal Drawing



Wiring Method



Dimensions(mm)



BUD-40/3
PV DC Surge
Protection Device



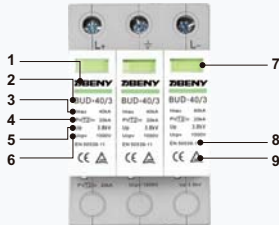
- 1 Brand
- 2 Type
- 3 Max. Discharge Current I_{max}
- 4 Nominal Discharge Current I_n
- 5 Voltage Protection Level U_p
- 6 Max. Continuous Operating Voltage U_{cpo}
- 7 Indicator
- 8 Standard Code
- 9 Certificate Symbol

- Suitable For Use in All Photovoltaic Systems
- Prewired Modular Complete Unit, Consisting of A Base Part and Plug-in Protection Modules
- Plug-in Protection Module, Easily Installation and Maintainance
- High Energy Varistor, Response Time Less Than 25 Nanosecond
- Optional Remote Signalling Contact(FM) for Monitoring Device (Floating Changeover Contact)
- Din Rail Mounting TH35-7.5/DIN35
- Comply with :EN 50539-11

Application

ZBENY PV DC BUD-40/3 Surge Protection Device was designed and manufactured, complying the PV standard EN50539-11, It widely used in PV DC combiner box, inverter, controller and PV DC cabinet. Rated voltage 1000V DC, Maximum discharge current 40KA,High Energy Varistor, high effective for lightning protection.

Appearance Introduction



Type Instruction

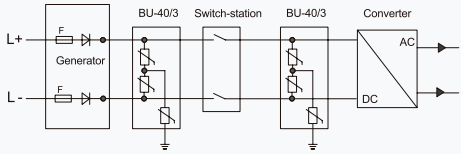
BUD	-	40	/	3	1000V	RC
Product code		Max. discharge current		Pole	Rated Voltage	With Remote signalling contact
PV DC Surge Protection Device		40KA		3P	1000V	RC: With Remote signalling contact Non: Without contact

Parameter

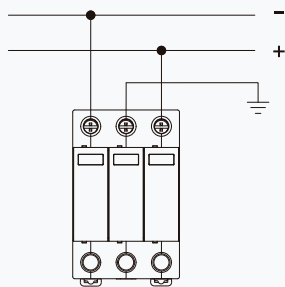
PV DC BUD-40/3 Surge Protection Device		
Pole		3P
Standard		EN 50539-11
Electrical Characteristics		
Category IEC/EN		IEC II/EN2
Open Voltage	U_{oc} Max	1000V DC
Max Continuous Operational Voltage	U_c	1000V DC
Nominal Discharge Current	$I_n(8/20)\mu s$	20KA
Maximum Discharge Current	$I_{max}(8/20)\mu s$	40KA
Voltage Protection Level	U_p	$\leq 3.8KV$
Response Time		$\leq 25ns$
Control and Indication		
Operating State/fault Indication		Green/Red
Plug-in Protection Module		■
Remote Signalling Contact(Optional)	Max. Working Voltage(V)	30V DC
	Max. Working Current	1A
Connection and Installation		
Wire	Hard cable mm^2	4~25
	Flexible cable mm^2	4~16
Terminal Screws		M5
Torque(Nm)	Main Circuit	2.5
	Remote Contact	0.25
Degree of Protection		IP20
Installation Environment		
Operating Temperature Range (TU)		-40°C~+85°C
For Mounting on		TH35-7.5/DIN35
Relative Humidity		30%~90%
Weight kg		0.36

BUD-40/3
PV DC Surge
Protection Device

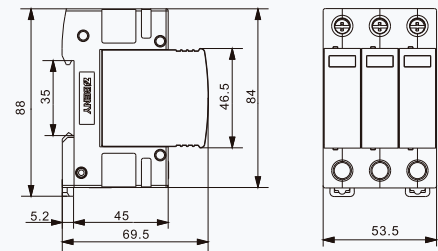
Principal Drawing



Wiring Method



Dimensions(mm)



BUD-1500
PV DC Surge
Protection Device



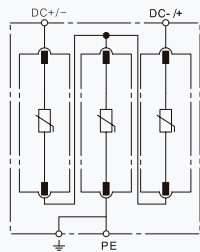
Application

BUDENY Developed and manufactured 1500V surge protector, in line with IEC/EN 616143-31, with a maximum continuous operating voltage of 1500V;High pressure Sensitive resistor, nanosecond response speed, high efficiency to prevent lightning voltage damage to photovoltaic power generation system.

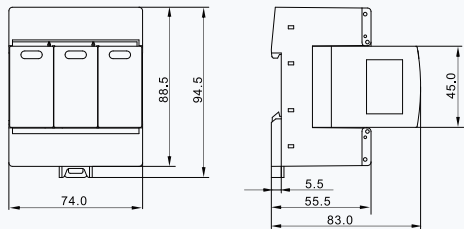
Parameter

Type	BUD-1500
Test standard	IEC/EN 61643-31
Type	T2
Max.PV voltage(U_{CPV})	1500V
Short-circuit current rating(I_{SCP})	10kA
Total discharge current (8/20 μ s) (I_{tmax})	40kA
Nominal discharge current(8/20 μ s)(I_n)	20kA
Voltage protection level (U_p)	6kV
Response time(t_r)	≤ 25 ns
Operating temperature range(T_o)	-40°C--+85°C
Operating state/fault indication	green/red
Number of ports	1
Cross-sectional area(min.)	1.5mm ² solid/ flexible
Cross-sectional area(max.)	35mm ² stranded/25mm ² flexible
For mounting on	TH35-7.5/DIN35
Place of installation	indoor installation
Degree of protection	IP20
Approvals	TUV,CE

Principal Drawing



Dimensions(mm)



BUD-S1000
PV DC Surge
Protection Device



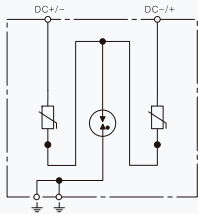
Application

ZBENY Developed and manufactured the T1+T2 complex surge protector, in line with IEC/EN 616143-31, with a maximum continuous operating voltage of 1000V; High pressure Sensitive resistor, nanosecond response speed, high efficiency to prevent lightning voltage damage to photovoltaic power generation system.

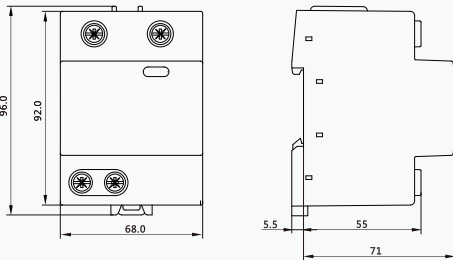
Parameter

Type	BUD-S1000
Test standard	IEC/EN 61643-31
EN Type	T1+T2
Max.PV voltage(DC+→DC-)(U_{CPV})	≤1000V
Max.PV voltage(DC+/DC-→PE)(U_{CPV})	≤725V
Short-circuit current rating(I_{SCP})	10kA
Total discharge current (8/20μs) (DC+/DC-→PE) (I_{tota})	30kA
Total discharge current (10/350μs) (DC+/DC-→PE) (I_{tota})	12.5kA
Nominal discharge current(8/20μs)(I_n)	15kA
Lightning impulse current (10/350μs) (DC+/DC-→PE) (I_{imp})	6.25kA
Voltage protection level (DC+/DC-→PE) (U_p)	2.5kV
Voltage protection level(DC+→DC-) (U_p)	4.75kV
Response time(t_r)	≤25ns
Operating temperature range(T_o)	-40°C~+85°C
Operating state/fault indication	green/red
Number of ports	1
Cross-sectional area(min.)	1.5mm ² solid/ flexible
Cross-sectional area(max.)	35mm ² stranded/25mm ² flexible
For mounting on	TH35-7.5/DIN35
Place of installation	indoor installation
Degree of protection	IP20
Approvals	TUV,CE

Principal Drawing



Dimensions(mm)



BUD-S1500
PV DC Surge
Protection Device



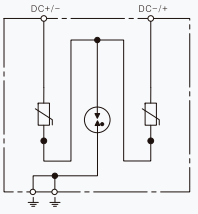
Application

ZBENY Developed and manufactured the T1+T2 complex surge protector, in line with IEC/EN 616143-31, with a maximum continuous operating voltage of 1500V; High pressure Sensitive resistor, nanosecond response speed, high efficiency to prevent lightning voltage damage to photovoltaic power generation system.

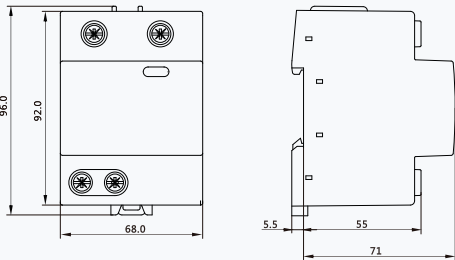
Parameter

Type	BUD-S1500
Test standard	IEC/EN 61643-31
EN Type	T1+T2
Max.PV voltage(DC+→DC-)(U_{CPV})	≤1500V
Max.PV voltage(DC+/DC-→PE)(U_{CPV})	≤1100V
Short-circuit current rating(I_{SCP})	10kA
Total discharge current (8/20μs) (DC+/DC-→PE) (I_{tota})	30kA
Total discharge current (10/350μs) (DC+/DC-→PE) (I_{tota})	12.5kA
Nominal discharge current(8/20μs)(I_n)	15kA
Lightning impulse current (10/350μs) (DC+/DC-→PE) (I_{imp})	6.25kA
Voltage protection level (DC+/DC-→PE) (U_p)	3.75kV
Voltage protection level(DC+→DC-) (U_p)	7.25kV
Response time(t_r)	≤25ns
Operating temperature range(T_o)	-40°C~+85°C
Operating state/fault indication	green/red
Number of ports	1
Cross-sectional area(min.)	1.5mm ² solid/ flexible
Cross-sectional area(max.)	35mm ² stranded/25mm ² flexible
For mounting on	TH35-7.5/DIN35
Place of installation	indoor installation
Degree of protection	IP20
Approvals	TUV,CE

Principal Drawing



Dimensions(mm)

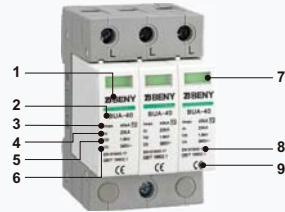


Application

ZBENY BUA-40 Surge Protection Device was designed and manufactured, complying standard GB 18802.1/EN 61643-11, Rated voltage 385V, Maximum discharge current 40KA, High Energy Varistor, high effective for lightning protection.

Appearance Introduction

- 1 Brand
- 2 Type
- 3 Max. Discharge Current I_{max}
- 4 Nominal Discharge Current I_n
- 5 Voltage Protection Level U_p
- 6 Max. Continuous Operating Voltage U_{cpv}
- 7 Indicator
- 8 Standard Code
- 9 Certificate Symbol



Type Instruction

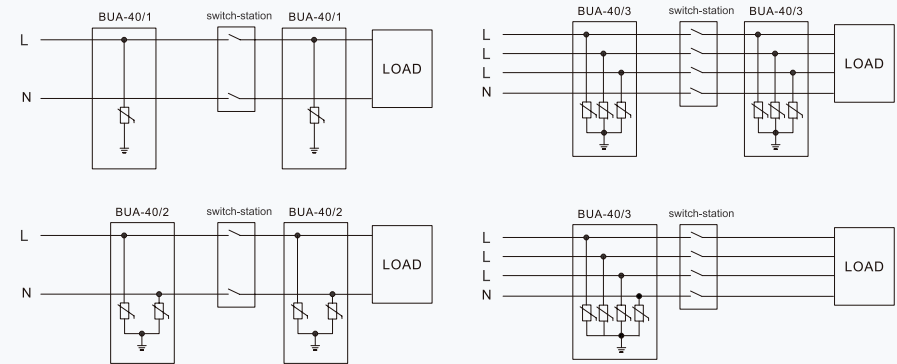
BUA	-	40	/	3	385V
Product code		Max. discharge current		Pole	Rated Voltage
Surge Protection Device		40KA		3P	385V

Parameter

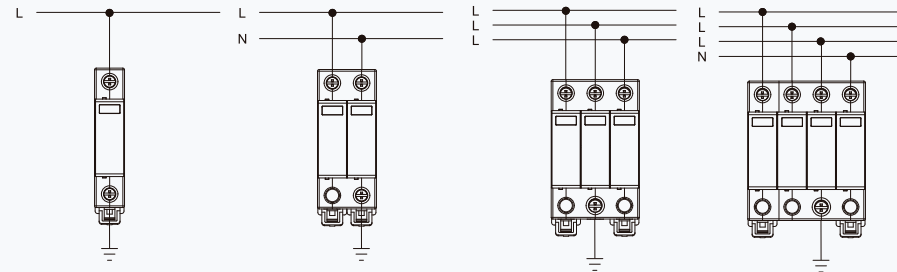
BUA-40 Surge Protection Device		
Pole		1P/2P/3P/4P
Standard		GB 18802.1/EN 61643-11
Electrical Characteristics		
Category IEC/EN		IEC II/EN2
Max Continuous Operational Voltage U_c		385V AC
Nominal Discharge Current $I_n(8/20)\mu s$		20KA
Maximum Discharge Current $I_{max}(8/20)\mu s$		40KA
Voltage Protection Level U_p		$\leq 1.8KV$
Response Time		$\leq 25ns$
Control and Indication		
Operating State/fault Indication		Green/Red
Plug-in Protection Module		■
Remote Signalling Contact(Optional)	Max. Working Voltage(V)	30V DC
	Max. Working Current	1A
Connection and Installation		
Wire	Hard cable mm^2	4~25
	Flexible cable mm^2	4~16
Terminal Screws		M5
Torque(Nm)	Main Circuit	2.5
	Remote Contact	0.25
Degree of Protection		IP20
Installation Environment		
Operating Temperature Range (TU)		-40°C~+85°C
For Mounting on		TH35-7.5/DIN35
Relative Humidity		30%~90%



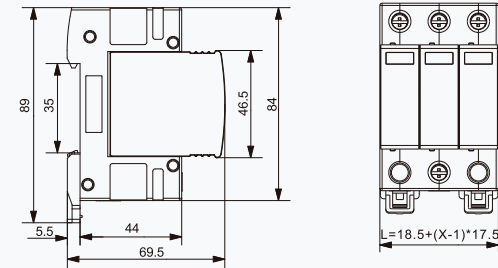
Principal Drawing



Wiring Method



Dimensions(mm)



BYA-63 series Weatherproof AC Isolating Switch

Technical Parameter:

- Conform to IEC60947-3
- Rated Current: 20A, 35A, 63A
- Rated Voltage: 250 / 440VAC
- No. of Pole: 1P, 2P, 3P, 4P
- EESS Approved

Terminal Capacity:

- 25mm² Rigid stranded cable
- Conduit entry:
- 2x25mm² cable entry top and bottom.
- 2x25mm² conduit adaptors provided.
- 4x20mm², 2x25mm² knockouts for rear cable entry.



Application

ZBENY The BYA series of weatherproof isolating switches is a robust range of switches suitable for virtually any external application included in the range are single, double, three and four poles switch from 20A to 63A, the base mounted mechanism provides for easier wiring and more wiring room.

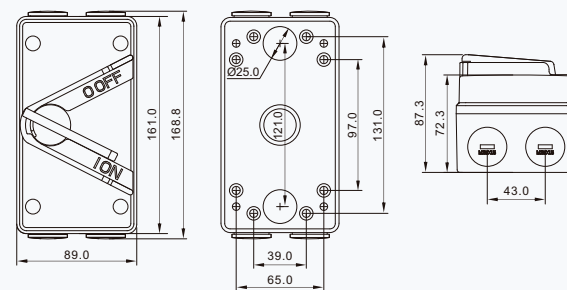
Parameter

Designation	BYA-63	
Pole	1P	3P
Rated Voltage	250VAC	440VAC
Rated Current	20A	20A
	35A	35A
	63A	63A
Rated Frequency	50Hz	
Rated Insulation Voltage	1000V	
Rated Impulse Withstand Voltage	2.5kV	
Rated Duty	Un-interrupted	
Short Term Withstand Current	750 A For 1 Second	
Short Circuit Making Capacity	750A	
Switch Rating	AC-22A(According to IEC 60947-3)	

Wiring Diagram

Contacts Wiring Diagram	250V	440V	Poles in series	Type Number	IP Rating	Weight/ pcs
	20A 35A 63A		Single pole	BYA-63	IP66	0.44kgs
		20A 35A 63A	Three poles	BYA-63	IP66	0.54kgs

Dimensions(mm)



BYAF-32 series Weatherproof AC Isolating Switch

Technical Parameter:

- Conform to IEC60947-3
- Rated Current: 20A, 25A, 32A
- Rated Voltage: 230~440VAC
- No. of Pole: 3P, 4P
- EESS Approved

ZBENY

Application

ZBENY The BYAF series of weatherproof isolating switches is a robust range of switches suitable for virtually any external application included in the range are three and four poles switch from 20A to 32A, the base mounted mechanism provides for easier wiring and more wiring room.

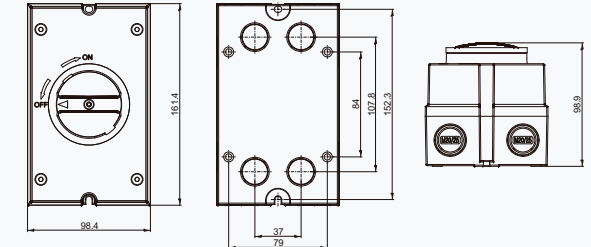
Parameter

Designation	BYAF-32	
Pole	3P	4P
Rated Voltage	230~440VAC	230~440VAC
Rated Current	20A	20A
	25A	25A
	32A	32A
Rated Frequency	50Hz	
Rated Insulation Voltage	1000V	
Rated Impulse Withstand Voltage	2.5kV	
Rated Duty	Un-interrupted	
Short Term Withstand Current	750 A For 1 Second	
Short Circuit Making Capacity	750A	
Switch Rating	AC-22A(According to IEC 60947-3)	

Wiring Diagram

Contacts Wiring Diagram	230~440V	Poles in series	Type Number	IP Rating	Weight / pcs
	20A 25A 32A	Three poles	BYAF-32	IP65	0.50kgs
	20A 25A 32A	Four poles	BYAF-32	IP65	0.54kgs

Dimensions(mm)



BYAF-63 series Weatherproof AC Isolating Switch

Technical Parameter:

- Conform to IEC60947-3
- Rated Current: 40A, 63A
- Rated Voltage: 230~440VAC
- No. of Pole: 3P, 4P
- EESS Approved

Application

ZBENY The BYAF series of weatherproof isolating switches is a robust range of switches suitable for virtually any external application included in the range are three and four poles switch from 40A to 63A, the base mounted mechanism provides for easier wiring and more wiring room.

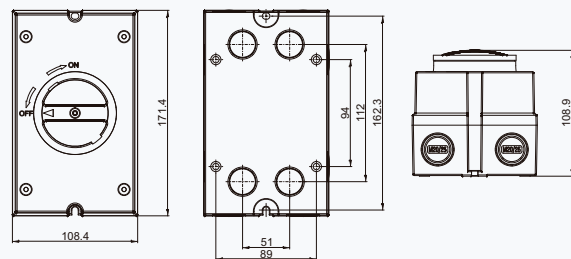
Parameter

Designation	BYAF-63	
Pole	3P	4P
Rated Voltage	230~440VAC	230~440VAC
Rated Current	40A	40A
	63A	63A
Rated Frequency	50Hz	
Rated Insulation Voltage	1000V	
Rated Impulse Withstand Voltage	2.5kV	
Rated Duty	Un-interrupted	
Short Term Withstand Current	750 A For 1 Second	
Short Circuit Making Capacity	750A	
Switch Rating	AC-22A(According to IEC 60947-3)	

Wiring Diagram

Contacts Wiring Diagram	230~440V	Poles in series	Type Number	IP Rating	Weight / pcs
	40A 63A	Three poles	BYAF-63	IP65	0.61kgs
	40A 63A	Four poles	BYAF-63	IP65	0.67kgs

Dimensions(mm)



BR-30 PV DC Fuse Holder



- 1 Brand
- 2 Type
- 3 Rated Current
- 4 Rated Voltage
- 5 Fuse Size
- 6 Electrical Diagram
- 7 Status Indicator

- Photovoltaic Applications
- Max Breaking Capacity up to 20KA, Effective Protection
- The Innovation Replacing Fuse Link Touch-safe
- Led Indicator, Reminding Fuse Link Replacement
- Be Suit for 10x38mm Fuse Size
- Comply with :IEC6094-3

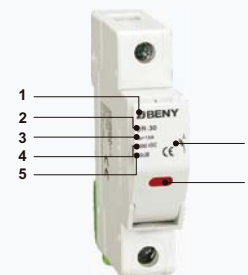


ZBENY

Application

ZBENY PV DC BR-30 Fuse Holder was designed and manufactured, complying with the standard IEC60947-3. The Rated Current up to 30A, rated voltage up to 1000V DC. It applied for PV DC combiner box, inverter etc, with the main function of over-current protection and effective disconnection.

Appearance Introduction



Type Instruction

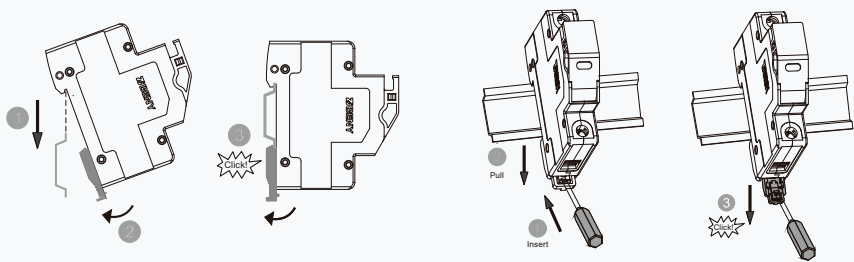


Parameter

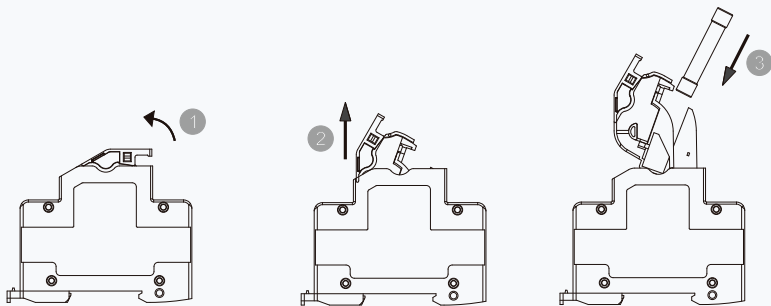
PV DC BR-30 Fuse Holder		
Pole		1P
According to		IEC 60947-3
Electrical Characteristics		
Rated Working Voltage	Ue	1000V DC
Rated Current	In	30 A
Breaking Capacity		20KA
Max Power Dissipation		3W
Control and Indication		
Operating State/Fault Indication		Indicator Light OFF/Indicator Light ON
Connection and Installation		
Wire		2.5mm ² ~25mm ²
Terminal Screws		M5
Torque	Nm	2.5
Degree of Protection		IP20
Installation Environment		
Fuse Size		10x38 mm
Operating Temperature Range	TU	-40°C ~ +85°C
For Mounting On		TH35-7.5/DIN35
Pollution Degree		3
Relative Humidity		+20°C≤95%, +40°C≤50%
Weight		0.07kg Per pole
Installation Class		III

BR-30
PV DC Fuse Holder

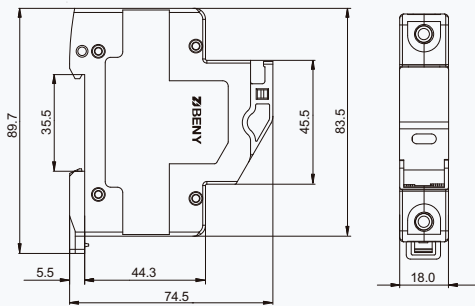
Installation



Replacement Fuse



Dimensions(mm)



Waterproof Enclosure for MCB

ZJBENY Waterproof Enclosures are available in 4 pole and 8pole.



4 Pole



8 Pole

Technical Specifications

Ingress Protection	IP65
Color	Grey
Material	PC
UV Resistance	Yes
Gland entries	4pcsxM25 for 4Pole 2pcs x M25 and 2pcs x M32 for 8 Pole
Fixing screws	6pcs
Padlockable	Yes
DIN Rail mounting	Yes
Caps for base hole	4pcs
Caps for top screw	4pcs
Measurement(LxWxH)	205x99.5x110mm for 4 Pole 205x174x110mm for 8 Pole



Memorandum

