BYH Series Non-polarity DC Isolator Switch



4P 1000V 32A



1 Waterproof Plug

- 2 IP66NW Ingress Protection
- 3 Sealing Plug
- 4 OFF
- 5 LOCK
- 6 Standard
- 7 Brand
- 8 Type
- 9 ON
- 10 Knob

BYH-32 BYH-32 with MC4







Accessories

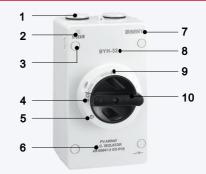
Application

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

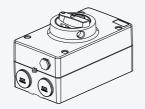


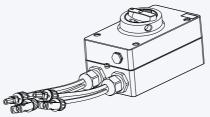
Parameter

| Interview of the second secon | Electrical Characteri | stics | | | | |
|---|--|--------------------------------------|--|--|--|--|
| IEC 60947-3, AS60947.3ilization categoryDC-PV2 / DC-21Bole4Pated frequencyDCated operational voltage (U_e) 500V, 600V, 800V, 1000Vated operational current (I_e) See the next pageated insulation voltage (U_i) 1200Vonventional free air thermal current (I_{ine}) Nonventional enclosed thermal current (I_{ine}) Same as I_e ated short-time withstand current (I_{ine}) 1.7kA(4, 4B); 1.7kA, 1s (2H)ated conditional short-circuit current (I_{con}) 3kAated impulsed withstand voltage (U_{imp}) 8.0kVvervoltage categoryIIuitability for isolationYesolarityYeservice Life/Cycle Operation15000tectrical1000stallation EnvironmentIP66Switch bodyIP20 | Туре | | BYH-32, BYH-32M1, BYH-32M2 | | | |
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| uitability for isolation Yes No polarity, "+" and "-" polarities could be interchanged. ervice Life/Cycle Operation lechanical 15000 lectrical 15000 lectrical 1000 stallation Environment egress Protection Environment Switch body IP20 | Rated impulsed withstand voltage (U_{imp}) | | | | | |
| No polarity, "+" and "-" polarities could be interchanged. ervice Life/Cycle Operation lechanical lectrical stallation Environment ogress Protection Switch body IP20 | Overvoltage category | | | | | |
| Image: Construct of the interchanged. ervice Life/Cycle Operation lechanical lectrical lectrical stallation Environment agress Protection Switch body IP20 | Suitability for isolation | | | | | |
| lechanical 15000 lectrical 1000 istallation Environment Enclsoure agress Protection Enclsoure Switch body IP20 | Polarity | | No polarity, "+" and "-" polarities could be interchanged. | | | |
| lectrical 1000 Istallation Environment Enclsoure IP66 Switch body IP20 | Service Life/Cycle O | peration | | | | |
| Astallation Environment Agress Protection Encloure IP66 Switch body IP20 | Mechanical | | 15000 | | | |
| Igress Protection Enclosure IP66 Switch body IP20 | Electrical | | 1000 | | | |
| gress Protection Switch body IP20 | Installation Environn | nent | | | | |
| Switch body IP20 | Ingress Protection | Enclsoure | IP66 | | | |
| torage Temperature -50°C ~ +90°C | | | IP20 | | | |
| | Storage Temperature | | -50°C ~ +90°C | | | |
| peration Temperature -40°C ~ +85°C | Operation Temperature | | -40°C ~ +85°C | | | |
| lounting Type Vertically or horizontally | Mounting Type | | Vertically or horizontally | | | |
| ollution degree 3 | Pollution degree | | 3 | | | |
| uitable environment Outdoor / Indoor | Suitable environment | | Outdoor / Indoor | | | |



Breathing Valve





Remarks:

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

| Identi | fication | | Rating data | | |
|---|--------------------|---|---|--|--|
| Switch, unenclosed - c (with DC-PV2 rating) | atalogue number | BYH.1-32, BYH.2-32 | | | |
| Specific dedicated indicated indicated indicated indicated contractions (with rating) | | BYH-32 IP66NW | | | |
| Assembly of switch and individual enclosure - c | | / | | | |
| <i>I_{th}</i> rated thermal curren shade ambient air tem | | | 32 amps | | |
| <i>I_{the}</i> rated thermal currer shade ambient air tem dedicated enclosure | | 32 amps | | | |
| <i>I</i> _{the} rated thermal current <u>outdoors</u> at 40°C shade ambient air temperature <u>without solar</u> <u>effects in</u> a specific dedicated enclosure rated IP66NW <i>I</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 | | 32 amps | | | |
| | | 29 amps | | | |
| | | <i>U</i> ℯ rated operational voltage DC Volts | <i>l</i> _e ; DC-PV2 rated operational current Amps | I _(make) and I _{c(break)} DC-PV2 4 x I _e Amps | |
| | | 300 | 32 | 128 | |
| | (_1/_2/) | 500 | 32 | 128 | |
| 4-pole 2 pole in series 4 | | 600 | 13 | 52 | |
| | | 800 | 9 | 36 | |
| | | 1000 | 9 | 36 | |
| | | 300 | 32 | 128 | |
| 2-pole | | 500 | 32 | 128 | |
| pole in series (<u>1</u> | <u>/_2/_3/_4/)</u> | 600 | 32 | 128 | |
| 1B | | 800 | 32 | 128 | |
| | | 1000 | 32 | 128 | |



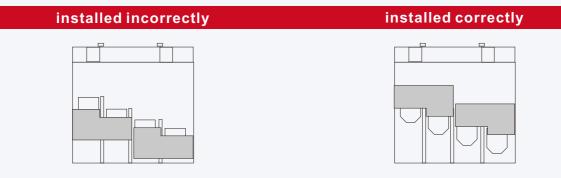
Wiring Diagram for Rated operational voltage Ue (V) & Rated operational current le (A)

| Contacts wiring diagram | 300V | 500V | 600V | 800V | 1000V | Poles in series | Number of Strings | Type Number |
|---|------|------|------|------|-------|-----------------|----------------------|-------------|
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | 32A | 32A | 13A | 9A | 9A | 2 | 2 | 4 |
| | 40A | 40A | 1 | 1 | 1 | 4 | 1 | 2H |
| | 32A | 32A | 32A | 32A | 32A | 4 | 1 | 4B |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | 32A | 32A | 32A | 32A | 32A | 4 | 1 | 4S |

Switching Configurations

| Туре | 4-pole | 2-pole 4 Paralleled Poles | 4-pole with Input and Output bottom | 4-pole with Input on top Output bottom |
|--------------------------|---|---|---|---|
| 1 | 4 | 2H | 4B | 48 |
| Contacts Wiring graph | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ |
| Switching example | | | | |

Bridging links installation



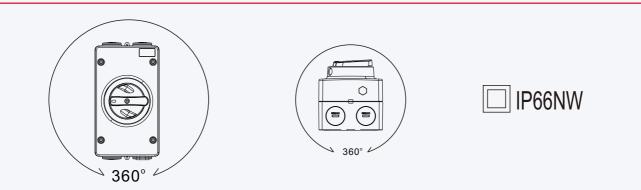
* Warning: Verify that all connections (including bridging link connections) are suitable for the rated current, prepared to ensure only conductive parts are clamped and tightened to the manufacturers required torque before energization.



Terminals / connection

| Туре | | 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) | | |
| Type of onductor | | 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 | | |

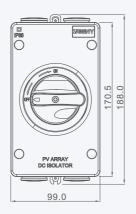
IP Rating

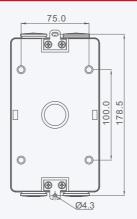


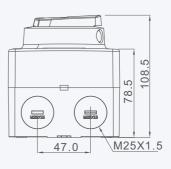
Remarks:

 ${\sf ZJBENY\,DC\,Isolator\,can\,be\,installed\,in\,any\,direction,\,but\,must\,do\,well\,performance\,for\,waterproof.}$

Dimensions(mm)









Data according to AS60947-3: 2018

| Main Contacts | | Туре | BYH-32 | Appendix B5 |
|---|-------|------|----------|-------------|
| Rated thermal current I _{the} | | А | 32 | Making & |
| Rated insulation voltage U _i | V | 1000 | Breaking | |
| Distance of contacts (per pole) | mm | 8 | 5x | |
| Rated operational current le (DC-PV2 | !) | | | operations |
| 1 pole | 300V | А | 25 | 100 |
| 1 | 400V | А | 10 | 40 |
| A / | 500V | А | 8 | 32 |
| _1/ | 600V | А | 8 | 32 |
| | 800V | А | 3 | 12 |
| | 1000V | A | 2 | 8 |
| | | | | |
| 4-pole | 500V | А | 32 | 128 |
| 2 pole in series 4 | 600V | А | 13 | 52 |
| _1/_2/ | 700V | А | 9 | 36 |
| | 800V | А | 9 | 36 |
| | 900V | А | 9 | 36 |
| | 1000V | А | 9 | 36 |
| | | | | |
| 2-pole | 500V | А | 40 | 160 |
| 4 parallel poles 2H | 600V | А | 1 | / |
| _1/_2/ | 700V | А | 1 | / |
| 3/_4/ | 800V | А | / | / |
| | 900V | А | / | / |
| | 1000V | А | / | / |
| | | | | |
| 2-pole | 500V | А | 32 | 128 |
| 4 pole in series 4B | 600V | А | 32 | 128 |
| <u>1/2/3/4/</u> | 700V | А | 32 | 128 |
| | 800V | А | 32 | 128 |
| | 900V | А | 32 | 128 |
| | 1000V | А | 32 | 128 |



Enclosed Solar Isolator Extended Warranty Terms

Zhejiang Benyi Electrical Co.,Ltd offers the following extended **5 Year Warranty** for installations within the Australia, Europe and Middle East only.

Zhejiang Benyi Electrical Co.,Ltd warrants that if under proper use the solar isolator BYH-32 and/or BYT-32 and/or BYSS-50 develop any defect during the period 5 years from date of delivery due to defective parts or materials supplied Zhejiang Benyi Electrical Co.,Ltd shall at its own expense replace or repair such goods as are defective so as to remedy the defects except where such defects are attributable to accident, fair wear and tear, or any action omission or neglect of the buyer or of its agents. The buyer must ensure that during the period the solar isolator is operated at least once per annum within the product's specified parameters of proper use and is not used outside or beyond such specification as stated by Zhejiang Benyi Electrical Co.,Ltd. Such conditions and parameters are agreed in writing by Zhejiang Benyi Electrical Co.,Ltd. Such conditions include but are not limited to current rating, voltage rating, temperature conditions and sunlight exposure.

The buyer must give Zhejiang Benyi Electrical Co.,Ltd notice of any alleged defect as soon as it becomes apparent, and shall (unless otherwise instructed by Zhejiang Benyi Electrical Co.,Ltd) retain the goods at the buyer's premises for inspection by Zhejiang Benyi Electrical Co.,Ltd and give Zhejiang Benyi Electrical Co.,Ltd adequate facilities to investigate the complaint at the buyer's premises.

Zhejiang Benyi Electrical Co.,Ltd shall not be liable in any event whatsoever for any indirect, special or consequential damages, arising out of the use of the goods at any time or howsoever caused by the goods.