





# **MORE THEN SOLAR**

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## MINDIAN ELECTRIC CO., LTD.

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# **COMPANY PROFILE**

Founded in 2009, Moreday Solar is a R&D and manufacturing company integrating photovoltaics and new energy industry. The original intention of Moreday Solar is to bring more clean energy to the world and enjoy a better life.

The company's main products: photovolta-ic convergence and grid-connected prod-ucts, low-voltage electrical, energy storage and application products, solar power transmission and distribution products and solar system manufacturing.

The company takes solar energy sharing as its vision, technological innovation as its driving force, customer-oriented, and has obtained more than 30 national patents. Its products have passed CQC, CE, CB, TUV, ROHS and other certifications, and IS09001 quality system certification, with more than 1,000 services. Customers, the products are exported to more than 50 countries in Europe, America, Southeast Asia, the Middle East and other regions.

We hope to work with more partners to bring solar energy to every region of the world, promote the widespread use of green and clean energy, and leave more day for the earth











## President's thoughts

As we look back on 2020, I am proud of how we adapted to the challenges that came our way. We took care of our employees, provided for our customers and partners, and prospered along the way.

We are optimistic about our resilience, flexibility, and solid business processes, reflecting the best in sustainability.

Sustainability is at our core at MOREDAY and our purpose remains to advance a sustainable future for all. As part of our commitment, we released our Reports on the development of the photovoltaic field in the next five years and better sustainable approaches. As we work towards an equitable energy future for all, we are aware of the importance of mobilizing the world to reduce the carbon footprint and electrify the planet.

We will continue to work hard to deliver high quality products that produce clean energy, save our customers money, and provide them with complete energy independence. Looking forward in 2021, we are excited about the strength in worldwide demand for solar, the ramp of our solar systems and upcoming new products, the higher levels of customer service, and our ongoing digital transformation efforts.

As always, I thank our employees, customers, partners, and shareholders for their continued support.

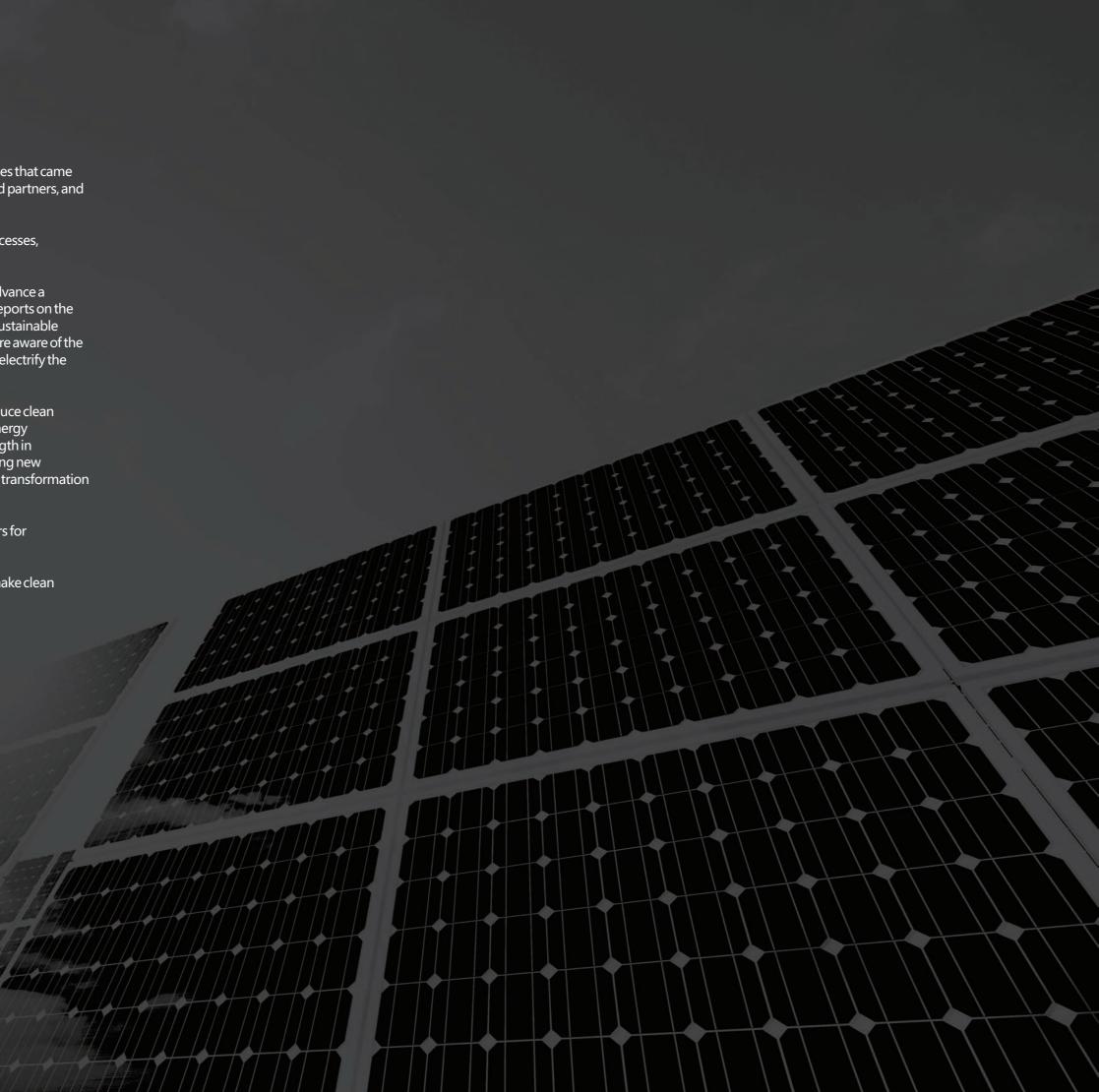
we will continue with our mission to deliver technology solutions that make clean energy affordable, reliable and accessible to all.

To be continued, More than solar



Dedao Huang
President and CEO

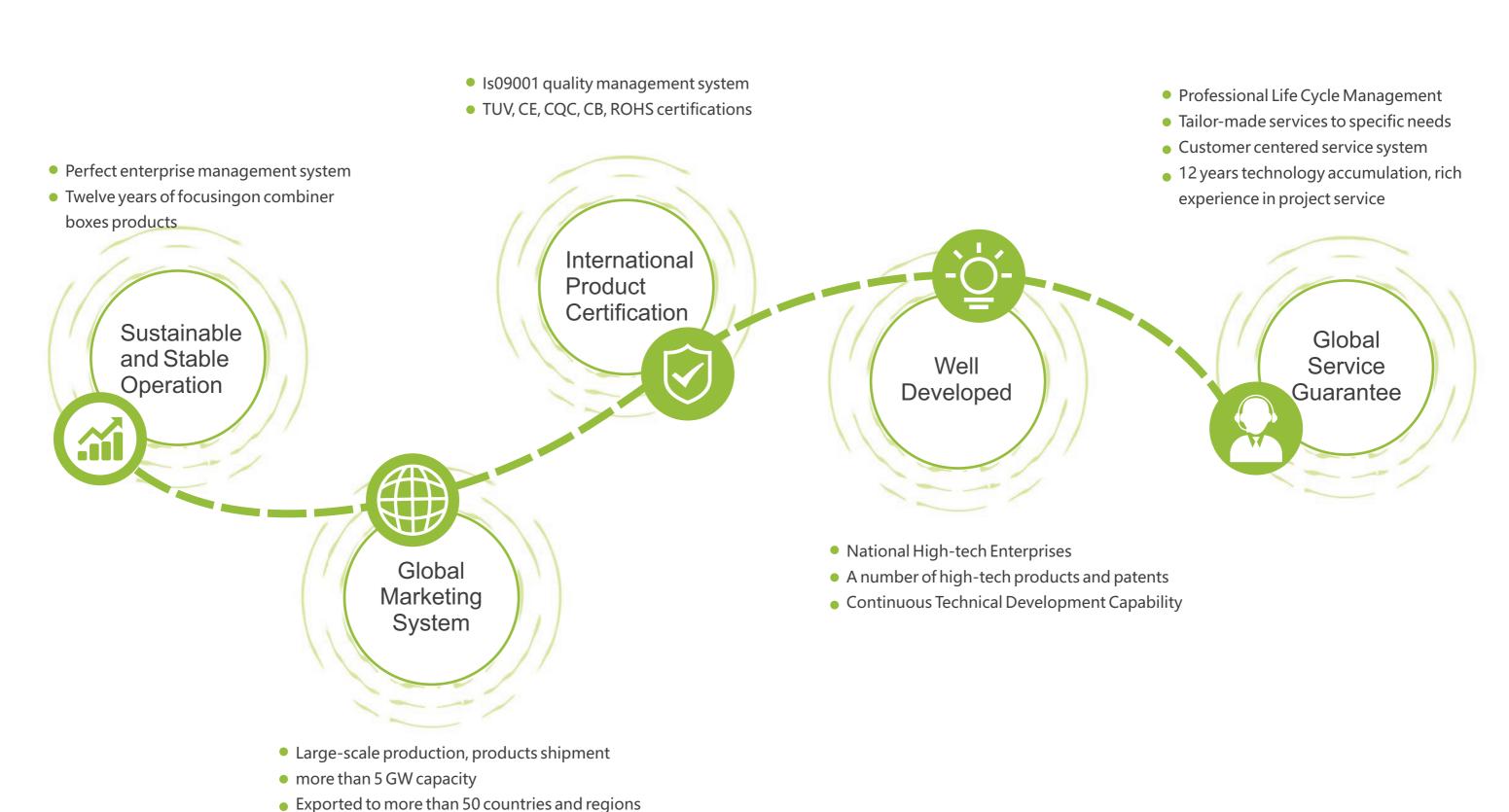
Oct.20, 2021





# **Corporate Advantage**

all over the world



# MCREDAY

# **Enterprise honor and qualification**















- Member of Asian Photovoltaic Industry Association
- National high-tech enterprise
- Well-known brands in China's photovoltaic industry in 2019
- Caring for employees and caring enterprises in 2020
- 2019、2020 SNEC Megawatt jade Award
- 2020 Outstanding Photovoltaic Enterprise
- Chinese technology-based SMEs
- Zhejiang Promise-keeping 3A Enterprise



PATENT FOR

INVENTION



CERTIFICATE





DESIGN PATENT TECHNOLOGY-BAS CERTIFICATE ENTERPRISE







ISO14001

ISO9001

ISO45001





CQC



# **Corporate partner**































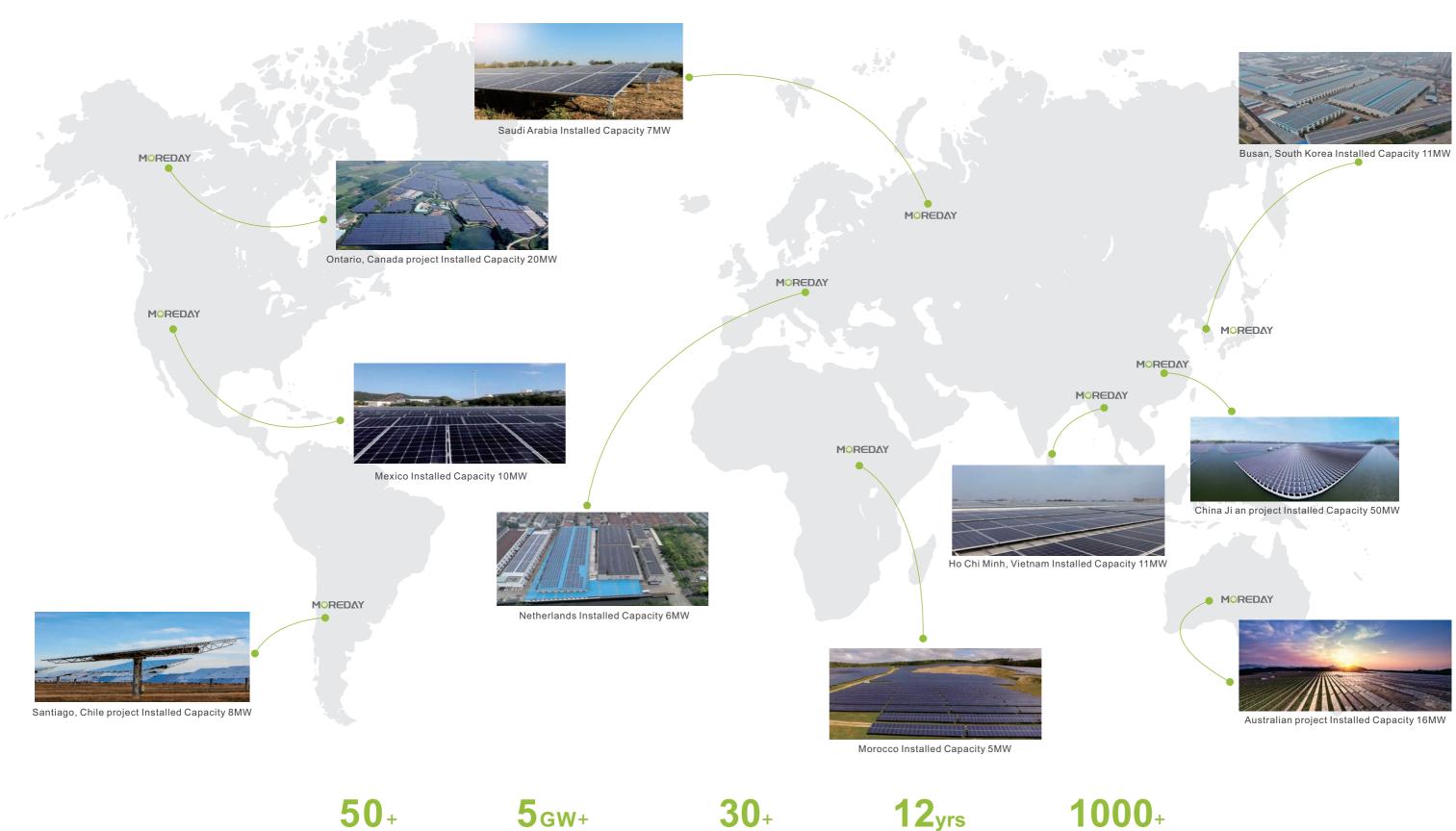












**Exporting Countries** 

Cumulative shipments

Patents

Industry experience

Global customers

# **Product**

# **Catalogue**

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MDX-200 PV Grid-Connected Distribution Box	12
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MDJB-4B DC COMBINER BOX	2
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## **MDCDB PV Combiner And Distribution Box**



#### Overview

Suitable for household and industrial and commercial photovoltaic power generation systems; Integrated DC junction box and AC distribution box;

Maximum suitable for 6kW single-phase photovoltaic power generation system;

Maximum applicable to 20kW three-phase photovoltaic power generation system;

Meet customer's customized needs.

Model	Voltage	Maximum system power	Optional
MDCDB-S3	600V	3kW	1. Meter
MDCDB-S6	600V	6kW	2. AC fuses
MDCDB-T10	1000V	10kW	3. Overvoltage protection device
MDCDB-T20	1000V	20kW	4. other

#### ► Technical Parameters

Model	MDCDB-1	MDCDB-2	MDCDB-3	MDCDB-4		
Basic parameter	s					
DC input string	1 string	2 string	2 string	4 string		
DC output string	1 string	2 string	2 string	4 string		
Maximum DC input voltage	600V	600V	1000V	1000V		
Maximum DC short- circuit current	15A to 32A (Optional)					
Maximum DC output current	32A					
Rated AC voltage	220 / 230 / 240V AC	220 / 230 / 240V AC	380 / 400 / 415V AC	380 / 400 / 415V AC		
Rated AC current	13.6A/16A	27.3A/32A	15.2A/20A	30.4A/40A		
Rated frequency		50/60	) Hz			
Optional function	on					
Meter		Optio	onal			
AC fuses		Optio	onal			
Overvoltage protection device	Optional					
DC monitoring	Optional					
AC leakage protector		Optio	onal			











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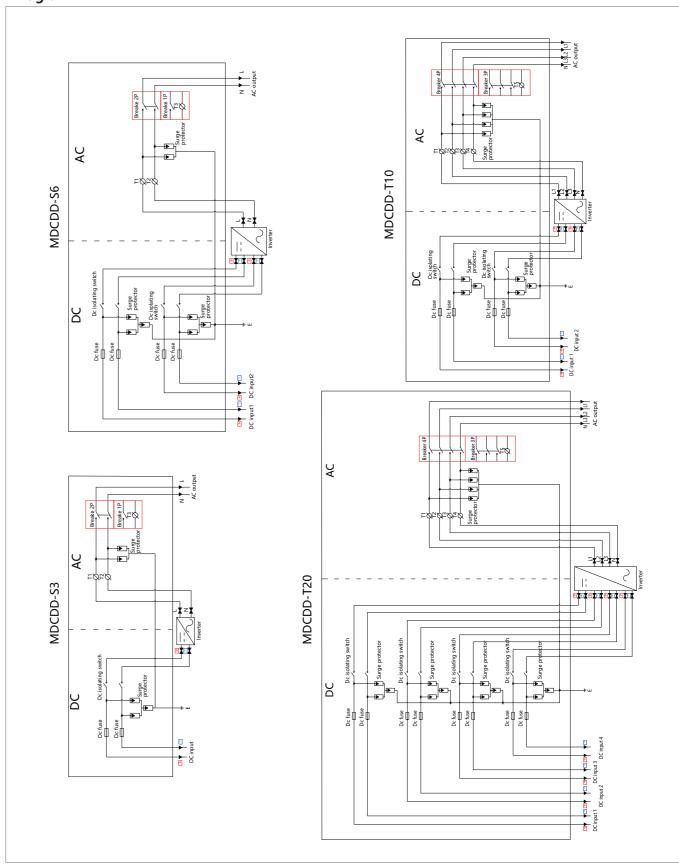




### ► Technical Parameters

Model	MDCDB-1	MDCDB-2	MDCDB-3	MDCDB-4				
Enclosure								
Cabinet material		PC+ABS						
Anti-UV		Yes						
Foreign body protection level		IP65						
Collision protection level		IK10						
Dimensions (W*H*D)		Customized	1					
DC input port		PG09, 2.5 to 4r	nm²					
DC output port		PG09, 2.5 to 4r	nm²					
AC input port	PG25, 2.5 to 6mm <sup>2</sup>	PG25, 2.5 to 10mm <sup>2</sup>	PG25, 2.5 to 6mm <sup>2</sup>	PG25, 2.5 to 10mr				
AC output port	PG25, 2.5 to 6mm <sup>2</sup>	PG25, 2.5 to 10mm <sup>2</sup>	PG25, 2.5 to 6mm <sup>2</sup>	Pg25, 2.5 to 10mr				
DC isolated switch								
Rated insulation voltage	600V	600V	1000V	1000V				
Rated current		32A						
Classification		DC-PV1/DC-P	V2					
Executive Standard		IEC/EN 60947-3,	JL508I					
Certification		CE, TUV, SAA,	СВ					
DC surge protection								
Maximum working voltage		1000V						
Maximum discharge current		40kA						
Executive Standard		EN 50539-11 Ty	pe 2					
Certification		CE, TUV, UL	-					
DC fuse								
Rated working voltage		1000 V						
Rated current		15 to 32A(Optio	onal)					
Dimensions (W*H*D)		Ф10 * 38mn						
Executive Standard		UL, CE, CB						
AC surge protection								
Rated voltage	230V AC	230V AC	400V AC	400V AC				
Maximum discharge current		40kA						
Executive Standard		IEC/EN 61643	-11					
Certification		CE						
AC circuit breaker								
Circuit breaker type	1P/2P	1P/2P	3P/4P	3P/4P				
Rated current	16A	32A	20A	20A				
Rated voltage	220/230/240V AC	220/230/240V AC	380/400/415V AC	380/400/415V AC				
Rated frequency		50/60Hz						
Environmental parameters		·						
Operating temperature		-20°C to +60	°C					
Humidity		99%						
Altitude		2000m (2000m Above	e derating)					
Installation method		Wall-mounted inst						

## **▶** Diagram



















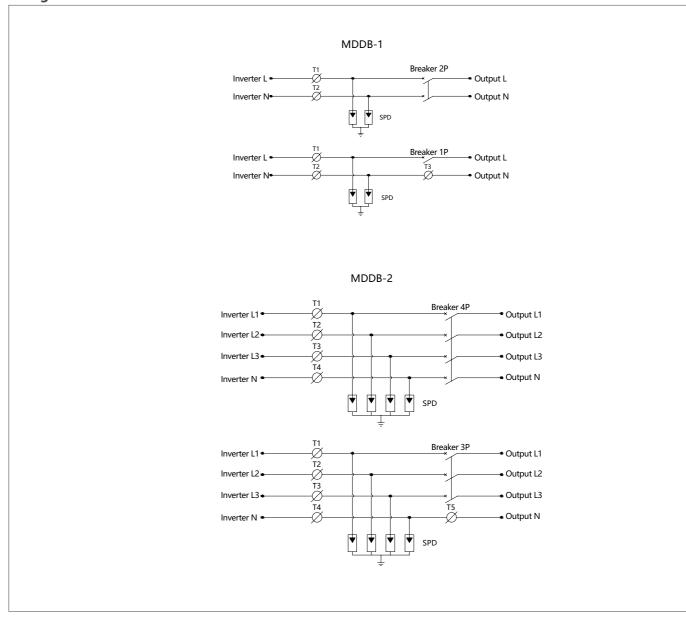
Suitable for household and industrial and commercial photovoltaic power generation systems; Maximum suitable for 6kW single-phase photovoltaic power generation system; Maximum applicable to 20kW three-phase photovoltaic power generation system; Meet customer's customized needs.

Model	Grid type	Maximum system power	Optional
MDDB-1	Single-phase grid	6kW	1. Electric energy meter 2. AC fuses
MDDB-2	Three-phase grid	16kW	Over-under voltage protection device     4. Others

#### ► Technical Parameters

Model	MDDB-1	MDDB-2		
Basic parameters				
Rated voltage	220/230/240V AC	380/400/415V AC		
Rated current	32A	40A		
Rated frequency	50/6	50Hz		
Enclosure				
Cabinet material		ainless steel onal)		
Foreign body protection level	IP	65		
Collision protection level	IK	10		
Dimensions (W*H*D)	Custo	mized		
AC input port	PG25, 2.5	to 10mm²		
AC output port	PG25, 2.5	to 10mm²		
AC circuit breaker				
Circuit breaker type	1P / 2P	3P / 4P		
Rated current	50 A	50 A		
Rated voltage	220 / 230 / 240V AC	380 / 400 / 415V A		
Rated frequency	50/6	60 Hz		
AC surge protection				
Rated voltage	230V AC	400V AC		
Maximum discharge current	40	kA		
Executive Standard	IEC/EN 6	51643-11		
Certification	C	Œ		
<b>Environmental parameters</b>				
Operating temperature	-20°C to	o +60°C		
Humidity	99	9%		
Altitude	2000 m			
Installation method	Wall-mounted installation			
Optional function				
Meter		ional		
AC fuses	•	ional		
Overvoltage protection device	Optional			
AC leakage protector	Opti	ional		

## Diagram









MDJB-A



MDJB-B







#### Overview

Suitable for PV system, equipped with a surge protector and isolator fuses, provid-ing isolation, leakage and grounding protection.

### **▶** Specification

Model Number	1/1		2/1		2/2		3/1	
Input	1 st	ring	2 string		2 string		3 string	
Output	1 st	ring	1 st	ring	2 string		1 string	
Max Voltage	600V	1000V	600V	1000V	600V	1000V	600V	1000V
Max Current Input (Eachstring)	30A	30A	30A	30A	30A	30A	30A	30A
Max Current Output (Eachstring)	30A	30A	63A	63A	30A	30A	63A	63A
Enclosure								
Material				PC/AE	BS			
Degree of Protection				IP65/IP	66			
Impacts				lk10				
Input Cable Glands	PG09, 2.5-16							
Output Cable Gland	PG21, 2.5-16							
Environment								
Operating temperature				-25°C∼+	60°C			

Model Number	3/3		4/2		6/2	6/3
Input	3 st	ring	4 string		6 string	6 string
Output	1 st	ring	2 stı	ring	2 string	3 string
Max Voltage	600V	1000V	600V	1000V	1000V	1000V
Max Current Input (Eachstring)	30A	30A	30A	30A	20A	30A
Max Current Output (Eachstring)	30A	30A	63A	63A	63A	63A
Enclosure						
Material				PC/AB	S	
Degree of Protection				IP65/IP	66	
Impacts				lk10		
Input Cable Glands	PG09, 2.5-16					
Output Cable Gland	PG21, 2.5-16					
Environment						
Operating temperature			-	25°C∼+	60°C	

#### ▶ Dimensions (unit:mm)

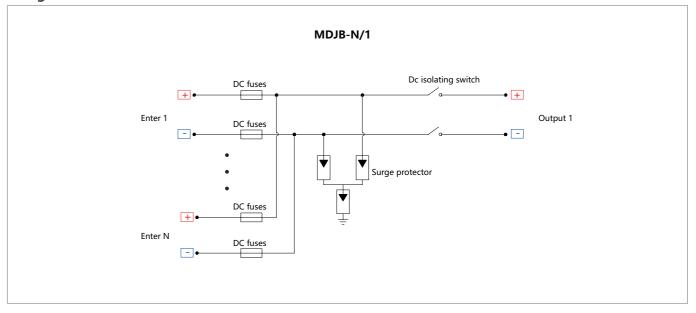
Distribution box (MDJB-A)	L*W*H
9 Ways	24.6*23.4*12.2
12 Ways	31.4*23.4*12.2
18 Ways	42.2*23.4*12.2
24 Ways	31.5*40.5*12.2

Distribution box (MDJB-B)	L*W*H
4 Ways	10.7*21*9.2
6 Ways	16.5*20*10
9 Ways	22*20*11
12 Ways	27*23*11
18 Ways	37.5*23*11
24 Ways	27*37.5*11
36 Ways	27*53*11

### **▶** Technical Parameters

Model	MDJB-1/1	MDJB-2/1	MDJB-3/1	MDJB-4/1	MDJB-6/1	
DC surge protection						
Maximum working voltage			1000 V			
Maximum discharge current			40 kA			
Executive Standard			EN 50539-11 Type 2	2		
Certification			CE, TUV			
DC isolated switch/DC MCB						
Rated insulation pad			1000V			
Rated current	32A	32A	32A	63A	63A/80A	
Classification			DC-PV1/DC-PV2			
Executive Standard		II	EC/EN 60947-3, UL5	081		
Certification		CE, TUV	CB, TUV Australia	Approval		
DC fuse						
Rated working voltage			1000V			
Rated current			15~32A(Optional)			
Dimensions (W*H*D)			Ф10 * 38 mm			
Executive Standard			TUV, CE, CB			
Environmental parameters						
Operating temperature		-20°C~+60°C				
Humidity	99%					
Altitude	2000m(2000m Above derating)					
Installation method		W	all-mounted installa	tion		

## **▶** Diagram





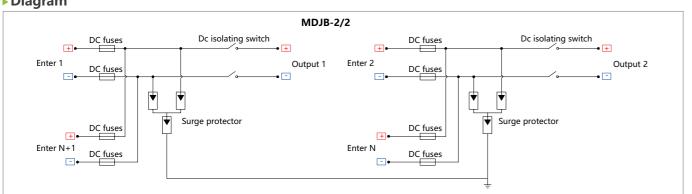


## **▶** Technical Parameters

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Model	MDJB-2/2	MDJB-4/2	MDJB-6/2			
Basic parameters		<u> </u>				
DC input string	2 String	4 String	6 String			
DC output string	2 String	2 String	2 String			
Maximum DC input voltage		1000V				
Maximum DC short-circuit current		15A~32A (Optional)				
Maximum DC output current	32A	32A	32A			
DC monitoring		Optional				
Enclosure						
Cabinet material	PC/ABS	PC/ABS	PC/ABS			
Anti-UV	Yes	Yes	Yes			
Foreign body protection level		IK10				
Collision protection level		IP65				
Dimensions (W*H*D)		Customized				
DC input port		Pg09, 2.5~4 mm²				
DC output port	Pg25, 4~6 mm²	Pg25, 4~6 mm²	Pg25, 6~10 mm <sup>2</sup>			
DC surge protection	<u>'</u>					
Maximum working voltage		1000V				
Maximum discharge current		40 kA				
Executive Standard		EN 50539-11 Type 2				
Certification		CE, TUV, CB				
DC isolated switch/DC MCB						
Rated insulation pad		1000V				
Rated current	32A	32A	40A			
Classification		DC-PV1/DC-PV2	,			
Executive Standard		IEC/EN 60947-3, UL508I				
Certification		CE, TUV, CB				
DC fuse						
Rated working voltage		1000 V				
Rated current		15 A~32A (Optional)				
Dimensions (W*H*D)		Ф10 * 38 mm				
Executive Standard	CE, CB, TUV					
Environmental parameters						
Operating temperature		-20°C~+60°C				
Humidity		99%				
Altitude	2000m (2000m Above derating )					
Installation method	Wall-mounted installation					

#### **▶** Diagram



#### **▶** Overview

 $\mathsf{MDHL}\,\mathsf{PV}\,\mathsf{AC}\,\mathsf{combiner}\,\mathsf{box}\,\mathsf{is}\,\mathsf{an}\,\mathsf{important}\,\mathsf{part}\,\mathsf{of}\,\mathsf{PV}\,\mathsf{series}\,\mathsf{string}\,\mathsf{power}\,\mathsf{generation}\,\mathsf{system},\mathsf{which}\,\mathsf{ind}\,\mathsf$ is responsible for string inverter and AC power distribution cabinet or step-up transformer. The product can access up to 4/6/8 PV inverters. It can be customized according to user requirements.

#### ▶ Features

#### High reliability

Use photovoltaic special AC surge protector

The photovoltaic special AC circuit breaker is used, and the rated voltage can reach 690V AC.

#### Strong adaptability

Ip65 protection, waterproof, dust proof and UV resistant.

**MDHL PV AC Combiner Box** 

Strict high and low temperature test, suitable for a wide area.

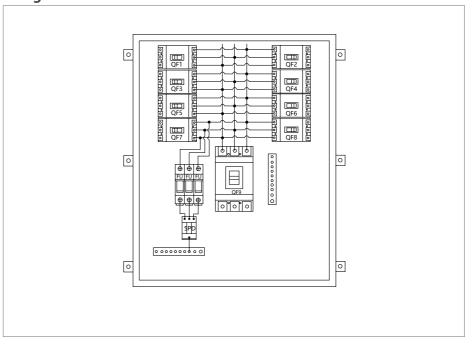
The installation is simple, the system wiring is simplified, and the wiring is convenient.

The box is made of a metal material such as cold rolled steel.

#### Flexible configuration

It is suitable for the AC output of 1~50KW PV string inverter. According to the capacity of the inverter, the current level of the circuit breaker can be modified.

#### **▶** Diagram











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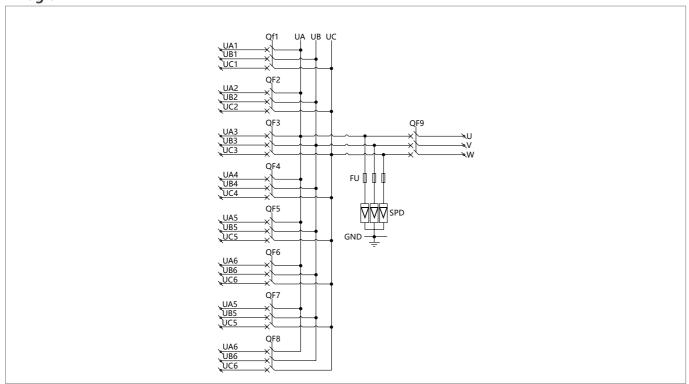




#### ► Technical Parameters

Product number	MDHL-4/1	MDHL-6/1	MDHL-8/1		
Number of input channels	4	6	8		
Maximum input voltage		690V AC			
Input current per channel	0~250A	0~200A	0~100A		
Highest output current		800A			
Un Rated working voltage Un		480V AC			
Up Voltage protection level Up		≤ 3.2kV			
Nominal flow capacity In (8/20µs)	20kA (Can b	20kA (Can be selected according to customer requirements			
Maximum flow capacity Imax (8/20µs)	40kA (Can k	40kA (Can be selected according to customer requirements			
Response time		<25ns			
Temperature and humidity	Working temperature:	-40~+85°C, humidity 95%, no co	ndensation, no corrosive gas		
Altitude		≤ 4000m			
Input and output switch		Breaker			
Surge protector		Standard			
Box material	Hot-dip galvanized steel	sheet/stainless steel/cold rolled s	steel sheet/engineering plastic		
Box protection level	IP65				
Cable connector protection rating	IP66				
Volume (width × height × depth)	900mm×1000mm×200mm	700mm×1000mm×200mm	800mm×1000mm×200mm		

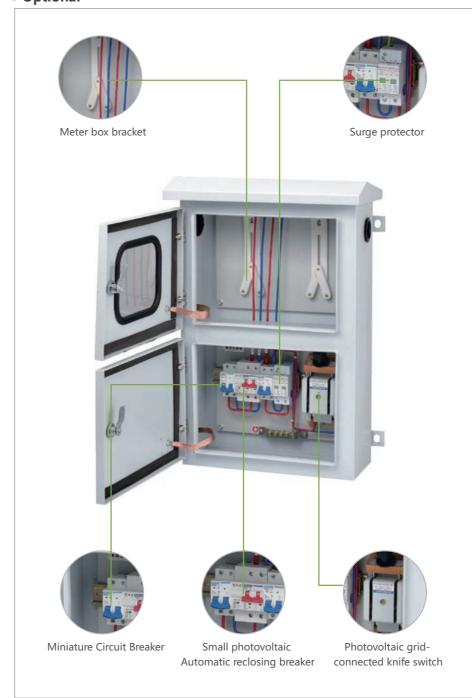
## **▶** Diagram



#### **▶** Features

Rainproof / waterproof / anti-corrosion Size: 650×400×160mm Power. 3~10KW

## **▶** Optional











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## MDXLD-4/1 6/1 12/1 PV DC Combiner Box







#### **▶** Features

Rainproof / waterproof / anti-corrosion Size: 500×600×200mm Power: 8~50KW

**▶** Optional



#### **▶**Overview

The MDXLD-4/1  $\,$  6/1  $\,$  12/1 lightning protection combiner box combines the DC input and sink of the 4/6/12-channel photovoltaic module string into one output, each line is equipped with a fuse, and the output is equipped with a lightning arrester and a circuit breaker, which greatly simplifies the DC power distribution cabinet and the reverse Input wiring for the transformer. It provides lightning protection, short circuit protection and grounding protection. The intelligent lightning protection combiner box is equipped with a flow monitoring unit, which can monitor the current input by each photovoltaic cell string, the summed output voltage, the temperature inside the box, the state of the lightning arrester, and the state of the circuit breaker. It can be customized according to user requirements.



#### **▶**Features

#### High reliability

Use PV fuses.

Use PV surge protectors.

Use PV DC breaker or rotary isolation switch.

Technical Specifications for Photovoltaic Confluence Equipment" CGC/GF 037:2014.

#### Strong adaptability

Ip65 protection, waterproof, dust proof and UV resistant.

Strict high and low temperature test, suitable for a wide area.

The installation is simple, the system wiring is simplified, and the wiring is convenient.

The box is made of metal materials such as cold rolled steel plate.

#### Flexible configuration

Applicable to monocrystalline silicon, polycrystalline silicon, thin film photovoltaic modules, can modify the current level of photovoltaic fuses, circuit breakers, rotary isolating switches.

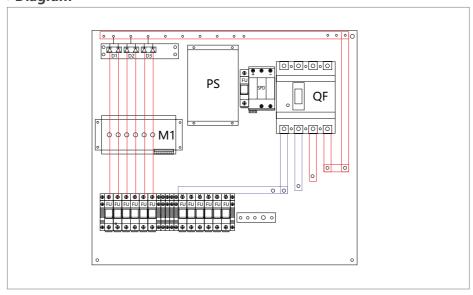








#### **▶** Diagram





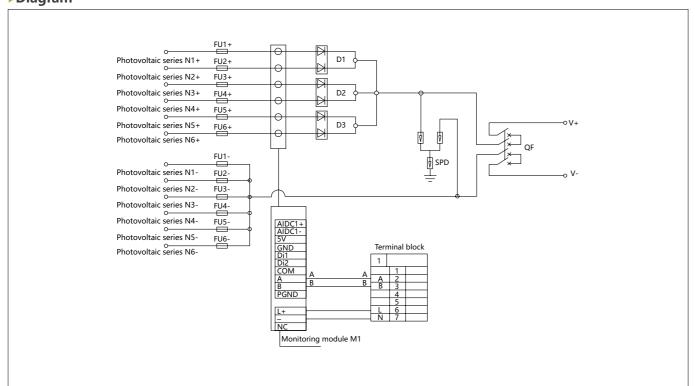
#### **▶**Technical Parameters

Name	MDXLD-4/1 6/1 12/1				
Electrical parameters					
System maximum DC voltage	1500				
Maximum input current per channel	15A				
Maximum number of input channels	4/6/12				
Maximum output switching current	100A				
Number of inverter MPPT	N				
Number of output channels	1				
Lightning protection					
Test category	II pole protection				
Nominal discharge current	20kA				
Maximum discharge current	40kA				
Voltage protection level	3.8kV				
Maximum continuous operating voltage	1500V				
Number of poles	3P				
Structural features	Pluggable module				

#### ► Technical Parameters

Name	MDXLD-4/1 6/1 12/1		
System			
Protection level	IP65		
Output switch	DC circuit breaker (standard) / DC rotary isolating switch (optional)		
SMC4 waterproof connector	Standard		
Photovoltaic DC fuse	Standard		
Photovoltaic DC fuse	Standard		
Monitoring module	Optional		
Anti-reverse diode	Optional		
Box material	Metal		
Installation method	Wall-mounted		
Operating temperature	-25℃~+ 55℃		
Altitude	2000 meter		
Allow relative humidity	0~95%, no condensation		

#### **▶** Diagram



#### **▶**Overview

The MDXLD-PV16/1 lightning protection combiner box combines the DC input and sink of the 16channel photovoltaic module string into one output, each line is equipped with a fuse, and the output is equipped with a lightning arrester and a circuit breaker, which greatly simplifies the DC power distribution cabinet and the reverse Input wiring for the transformer. It provides lightning protection, short circuit protection and grounding protection. The intelligent lightning protection combiner box is equipped with a flow monitoring unit, which can monitor the current input by each photovoltaic cell string, the summed output voltage, the temperature inside the box, the state of the lightning arrester, and the state of the circuit breaker. It can be customized according to user requirements.



#### **▶** Features

#### **High reliability**

Use PV fuses.

Use PV surge protectors.

Use PV DC breaker or rotary isolation switch.

Technical Specifications for Photovoltaic Confluence Equipment" CGC/GF 037:2014.

#### Strong adaptability

Ip65 protection, waterproof, dust proof and UV resistant.

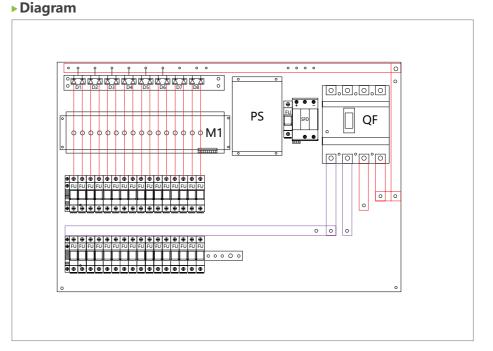
Strict high and low temperature test, suitable for a wide area.

The installation is simple, the system wiring is simplified, and the wiring is convenient.

The box is made of metal materials such as cold rolled steel plate.

#### Flexible configuration

Applicable to monocrystalline silicon, polycrystalline silicon, thin film photovoltaic modules, can modify the current level of photovoltaic fuses, circuit breakers, rotary isolating switches.











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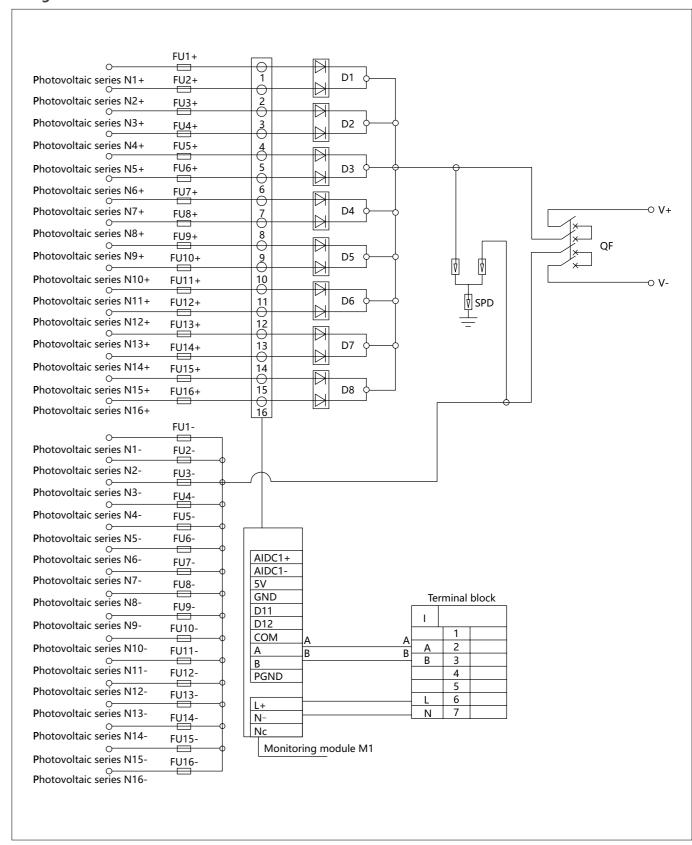




#### **▶** Technical Parameters

Name	MDXLD-PV16/1
Electrical parameters	
System maximum DC voltage	1500
Maximum input current per channel	15A
Maximum number of input channels	16
Maximum output switching current	200A
Number of inverter MPPT	N
Number of output channels	1
Lightning protection	
Test category	II pole protection
Nominal discharge current	20kA
Maximum discharge current	40kA
Voltage protection level	3.8kV
Maximum continuous operating voltage	1500V
Number of poles	3P
Structural features	Pluggable module
System	·
Protection level	IP65
Output switch	DC circuit breaker (standard) / DC rotary isolating switch (optional)
SMC4 waterproof connector	Standard
Photovoltaic DC fuse	Standard
Photovoltaic DC surge protector	Standard
Monitoring module	Optional
Anti-reverse diode	Optional
Box material	Metal
Installation method	Wall-mounted
Operating temperature	-25°C~+ 55°C
Altitude	2000 meter
Allow relative humidity	0~95%, no condensation

#### **▶** Diagram









MDXLD-24/1 Metal













Overview

The MDXLD-PV24/1 lightning protection combiner box combines the DC input and sink of the 24-channel photovoltaic module string into one output, each line is equipped with a fuse, and the output is equipped with a lightning arrester and a circuit breaker, which greatly simplifies the DC  $power \, distribution \, cabinet \, and \, the \, reverse \, Input \, wiring \, for \, the \, transformer. \, It \, provides \, lightning$  $protection, short \, circuit \, protection \, and \, grounding \, protection. \, The \, intelligent \, lightning$  $protection\,combiner\,box\,is\,equipped\,with\,a\,flow\,monitoring\,unit,\,which\,can\,monitor\,the\,current$ input by each photovoltaic cell string, the summed output voltage, the temperature inside the box, the state of the lightning arrester, and the state of the circuit breaker. It can be customized according to user requirements.

#### **▶** Features

#### **High reliability**

Use PV fuses.

Use PV surge protectors.

Use PV DC breaker or rotary isolation switch.

Technical Specifications for Photovoltaic Confluence Equipment" CGC/GF 037:2014.

#### Strong adaptability

Ip65 protection, waterproof, dust proof and UV resistant.

Strict high and low temperature test, suitable for a wide area.

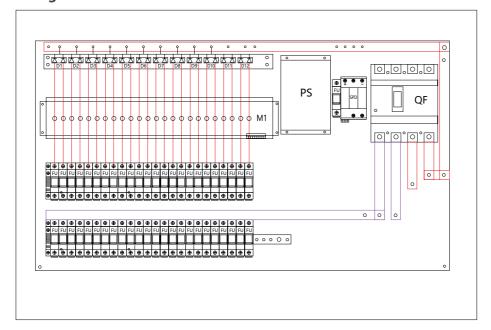
The installation is simple, the system wiring is simplified, and the wiring is convenient.

The box is made of metal materials such as cold rolled steel plate.

#### Flexible configuration

Applicable to monocrystalline silicon, polycrystalline silicon, thin film photovoltaic modules, can modify the current level of photovoltaic fuses, circuit breakers, rotary isolating switches.

#### **▶** Diagram



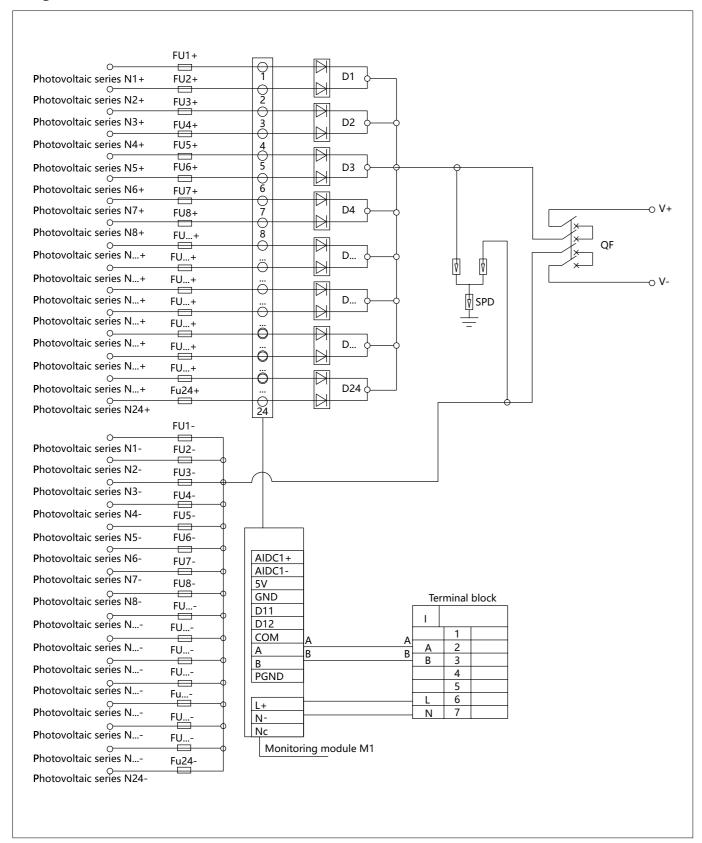
#### **▶**Technical Parameters

riecillical Parameters	
Name	MDXLD-PV24/1
Electrical parameters	
System maximum DC voltage	1500
Maximum input current per channel	15A
Maximum number of input channels	24
Maximum output switching current	400A
Number of inverter MPPT	N
Number of output channels	1
Lightning protection	
Test category	II pole protection
Nominal discharge current	20kA
Maximum discharge current	40kA
Voltage protection level	3.8kV
Maximum continuous operating voltage	1500V
Number of poles	3P
Structural features	Pluggable module
System	
Protection level	IP65
Output switch	DC circuit breaker (standard) / DC rotary isolating switch (optional)
SMC4 waterproof connector	Standard
Photovoltaic DC fuse	Standard
Photovoltaic DC surge protector	Standard
Monitoring module	Optional
Anti-reverse diode	Optional
Box material	Metal/SMC
Installation method	Wall-mounted
Operating temperature	-25℃~+ 55℃
Altitude	2000 meter
Allow relative humidity	0~95%, no condensation





#### Diagram



#### **▶** Features

- 1.The PV combiner box is suitable for photovoltaic grid-connected and off-grid power generation
- 2.It is configured with photovoltaic dedicated high-voltage lightning arrester, DC fuse and circuit breaker to provide short circuit fault protection and lightning protection.
- 3.It has protect function of over-voltage and over-current so as to avoid damage to photovoltaic panels and inverters when the fault occurs.
- 4.lt's also used to reduce the connection of the photovoltaic array to the inverter, optimize the system structure, improve the reliability and maintainability of the system, make the photovoltaic system at
- 5.IP65 design, waterproof, anti dust and anti ultraviolet.
- 6.Strict test for high and low temperature, used widely.
- 7.The simple installation, the simplified system wiring, the convenient wiring

#### **▶** TechnicaL Specification

DC string box	
Product Name	DC combiner box
Model Code	MDJB-PV4/1
Rated Voltage	500V~600V
Operation	10A
Input	4strings
output	1string
Temperature range	-25°C~+60°C
Enclosure	
IP Protection Class (IEC60529)	IP65
Materials	Polycarbonate / ABS
Spec UV resistance and Flame reta	
DC Circuit Breaker	
Rated Voltage	500V~600V
Rated Current	63A
DC SPD	
Max Operating Voltage	1000V
Max Discharge Current	40KA
Nominal discharge current	20KA
DC Fuse	
Rated Volitage	1000V
Fuse link	15A 10*38mm²
Finger safe touch	YES







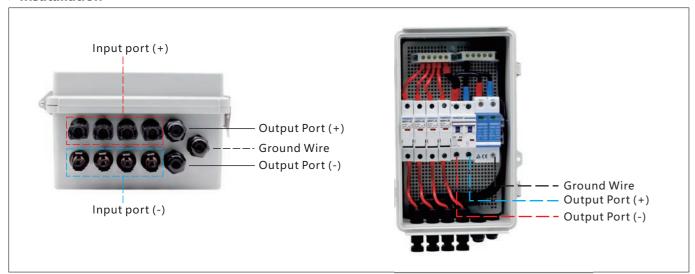






## MOREDAY

#### **▶** Insatallation



#### Instruction

- 1. Box Input: Connect the panel connectors (module output and combiner input), make sure the negative wire of module output connected to the blue area (as the picture instructed); the positive wire of module output connected to the red area (as the picture instructed).
- 2. Box Output: Connect PV wires to the output terminals of DC circuit breaker (both "+" and "-"; as the picture instructed), connect the ground wire to the ground terminal of DC arrester. All the output wires separately pass through the cable glands, make sure all the cable glands properly tightened.

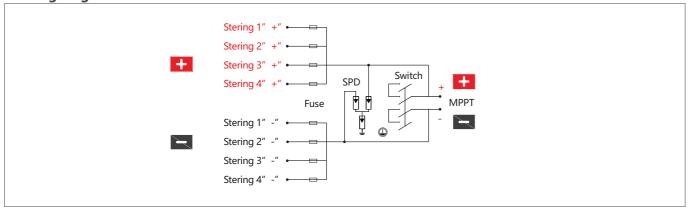
#### Notice:

- 1. All connections must be carried out under the state of power failure.
- 2. Let the professional electrical engineer carry on connecting line.
- 3. The flammable and explosive are forbidden in the installing concourse.

#### **▶** Warranty & Service

Standard Combiner Boxes come with 3 year warranty, except on the consumables such as fuses. If you have any question, just feel free tocontact me.

#### **▶**Wiring diagram



#### **▶** Features

- 1.The PV combiner box is suitable for photovoltaic grid-connected and off-grid power generation systems.
- 2.It is configured with photovoltaic dedicated high-voltage lightning arrester, DC fuse and circuit breaker to provide short circuit fault protection and lightning protection.
- 3.It has protect function of over-voltage and over-current so as to avoid damage to photovoltaic panels and inverters when the fault occurs.
- 4.It's also used to reduce the connection of the photovoltaic array to the inverter, optimize the system structure, improve the reliability and maintainability of the system, make the photovoltaic system at its best.
- 5.IP65 design, waterproof, anti dust and anti ultraviolet.
- 6.Strict test for high and low temperature, used widely.
- 7.The simple installation, the simplified system wiring, the convenient wiring

#### **▶** TechnicaL Specification

DC string box		
Product Name	DC combiner box	
Model Code	MDJB-PV6/1	
Rated Voltage	500V~600V	
Operation	10A	
Input	6trings	
output	1string	
Temperature range	-25°C~+60°C	
Enclosure		
IP Protection Class (IEC60529)	IP65	
Materials	Polycarbonate / ABS	
Spec	UV resistance and Flame retardant	
DC Circuit Breaker		
Rated Voltage	500V~600V	
Rated Current	63A	
DC SPD		
Max Operating Voltage	1000V	
Max Discharge Current	40KA	
Nominal discharge current	20KA	
DC Fuse		
Rated Volitage	1000V	
Fuse link 15A 10*38mm²		
Finger safe touch	YES	









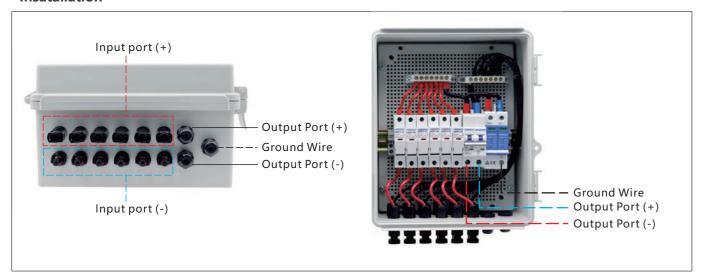




MDJB-6B DC COMBINER BOX



#### **▶**Insatallation



#### **▶**Instruction

- 1. Box Input: Connect the panel connectors (module output and combiner input), make sure the negative wire of module output connected to the blue area (as the picture instructed); the positive wire of module output connected to the red area (as the picture instructed).
- 2. Box Output: Connect PV wires to the output terminals of DC circuit breaker (both "+" and "-"; as the picture instructed), connect the ground wire to the ground terminal of DC arrester. All the output wires separately pass through the cable glands, make sure all the cable glands properly tightened.

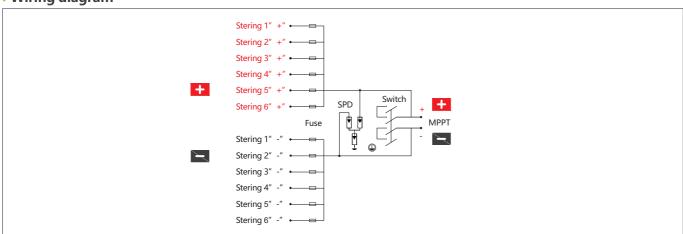
#### Notice:

- 1. All connections must be carried out under the state of power failure.
- 2. Let the professional electrical engineer carry on connecting line.
- 3. The flammable and explosive are forbidden in the installing concourse.

#### **▶** Warranty & Service

Standard Combiner Boxes come with 3 year warranty, except on the consumables such as fuses. If you have any question, just feel free tocontact me.

#### **▶**Wiring diagram



#### **▶**Overview

Dc circuit breaker limited current performance, can accurately protect relay protection, automatic device from overload, short circuit and other faults. Advantages of current limiting and arc extinguishing capabilities of dc circuit breakers.

#### **▶** TechnicaL Specification

#### MDB1Z-63

reclinical Spec	echinical Specification MDE				VIDB 1Z-63
Pole		1P	2P	3P	4P
Rated Working Volta	250V DC   600V DC   800V DC   1000V D				
Frame Current		63A			
Rated Current In		63A, 5	0A, 40A, 32A	, 25A, 20A,16	5A,10A
Rated Insulation Volt	age Ui		100	00V	
Rated Impulse Withs	tand Voltage Uimp		61	kV	
Tripping Characterist	ics		В	/C	
Tripping Type			Thermal	Magnetic	
Rated Ultimate Short-Capacity Icu	Circuit Breaking		61	kA	
Rated Service Short-Ci Capacity Ics	rcuit Interrupting		61	kA	
Electrical Life	Actual		> 1500	) Cycles	
	Standard		300 (	Cycles	
Mechanical Life	Actual		>10000	) Cycles	
	Standard		9700	Cycles	
Overvoltage Categor	у	III			
Pollution Degree		3			
Ingress Protection		IP40; Wiring port IP20			
Resistance to humidi	ty and heat	Class 2			
Relative Humidity		≤ 95 %			
Vibration		acc. to IEC60068-2-6			
Shocks		acc. to IEC60068-2-27			
Terminal capacity		2.5~35mm?			
Fastening Torque of T	Terminals	2.0 ~ 3.5 Nm			
Ambient Temperatur	е	-30°C~70°C			
Storage Temperature		-40°C~85°C			
Installation Method		DIN			
Elevation		≤2000m			
Dimension			Width	:72mm	
		High: 87.5mm			
		Depth: 81mm			
Weight	eight 0.12kg/Pole				



MDB1Z-63



MDB1Z-100





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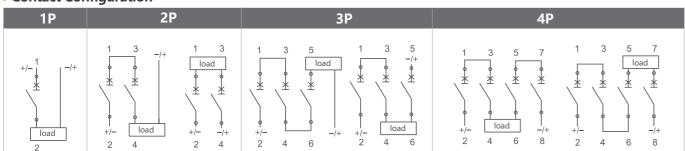


## **▶**TechnicaL Specification

#### MDB1Z-100

Pole		2P	4P	
Rated Working Voltage Ue		600V DC	1000V DC	
Frame Current		100A		
Rated Current In		63A, 80A, 100A		
Rated Insulation Voltage Ui		100	00V	
Rated Impulse Withstand Voltage	Uimp	6	ΚV	
Tripping Characteristics		В/	/C	
Tripping Type		Thermal	Magnetic	
Rated Ultimate Short-Circuit Break	king Capacity Icu	15kA(In	≤100A)	
Rated Service Short-Circuit Interru	pting Capacity Ics	10kA(In	≤100A)	
Electrical Life	Actual	> 1500	Cycles	
	Standard	300 0	Cycles	
Mechanical Life	Actual	>10000	) Cycles	
	Standard	9700 Cycles		
Overvoltage Category		III		
Pollution Degree		3		
Ingress Protection		IP40; Wiring port IP20		
Resistance to humidity and heat		Class 2		
Relative Humidity		≤ 95 %		
Vibration		acc. to IEC60068-2-6		
Shocks		acc. to IEC60068-2-27		
Terminal capacity		2.5~35mm?		
Fastening Torque of Terminals		2.0~3.5 Nm		
Ambient Temperature		-30°C~70°C		
Storage Temperature		-40°C~85°C		
Installation Method		DIN		
Elevation		≤20	00m	
		Width:	72mm	
Dimension		High: 87.5mm		
		Depth: 81mm		
Weight		0.12kg/Pole		

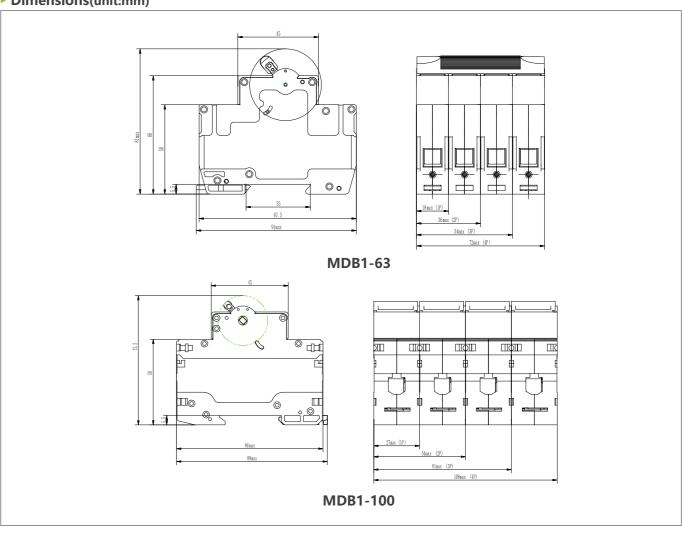
## **▶** Contact Configuration



#### ► Standard time-current band

Test	Instantaneous release type	DC test current	Starting state	Tripping or non-tripping time limit	Expected results	Remarks
	B、C	1.13In	Cold state	t ≥ 1h(In≤ 63A)	No tripping	/
b	B、C	1.45ln	Followed by a test	t < 1h(In≤ 63A)	Tripping	The current rises steadily within 5S
С	B、C	2.55In	Cold state	1s < t < 60s(In≤ 63A) 1s < t < 60s(In≤ 63A)	Tripping	/
d	B, C	4ln	Cold state	$0.1s < t < 45s(In \le 32A)$ $0.1s < t < 90s(In \le 32A)$	Tripping	
u	В, С	7In	Cold state	$0.1s < t < 15s(In \le 32A)$ $0.1s < t < 30s(In \le 32A)$		Close the auxiliary switch to turn on the power
Α	e B, C	7In Cold state	Cold state	t < 0.1s	Tripping	
		15In	Cold State	ι < 0.15	птррппу	

### ▶ Dimensions(unit:mm)



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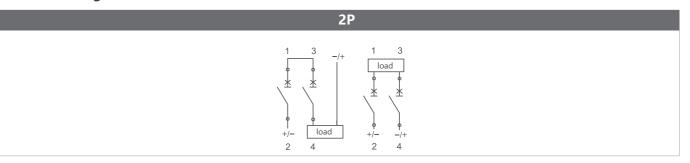
### Overview

Dc circuit breaker limited current performance, can accurately protect relay protection, automatic device from overload, short circuit and other faults. Advantages of current limiting and arc extinguishing capabilities of dc circuit breakers.

## **▶** TechnicaL Specification

Pole		2Р	
Rated Working Voltage Ue		800V/1000V DC	
Frame Current		63A	
Rated Current In		63A, 50A, 40A, 32A, 25A, 20A,16A,10A	
Rated Insulation Voltag	ge Ui	800V/1000V	
Rated Impulse Withsta	nd Voltage Uimp	6kV	
Tripping Characteristic	S	B/C	
Tripping Type		Thermal Magnetic	
Rated Ultimate Short-Ci Capacity Icu	rcuit Breaking	6kA	
Rated Service Short-Circ Capacity Ics	uit Interrupting	6kA	
Electrical Life	Actual	> 1500 Cycles	
	Standard	300 Cycles	
Mechanical Life	Actual	>10000 Cycles	
	Standard	9700 Cycles	
Overvoltage Category		III	
Pollution Degree		3	
Ingress Protection		IP40; Wiring port IP20	
Resistance to humidity	and heat	Class 2	
Relative Humidity		≤ 95 %	
Vibration		acc. to IEC60068-2-6	
Shocks		acc. to IEC60068-2-27	
Terminal capacity		2.5~35mm?	
Fastening Torque of Te	rminals	2.0 ~ 3.5 Nm	
Ambient Temperature		-30°C~70°C	
Storage Temperature		-40°C~85°C	
Installation Method		DIN	
Elevation		≤2000m	
		Width:72mm	
Dimension		High: 87.5mm	
		Depth: 81mm	
Weight		0.12kg/Pole	

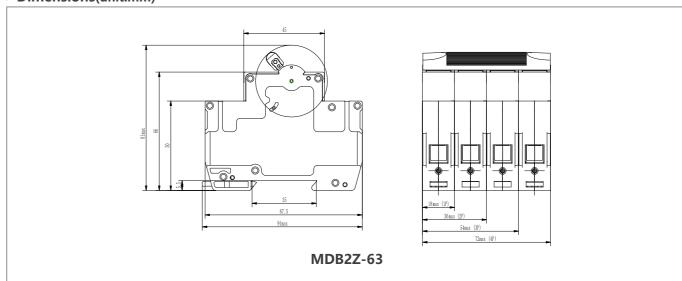
## **▶** Contact Configuration



#### ▶ Standard time-current band

Test	Instantaneous release type	DC test current	Starting state	Tripping or non-tripping time limit	Expected results	Remarks
	B、C	1.13In	Cold state	t ≥ 1h(In≤ 63A)	No tripping	/
b	B、C	1.45ln	Followed by a test	t < 1h(In≤ 63A)	Tripping	The current rises steadily within 5S
С	B、C	2.55In	Cold state	1s < t < 60s(In≤ 63A) 1s < t < 60s(In≤ 63A)	Tripping	/
d	В、С	4ln		, ,	Tripping	
a		7In		` '		Close the auxiliary switch to turn on the power
Α	e B、C	7In	Cold state	t < 0.1s	Tringing	1
		15In	Cold State	ι < 0.15	Tripping	

### **▶** Dimensions(unit:mm)















#### Overview

Suitable for industrial, commercial, high-rise and civil residences circuit protection. Features

- Up to 63A current rating
- Current limiting design
- D curves.
- Captive screws cannot be lost
- Contact position indicator(red/green)
- Easy installation on DIN rail

### **▶** TechnicaL Specification

Specifications	
Rated voltage(v)	230/400V(1P)、400V(2P、3P、4P)
Rated current(A)	6、10、16、20、25、32、40、50、63
Poles	1P、2P、3P、4P
Rated breaking capacity(A)	4500
Tripping characteristics	Table 1
Mechanical & Electrical life	4000
Tripping characteristics	B、C、D
Tightening torque (N·m)	2.5
Pollution Degree	2
Protection class	lp20
Overvoltage category	п
Standards	IEC60898 -1、GB/T10963 . 1
Compliant certification	ccc

### **▶** Wiring Diagram

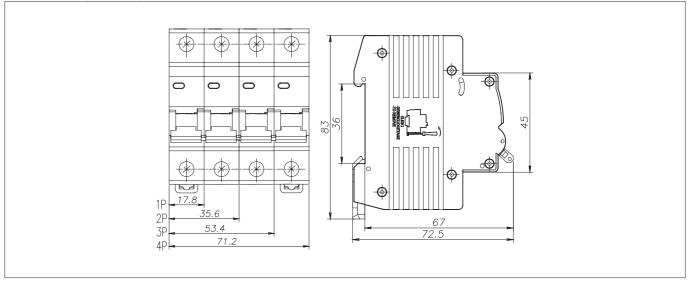
1P	2P	3P	4P
1 ±	1 * 3 * 2 4	1 * 3 * 5 * 2 4 6	1 ± 3 ± 5 ± 7 ± 2 ± 4 ± 6 ± 8 ±

#### ▶ Table 1: Tripping characteristics (Reference temp.30°C)

ltem	Rated current(A)	Initial status	Test current In(A)	Time limit for tripping or non-tripping	Expected result	Remarks
Delay	≤63	Cold	1.13In	≤1h	Non-tripping	
Delay	≤63	Following previous test	1.45In	<1h	Tripping	Current smoothly rises to specified value within 5s
Delay	≤32	Cold	2.55In	1 <t<60s< td=""><td>Tripping</td><td></td></t<60s<>	Tripping	
Delay	>32	Cold	2.55In	1 <t<120s< td=""><td>Tripping</td><td></td></t<120s<>	Tripping	
Instantaneous	Any value	Cold	3、5、10ln	≤0.1s	Non-tripping	B、C、D
Instantaneous	Any value	Cold	5、10、20In	<0.1s	Tripping	B、C、D

Note: The term"cold "means that the test is carried out at a reference calibration temperature without load before the test.

#### ▶ Dimensions(unit:mm)















#### **▶** Overview

Suitable for industrial, commercial, high-rise and civil residences circuit protection. Features

- Up to 63A current rating
- Current limiting design
- $\bullet$  Three levels of short-circuit protection , categorized by B  $_{\sim}$  C and
- D curves.
- Captive screws cannot be lost
- Contact position indicator(red/green)
- Easy installation on DIN rail

### **▶**TechnicaL Specification

Specifications	
Rated voltage(v)	230V(1P)、400V(2~4P)
Rated current(A)	63A、80A、100A
Poles	1P、2P、3P、4P
Rated breaking capacity lcn(A)	Icu=Ics=6000A
Rated impulse withstand voltage Uimp(V)	6000V
Tripping characteristics	Table 1
Mechanical & Electrical life	8500&1500(Operating frequency: 120 /h)
Pollution Degree	2
Tightening torque(N•m)	2.5
Protection class	IP20
Overvoltage category	паш
Standards	IEC 60947-2 、GB/T14048.2
Compliant certification	ccc

### **▶** Wiring Diagram

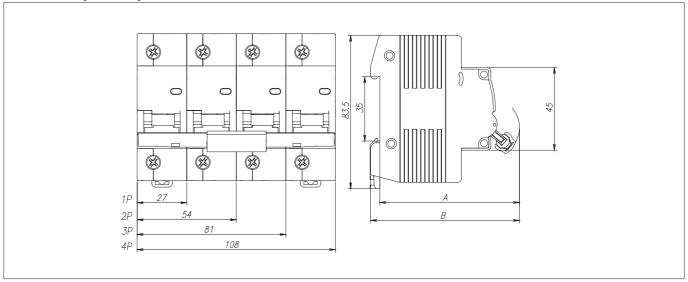
1P	2P	3P	4P
1 ± 2	1 * 3 *	1 * 3 * 5 *	1 ± 3 ± 5 ± 7 ±
	2 4	2 4 6	2 4 6 8

#### ▶ Table 1: Tripping characteristics (Reference temp.30°C)

Item	Test current In(A)	Initial status	Time limit for tripping or non-tripping	Expected result	Remarks
a	1.05In	Cold	t≤1h ( ln≤63A) t≤2h ( ln≥63A)	Non-tripping	
b	1.3In	Following Item a test	t<1h ( ln≤63A) t<2h( (ln≥63A)	Tripping	Current smoothly rises to specified value within 5s
c	2ln	Cold	0 <t<300s< td=""><td>Tripping</td><td></td></t<300s<>	Tripping	
d	8In	Cold	t≤0.2s	Non-tripping	
е	12In	Cold	t<0.2s	Tripping	

Note: The term"cold "means that the test is carried out at a reference calibration temperature without load before the test.

#### ▶ Dimensions(unit:mm)





## **MDB7 Miniature Automatic Reclosing Circuit Breakers**

## **MDM8L PV Plastic Smart Circuit Breakers**













#### Overview

MDB7-100ARD electric energy meter external circuit breaker (hereinafter referred to as circuit breaker) is suitable for AC 50Hz, rated working voltage up to 400V, rated current to 100A, long-distance control breaking or closing operation of the line, at the same time The line acts as an overload and short circuit protection, and can also be used as an infrequent operation conversion of the line. At present, it is widely used in intelligent prepaid meters to control the closing and breaking of lines.

Meet the standard: GB10963.1, IEC60898-1.

#### **▶** Electrical performance

Project	Parameter	Project	Parameter		
Number of poles	2P、4P	Instantaneous trip type	С		
Features	Short circuit protection, overload protection, isolated, remote split/ close control	Rated short-circuit breaking capacity	lcs=lcn=6000A		
Rack rated current value Inm	100A	Mechanical life	10000		
Rack rated current value Inm	230V AC(2P)/400V AC(4P)	Electrical life	6000		
Rated current In	32A, 40A, 50A, 63A, 80A,100A	Overcurrent tripping characteristics	See Table 1 and Figure 1		

Remote control function							
Project	Parameter	Project	Parameter				
Closing time	tc≤3s	Split/close switch	Phase line power				
Power-on delay td≤4s		Phase leakage current	IL≤0.2mA				
Control level voltage 220V AC±30%		Control signal indicator	Have				
Control level current	Ic≤1mA	Feedback signal	Have				
Closing module power take-off mode	Take power before the control line meter, take power after closing/ opening the short timetable	Split/close operation mode	Built-in shaft drive				

#### Overview

PV plastic smart circuit breakers (hereinafter referred to as: circuit breaker) is a circuit breaker integrating residual current relay, contactor and molded case circuit breaker. It is suitable for three-phase four-wire neutral point grounding power supply and demand system. Or the ground fault of the electrical equipment, over current, short circuit, phase loss and over voltage protection. It can also prevent electrical fires and electrical equipment damage caused by ground faults of electrical circuits or electrical equipment and provide indirect contact protection for personal electric shock hazards.

The product complies with the GB14048.2-2008 GB/T22387-2008 standard.

The photovoltaic molded case intelligent circuit breaker is equipped with RS485 serial interface, which can set the protection characteristic parameters through the programmer, and can meet the requirements of communication networking.

#### ▶ The main technical parameters

The main technical para	ameters					
Specification model	MDM8L-125	MDM8L-250	MDM8L-400	MDM8L-630	MDM8L-800	
Rated Voltage(V)	380V	380V	380V	380V	380V	
Shelf current In(A)	125	250	400	630	800	
Rated current Ir (standard type)	40、63、 80、100、 125	100, 160 200, 250	250, 315 350, 400	400, 500, 630	630、 700、800	
Rated current lr (electronic)	(0	.4-1.0) xln+	off (can be adju	usted every	0.1ln)	
Rated ultimate short-circuit breaking capacity leu (kA)	30	35	50	65	65	
Rated operating short-circuit breaking capacity les (kA)	15	22	35	42	42	
Rated residual short- circuiting (breaking) capability l m (kA)	7.5 8.75		12.5	16.25	16.25	
Rated residual operating current I41 (standard type)		-	100mA/200mA/ 300mA/500mA			
, ,,,		Leakage	alarm, automa	tic tracking		
Rated residual operating current l n (electronic)	50mA/100				ıkage alarm,	
Rated residual non- operating current			0.5 l△ n			
Residual current breaking time		≤ 0	.2S S-type 0.5	S 1S		
Limit no drive time		∆t>(	0.06s (2 I $_{\vartriangle}$ n) (S	5-type)		
Undervoltage action value (standard type)	MDM8L-125   MDM8L-250   MDM8L-400   MDM8L     380V   380V   380V   380V     125   250   400   63     80, 100, 125   200, 250   350, 400   500,     125   25			fter voltage	recovery)	
Overvoltage action value (standard type)	280V:	±5% (autom	natically close a	fter voltage	recovery)	









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## MDM1Z/5Z DC Moulded Case Circuit Breaker







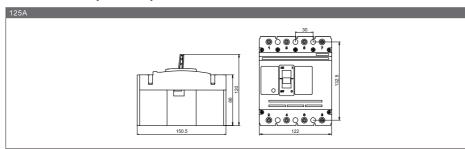


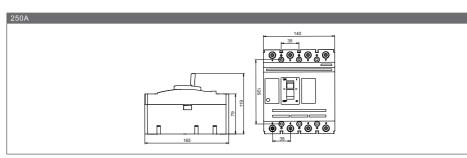
#### Overview

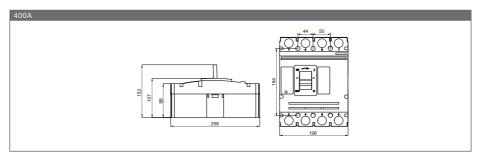
MDM1Z PV DC Moulded Case Circuit Breaker (MCCB) are mainly used in large solar power system, which are applied for solar DC combiner box, inverter and DC power distribution cabinet. Rated voltage up to 1000V DC, current up to 630A, with the function of overload protection and short-circuit protection.

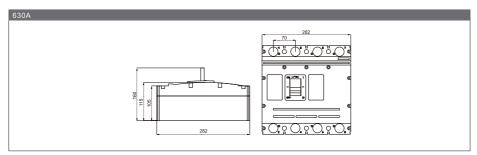
- High Shot- Circuit/Breaking Capacity
   Protection Functions: Overload, Short circuit, Unfrequent Operation
- Rated Voltage up to 1000V DC
  Rated Current 125A,250A.400A,630A
  IEC60947-2, GB14048-2
- Easy Installation

#### ▶ Dimensions(unit:mm)









#### **▶**TechnicaL Specification

BD series PV DC N	мссв									
Туре			MDM1Z-125	MDM1Z-250	MDM5Z-400	MDM5Z-630				
Pole			4P	4P	4P	4P				
Max Rated Current			125A	250A	400A	630A				
Electrical Charact	teristics									
Rated Working Vo	ltage	Ue	1000V DC	1000V DC	1000V/1500V DC	1000V/1500V DC				
Rated Current		In(A)	63/80/100/125	125/160200/250	250/300/315 350/400	400/500/630				
Rated Insulated Vo	oltage	Ui		1000	)V DC					
Rated Impulsed Vo	oltage	Uimp		8	kV					
1 Min Power Frequ	uency Withstand \	/oltage	3.8 KV	3.8 KV	3.8 KV	3.8 KV				
Utimate Breaking	Capacity	lcu	20 KA	20 KA	20 KA	20 KA				
Run Breaking Cap	acity	lcs	15 KA	15 KA	15 KA	15 KA				
Protection										
Tripping Type			Thermal Magnetic Type							
Control And India	cation									
ControlMode	Manual	Direct (RHD)	Optional							
		Extended(ERH)		Opt	ional					
	MOD			Opt	ional					
Shunt Release (SH	IT)		Optional							
Auxiliary Release			Optional							
Terminal End Cove	er		Yes							
Interphase Barrier	rs .		Yes							
Service Life/Cycle	e Operation									
Mechanical			14000	14000	5000	5000				
Electrical			5000	5000	1500	1500				
Size(LxWx H)			150.5x122x92.5	150.5x122x92.5 165x140x88 258x198x107						
Ingress Protection	1			All Sides IP40 ,Conn	ection Terminal IP20					
Installation Envir										
Installation Envir	onment									
Comply With	onment			IE C60947-2	/GB14048.2					

#### **▶** Wiring Diagram

2P	3P	4P
1 3 -/+ 1 1 3 * * * * * * * * * * * * * * * * * * *	3 5 1 3 5	1 3 5 7 1 3 1 3 Load + +/- Load -/+ +/- 2 4 6 8 +/- 6 2 4





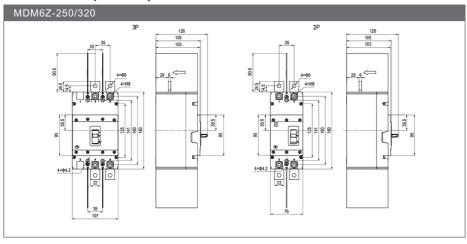


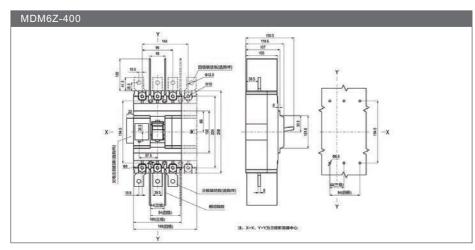


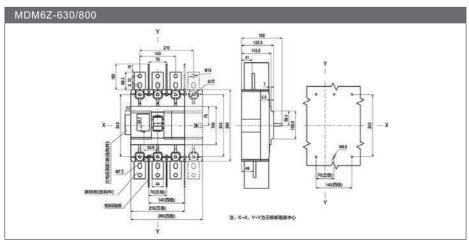
#### Overview

MDM6Z series molded case circuit breaker, rated voltage up to DC1500V, current up to 400A. The breaking capacity of DC1500V is up to 10kA, which can reliably protect the system against short circuit.

## ▶ Dimensions(unit:mm)







## **▶** TechnicaL Specification

Model	MD	M6Z-	250	MD	MDM6Z-320		MDM6Z-400		MDM6Z-630		MDM6Z-8		800		
Shell frame grade Rated current Inm (A)	250				320		400		630		800				
Rated current In (A)		140、 200、 250	225	280、	315、	320	315、	350、	400	400、	500、	630	630、	700、	800
pole	2	3	3	2	3	3		4			4			4	
Rated operating voltage Ue (V)AC.	1000	1250	1500	1000	1250	1500	1000	1250	1500	1000	1250	1500	1000	1250	1500
Rated insulation voltage Ui (V)	1000	1500	1500	1000	1500	1500		1500			1500			1500	
Rated impact withstand voltage Uimp (kV)								12							
Ultimate short-circuit breaking capacity LCU (kA)								20							
Operating short circuit breaking capacity Ics (kA)								20							
Connection mode	Тор	dowi	out	Тор	down	out	In	the c	ut	l l	the c	out	In the out		out
Mechanical life (total number of times)								10000	)						
Electrical life (total number of times)								2000							
Total break time (MS)								20							
Whether it has isolation characteristics								yes							
Standard.						IEC 6	0947-2	2 GB	/T 14	048.2.					
Permissible ambient temperature							-40	~+70	)* C						
Protection grade								lp20							
Quality certification						C	CC. (	CE、 C	B、T0	V					
But with attachments			Auxi	liary,	alarm	, shun	t, mar	ual o	perat	ion, el	ectric	oper	ation		
Arc distance (mm)						≥50(	zero a	rc wit	h arc i	mask)					
Instantaneous action value								10In							
Overall dimension LxWxH(mm)	180x	76x12	6(2P)/	180x1	07x126	5(3P)	258	x200x	107	280x	280x1	15.5	280x	280x1	15.5
installation						Fixe	ed typ	e, plu	g-in t	уре					

## **▶** Wiring Diagram

2P	3P	4P
1 3 -/+ 1 3 * * * * * * * * * * * * * * * * * * *	1 3 5 1 3 5 -/+	1 3 5 7 1 3 1 3 * * * * * * * * * * * * * * * * * * *

### MDM1 AC Moulded Case Circuit Breaker









#### Overview

MDM1 series plastic case circuit breakers (hereinafter referred to as circuit breakers) are thelt is one of the new circuit breakers researched and developed by international advanced design and manufacturing technology. its rated insulationThe voltage is 1000V, suitable for AC 50Hz, the rated working voltage is 690V and below, (SHRM1-63 is 400V), infrequent operation in circuits with rated working current up to 800Alt is used for switching and infrequent starting of the motor. Circuit breaker with overload, short circuit and undervoltage protection function, can protect the circuit and power supply equipment from damage.

MDM1 AC Moulded Case Circuit Breaker

#### **▶** Features

- The insulating parts are made of high-strength DMC unsaturated polyester glass fiber plastic, and the proportion of aluminum hydroxide content is appropriately increased to improve the flame retardant performance of the product.
- The conductive system adopts advanced silver-plating process, increasing the thickness of silver-plating to improve the current-carrying capacity and heat dissipation of the product.
- The accessories of circuit breakers are selected from professional manufacturers that meet national standards. Further improve product reliability.
- ◆ The operating mechanism "three buckles" (locking, rebuckling, and jumping) adopts advanced professional technology to ensure the hardness and toughness of the "three buckles".
- Further improve the reliability and stability of the product.
- The metal parts of the product adopt the environmental protection electroplating process, which conforms to the EU environmental protection standards.
- ◆ Circuit breakers are classified into three types according to their rated ultimate short-circuit breaking capacity (Icu): L type (standard type), M type (higher breaking type), and H type (high breaking type). The circuit breaker has the advantages of small size, high breaking, Short arcing (zero arcing in some specifications), anti-vibration and other characteristics.
- This circuit breaker can be installed vertically (ie vertical installation) or horizontally (ie horizontal installation).
- This circuit breaker has isolation function, and its corresponding symbols are:

#### ► Normal working conditions

- Ambient medium temperature: not higher than +40°C (+45°C for common products) and not lower than -5°C, and the average value of 24h does not exceed +35°C (+40°C for common products);
- Installation site: the altitude does not exceed 2000m;
- ◆ Installation site: The relative humidity of the air does not exceed 50% when the maximum temperature is +40°C, and can have a higher relative humidity at lower temperatures, such as 90% at 20°C;
- Condensation should take special measures;
- Pollution level: Level 3;
- ◆ Installation category: The installation category of the main circuit of the circuit breaker and the undervoltage release is III, and the installation category of the other auxiliary circuits and control circuits is II;
- The circuit breaker can withstand the influence of humid air, salt mist, oil mist, mold and nuclear
- The maximum inclination of the circuit breaker installation is ±22.5°;
- ◆ The circuit breaker can work reliably under earthquake conditions (4g);
- The circuit breaker should be installed in a place where there is no explosion hazard, no conductive dust, and no enough to corrode metals and damage insulation;
- The circuit breaker should be installed in a place free from rain and snow.

#### **▶** Protection features

The thermal release of the circuit breaker has inverse time characteristics; the electromagnetic release is instantaneous, and the characteristics are shown in Table 3 (for power distribution) and Table 4 (for motor protection).

Table 3 (for power distribution)

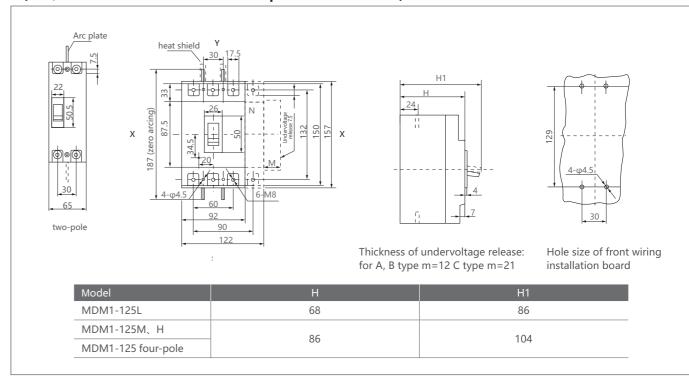
Rated operating	Thermal release (referen	Electromagnetic release	
current of release (A)	1.05In (cold state) non-action time (h)	1.30ln (hot state) operating time (h)	operating current (A)
10 <in≤63< td=""><td>≥1</td><td>&lt;1</td><td>10In±20%</td></in≤63<>	≥1	<1	10In±20%
63 <in≤100< td=""><td>≥2</td><td>&lt;2</td><td>10In±20%</td></in≤100<>	≥2	<2	10In±20%
100 <in≤800< td=""><td>≥2 </td><td>&lt;2</td><td>5In±20% 10In±20%</td></in≤800<>	≥2	<2	5In±20% 10In±20%

Note: There is no 5In electromagnetic trip unit in the 100A and 125A specifications of SHRM1-250.

Table 4 (for motor protection)

Rated operating	Ther	mal release (referei	nce temperature 40	°C)	
current of release (A)	1.0In (cold state) non-action time (h)	Thermal release (reference temperature 4 ate) 1.20In (hot state) 1.50In (cold state) ne (h) operating time (h) non-action time (h  ≤2  4min 8min	7.20In (hot state) operating time (h)	Electromagnetic release operating current (A)	
10≤In≤205		.2	4min	4s <t≤10s< td=""><td>121- 1200/</td></t≤10s<>	121- 1200/
225 <in≤800< td=""><td>_ ≥2</td><td>≤2</td><td>8min</td><td>6s<t≤20s< td=""><td>12In±20%</td></t≤20s<></td></in≤800<>	_ ≥2	≤2	8min	6s <t≤20s< td=""><td>12In±20%</td></t≤20s<>	12In±20%

#### ► MDM1-125 (L, M, H) front wiring (two-pole, three-pole, four-pole) (X-X, Y-Y are the center of the three-pole circuit breaker)



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## ► Main technical performance indicators

Frame current (A	)	6	3			125(100)			250			400	
model		MDM1 -63L	MDN -63N		MDM1 -125L	MDM1 -125M	MDM1 -125H	MDM1 -250L	MDM1 -250M	MDM1 -250H	MDM1 -400L	MDM1 -400M	MDM1 -400H
Rated current In(A	A)	20, 2	0、16、 5、32、 50、63		3	0、16、20 2、40、50 80、100、		100、125、140、160、180、 200、225、250			225、250、315、350、400		
Number of poles (	(P)	3	3	4	3	3 4	3	3	3 4	4	3	3 4	4
Rated insulation voltage Ui(V)		AC	500			AC1000		AC1000				AC800	
Rated impulse wi voltage Uimp(V)	thstand	60	000			8000			8000			8000	
Rated working vo Ue(V)	ltage	AC	400		AC400	AC400 AC690	AC400	AC400	AC400 AC690	AC400	AC400	AC400 AC690	AC400
Arc distance(mm)		(	0			0(>50)		<b>≯</b> 50			<b>≯100</b>		
Rated ultimate short-circuit breaking capacity Lcu(kA)	AC400V AC690V	25	50	0	35	50	80	35	50	80	50	65	100
Rated operating short-circuit breaking capacity Lcs(KA)	AC400V AC690V	18	35	5	22	35	50	25	35	50	35	42.5	65
Operational performance (times)	power ups no power				6000 8500				3000 7000			2000 4000	
ê + +	W	78	78 1	103	92	92 122	92 .	107	107 142	107 .	150	198	150
Oimensions (mm)	L	135	135	5	150	15	50	165	16	55		257	
E W H →	Н	73.5	81.5	5	68	8	6	86	10	)3		106.5	

Note: The limit breaking and arcing distance includes horizontal and vertical installation.

\*MDM1-125 arcing distance is divided into "0" arcing and 50mm, which should be specified when ordering. There is no "0" arcing in the 690V specification of the four-pole circuit breaker.

Frame current (A	)		630			800			1250	
model	,	MDM1 -630L				MDM1 MDM1 -800L -800H			MDM1 -1250M	MDM1 -1250H
Rated current In(A)	)	40	0、500、6	530	630、700、800			800、1000、1250		
Number of poles (F	P)	3	3 3 4 3		3	4	3	3	3 4	3
Rated insulation voltage Ui(V)			AC800			AC800			AC800	
Rated impulse with voltage Uimp(V)	hstand		8000			8000			8000	
Rated working volt Ue(V)	tage	AC400	AC400 AC690	AC400	AC400 AC690 AC400		AC400	AC400	AC400 AC690	AC400
Arc distance(mm)			<b>≯100</b>		<b>≯100</b>			<b>≯100</b>		
	AC690V AC400V	50	65	100	8:		100	85 30 100		100
	AC690V AC400V	35	42.5	65	5( 2)		80	5( 2(		65
Operational performance (times)	power ups no power		1500 4000			1000 2500			1500 4000	
ê + +	w	182	240	182	210	280	210	210	280	210
Oimensions (mm)	L		270		280	280	280		470	
<u>E</u>   W   H →	Н		110		115.5	115.5	115.5		191	



## MDSP 1000/1500V PV DC Surge Protection Device

## **MD1-40 AC Surge Protection Device**





MDSP-600





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### Overview

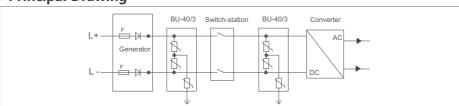
DC Surge Arrester BUD-40/3 is a Type 2 DC Surge Protection Device for DC side to protect the terminal devices in PV system from over voltage, like solarpanels or inverters. Available for 600Vdc

- 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 Contac(FM) for Monitoring Device (Floating Changeover Contact)
- Din Rail Mounting TH35-7.5/DIN35
- Comply with :EN 50539-11

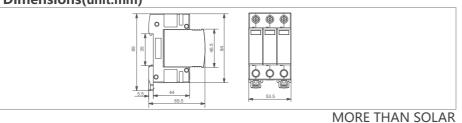
#### ► Technical parameters

PV DC Surge Protection Device		
Modules		3 modules
Standard		EN 50539-11
Electrical Characteristics		
Open Voltage	Uoc Max	1000V/1500V
Max Continuous Operational Voltage	Uc	1000V/1500V
Nominal Discharge Current	In(8/20)µs	20KA
Maximum Discharge Curent	Imax(8/20)µs	40KA
Voltage Protection Level Up	Up	≤3.8KV
Response Time	tA	≤25ns
Indication		
Operating State/fault Indication		Green/Red
Plug-in Protection Module		YES
Type of remote signalling contact		changeover contact
Remote Signalling Max Working Voltage		30V DC
Remote Signalling Max Working Current		1A
Connection And Installation		
Cross sectional area	min	1.5 mm <sup>2</sup> solid / flexible
Cross sectional area	max	35 mm <sup>2</sup> stranded I 25 mm <sup>2</sup> flexible
Connection	mm²	By screw terminal 4-25 mm <sup>2</sup>
Torque(Nm)	Main Circuit	2.5
	Remote Contact	0.25
For mounting on 35 mm DIN rails		
Place of installation		indoorinstallation
Degree of Protection		lp20
Installation Environment		
Operating Temperature Range	TU	-40°C+80°C
Relative Humidity		30%~90%
Weight kg		0.36

#### ▶ Principal Drawing



## ▶ Dimensions(unit:mm)



#### Overview

 $Surge\ protection\ device\ (in\ short\ SPD, a lias: surge\ suppressor\ surge\ arrester) is\ suitable\ for\ TN-S,$ TN-C-S, TT, IT etc, power supply system of AC 50/60Hz, <380V, installed on the joint of LPZ1 or LPZ2 and LPZ3. It's designed according to IEC61643-1, GB18802.1, it adopts 35mm standard rail, there is a failure release mounted on the module of surge protection device, When the SPD fails in breakdown for over heat and over-current, the failure rlease will help electric equipments separate from the power supply system and give the indication signal, green means normal, red means abnormal, it also could be replaced for the module when has operating voltage.

- Inside over-current and over-heat protection, temperature control open circuit.
- Module design, convenient installation, could be replaced online.
- Time of response <25ns.
- The color of visible window shows operating status, green means normal, red means abnormal.

#### **▶** Technical parameters

PV DC Surge Protection Device						
Technical Parameters			380V/22	20V 0.36		
Rated Operating Voltage Un(V~)	275V	320V	385V	385V	385V	420V
Maximum Continuous Operating Voltage Uc(V~)	≤1.0	≤1.2	≤1.8	≤2.0	≤2.2	≤2.8
Voltage protection Level Up(V~)kV	5	10	20	30	40	60
Nominal Discharge Current In (8/20s)kA	10	20	40	60	80	100
Maximum Discharge Current Ilmax(8/20s)kA						
Response Time (ns)			< 7	25		
Test Standard		IEC	61643.1,	GB1 880	2.1	
Operating Environment(centigrade)			-40°C ^	-+85℃		
Max Connection Line	35mm²	hard wir	e/35mm	<sup>2</sup> strand	wire cop	per line
Recommended Connection Line	16mm²	hard wir	e/25mm	<sup>2</sup> strand	wire cop	per line
Installation		St	andard I	Rail 35m	m	
Material of Outer Covering		Вι	ırning-p	roof Nylo	on	





MD1-40 4P

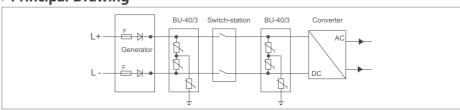




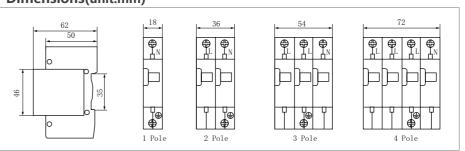


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#### **▶** Principal Drawing



#### ▶ Dimensions(unit:mm)



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## MDIS-40/40A PV DC Isolation Switch

## **MDIS-40MD PV DC Isolation Switch**











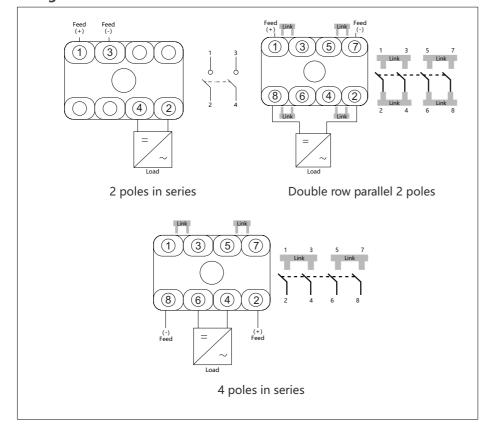


2 Poles	Ratings (DC21)	600V	700V	800V	900V	1000V	1200V
	MDIS-40-16A DC	16A	16A	16A	13A	9A	
connected in series	MDIS-40-25A DC	25A	23A	20A	16A	11A	
in series	MDIS-40-32A DC	32A	27A	23A	20A	13A	
	5 .: (5.604)	60017	7001	0001	00017	10001	400017
2 Poles in parallel	Ratings (DC21)	600V	700V	800V	900V	1000V	1200V
connected in	MDIS-40-16A DC	35A	16A	16A	16A	16A	16A
series with	MDIS-40-25A DC	40A	25A	25A	25A	25A	25A
2Poles in parallel	MDIS-40-32A DC	45A	32A	32A	32A	32A	32A
4 poles	Ratings (DC21)	600V	700V	800V	900V	1000V	1200V
connected	MDIS-40-16A DC	16A	16A	16A	16A	16A	16A
in series	MDIS-40-25A DC	25A	25A	25A	25A	25A	25A
ill series	MDIS-40-32A DC	32A	32A	32A	32A	32A	32A

### ▶ The main technical parameters

Photovoltaic DC isolated switch	Rated current 16A 25A 32A
Product number MDIS-40-16/25/32A DC	Rated voltage 1200V
Opening method Handle 90° Rotary switch	Dimensions 83mm*61mm*46mm
Ambient temperature -5°C~40°C	Installation method Rail mounting inside the distribution box
Switch body plastic part nylon	VO Switch body plastic flame retardant VO
Switch body energized part copper	The handle is connected to the main body

## **▶** Diagram

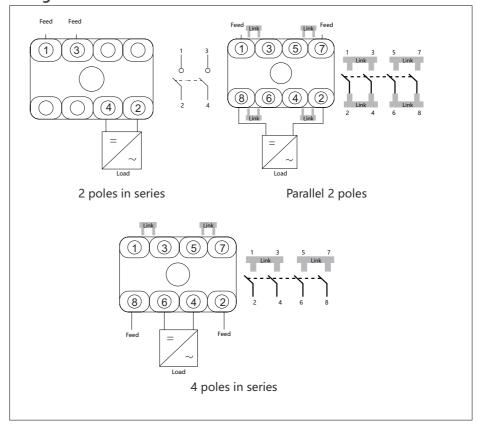


2 Poles	Ratings (DC21)	500V	600V	800V	900V	1000V	1200V
	MDIS-40MD-16A DC	16A	16A	16A	13A	9A	
connected	MDIS-40MD-25A DC	25A	25A	13A	13A	11A	
in series	MDIS-40MD-32A DC	32A	32A	13A	13A	13A	
2 Poles in parallel	Ratings (DC21)	500V	600V	800V	900V	1000V	1200V
connected in	MDIS-40MD-16A DC	35A	29A	13A	16A	16A	16A
series with	MDIS-40MD-25A DC	40A	25A	25A	25A	25A	25A
2Poles in parallel	MDIS-40MD-32A DC	45A	32A	32A	32A	32A	32A
4 malas	Ratings (DC21)	500V	600V	800V	900V	1000V	1200\
4 poles	MDIS-40MD-16A DC	16A	16A	16A	16A	16A	16A
connected	MDIS-40MD-25A DC	25A	25A	25A	25A	25A	25A
in series	MDIS-40MD-32A DC	32A	32A	32A	32A	32A	32A

### ► The main technical parameters

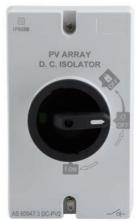
Photovoltaic DC isolated switch	Rated current 16A 25A 32A
Product number MDIS-40MD-16/25/32A DC	Rated voltage 1200V
Opening method Handle 90° Rotary switch	Housing material PC+ABS
Ambient temperature -5°C~40°C	Shell waterproof rating IP66NW
Shell flame rating V1	Housing environment Outdoor UV (UV)
Switch body energized part copper	Inlet hole size M20 knockout hole
Switch body plastic part nylon	Switch body plastic flame retardant VO

#### Diagram





MDIS-40MD With breathing valve



MDIS-40MD





















#### **▶** Overview

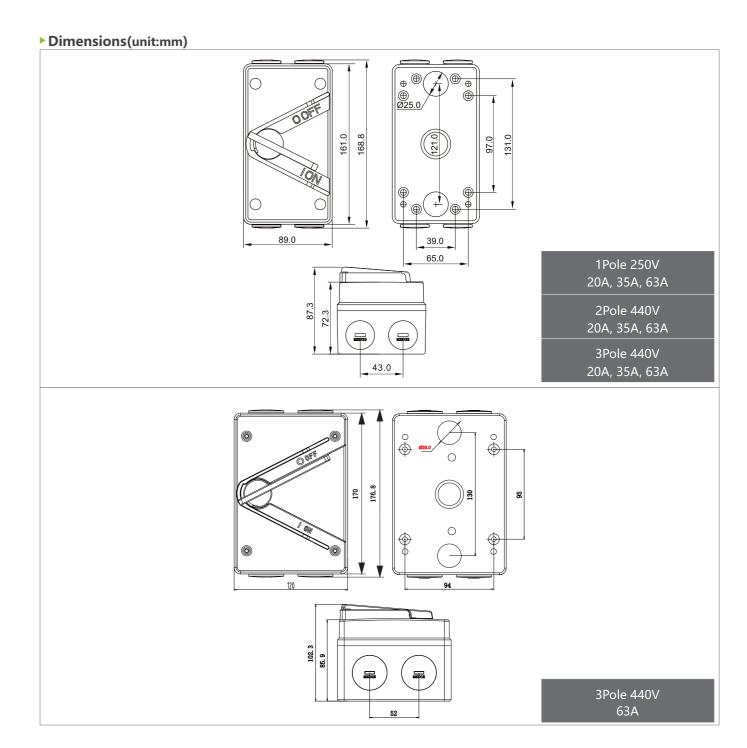
AC Isolator Switch with super waterproof and dustproof function, can effectively prevent entry of dust, oil, in the rain or strong water will notaffect the use of product performance; have anticorrosive, UV protection, cold resistant, high temperature resistant, anti-aging characteristics. Included in the range is single, double and triple pole switches from 20A to 63A. The base mounted mechanism provides for easier termination andmore wiring room.

#### **▶** Features

- High visibility ON/OFF indication
- 4pcs screws for high strength locking
- IP66 & UV Resistance
- Conduit entries on top and bottom
- Pad-lockable handle

### ► Technical parameters

Туре		MDF1							
Pole		1Pol	е		2Pole			3Pol	e
Rated operational current (le)	20A	35A	63A	20A	35A	63A	20A	35A	63A
Rated operational voltage (Ue)	250V	250V	250V	440V	440V	440V	440V	440V	440V
Standard				IEC609	947.3 A	C-22A	١		
Rated frequency					50Hz				
Rated insulation volateg (U)					1000V	1			
Rated impulse withstand voltage (Uimp)					2.5kV				
Short time withstand current (1cw)					750A				
Short circuit making capacity (lcm)					1.98k <i>A</i>	١			
Free air thermal current (1th)				Sa	ame as	le			
Enclosed thermal current (Ithe)				Sa	ame as	le			
Dielectric properties					800V				
Mechanical life					10000	)			
Electrical life					1500				
Protection degree					IP66				
UV Resistance					Yes				
Color					Gray				
Conduit entries					4xM25	5			4xM32
P adlock max diameter					6mm				
Max. cable size (Mains)				-	25mm	2			
Max. cable size (N/E)					16mm	2			
Approved				SAA	A, RCM	I, CE			
	Locke	d roto	r 3 Ø,"I	M" rati	ng Lo	cked ro	otor 1 (	ð,"M"	rating
Rated operation current		120 <i>A</i>	for 20	ΙA		14	40A fo	r 20A	
(AS3133)		160 <i>A</i>	for 35	iΑ		18	30A fo	r35A	
		200 <i>A</i>	for 63	A		20	00A fo	r 63A	







MDPV-30(1000V)

MDPV-32(1500V)









#### **▶** Overview

The MDPV-30/32 series of photovoltaic fuses are mainly used in the solar photovoltaic power generation DC combiner box to break the line overload and short-circuit current generated by the current feedback of the solar panel photovoltaic modules and inverters that may generate solar energy, thereby protecting For the use of solar photovoltaic panels, fuses can also be optionally used in any other DC circuit for line overload and short circuit protection of electrical components.

#### **▶** Use environment

The upper limit of ambient air temperature does not exceed +90°C, and the lower limit of air temperature is not lower than -40°C;

The altitude of the installation site does not exceed 3000m;

At a maximum temperature of  $+40^{\circ}$ C, the relative humidity of the air does not exceed 50%, allowing higher humidity at lower temperatures, for example, up to 90% at +25 °C. Special measures should be taken for condensation that occasionally occurs due to temperature

In a medium free of explosion hazard, and where there is no sufficient gas or conductive dust to corrode the metal and destroy the insulation; Pollution degree 3.

#### ▶ Terminals /connection

Type designation	MDPV-32	MDPV-30
Type designation		
Type of Terminal	Pillar terminal	Pillar terminal
Material/plating of the terminal	Zinc plated Steel	Zinc plated Steel
Material/plating of the washer	Zinc plated Copper	Zinc plated Copper
Material/plating of the screw	Zinc plated Iron	Zinc plated Iron
Type of conductor	Flexible: 2.5m Copper type; hard wi	•
Connectable conductors	2.5mm <sup>2</sup> -6mm <sup>2</sup>	2.5mm²-6mm²
ISO(mm2) or AWG number		
metric equivalent (mm2)		
Number of conductors per terminal	1	1
Required preparation of the conductor	Example: No prep	ared conductor
Max. Stripping length (mm)	8 mm	8 mm
Tightening torque (N•m)	2Nm, M5	2Nm, M5

#### ► Technical Parameters

Type designation	MDPV-32	MDPV-30
Ambient temperature	-5C~+40C	-5C~+40C
Contact material	Copper (T2Y)	Copper (T2Y)
Contact form	Form U	Form U
Interrupting medium	Air	Air
- method of operation:		
- suitability for isolation	suitable	suitable
- degree of protection		
- kind of current	DC	DC
in the case of a.c., number of phases and		
rated frequency		
-breaking arrangement for fused devices:	Double Break	Double Break
Rated and limiting values, main circuit	/	/
- rated operational voltage Ue (V):	1500V DC	1000V DC
- rated insulation voltage Ui (V):	1800V DC	1200V DC
- rated impulse withstand voltage Uimp (kV):	8kV	6kV
Rated operational voltage Ue	1500 V DC	1000 V DC
Rated operational current le	32 A	30 A
Insulation voltage	1800 V	1200 V
Conventional free air thermal current(Ith)	32A	30A
Conventional enclosed thermal current(Ithe)	32A	30A
Utilization category	DC-20A	DC-20A
Rated short-time withstand current		
Rated short-circuit making current		
Conditional short-circuit current	25 kA	20 kA
	Tested with fuse-link: YRPV-32	Tested with fuse-link:YRPV-30
Short circuit protective device	(SOLAR, gPV, 10x85, DC 1500V,	(SOLAR, gPV, 10x38, DC 1000V,
-	32A, Interrupting Capacity: 25kA)	30A, Interrupting Capacity: 20kA
IP code	lp20	lp20
Pollution degree	3	3
Suitability for isolation	-	-













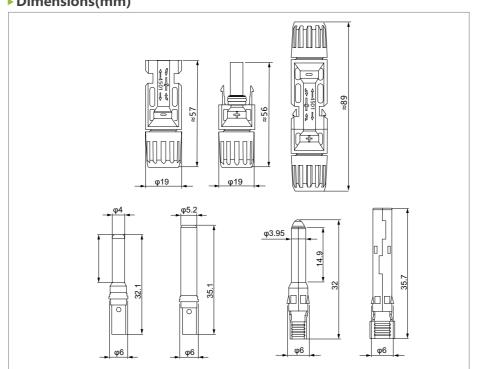
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 $DC \, connector \, MD-MC4 \, series \, are \, applicable \, for \, use \, in \, connection \, for \, photovoltaic \, devices \, like \, and \, connection \, for \, photovoltaic \, devices \, like \, and \, connection \, for \, photovoltaic \, devices \, like \, and \, connection \, for \, photovoltaic \, devices \, like \, and \, connection \, for \, photovoltaic \, devices \, like \, and \, connection \, for \, photovoltaic \, devices \, like \, and \, connection \, for \, photovoltaic \, devices \, like \, and \, connection \, for \, photovoltaic \, devices \, like \, and \, connection \, for \, photovoltaic \, devices \, like \, and \, connection \, for \, photovoltaic \, devices \, like \, and \, connection \, for \, photovoltaic \, devices \, like \, and \, connection \, for \, photovoltaic \, devices \, like \, and \, connection \, for \, photovoltaic \, devices \, like \, and \, connection \, for \, photovoltaic \, devices \, like \, and \, connection \, devices \, like \, and \, connection \, devices \, device$ DC combiner box, Inverters, String Combiner Boxes, etc., double electric shock free protection for load closure and disconnection, can meet quick connection and antivibration function. rainproof, moisture-proof, dust-proof and durable .waterproof grade IP67.high heat resistance, wear resistance, durability, corrosion resistance, thick copper inner core, high quality material selection.

#### ► Technical data

10 0111110011 010101		
Connector system	Ф4mm	
Rated voltage	1000V DC(IEC)	
Rated current	17A,22A,30A(1.5mm²,2.5mm²; 14AWG,4mm²; 6mm²; 12AWG,10AWG)	
Test voltage	6kV(50Hz,1min.)	
Temperature Range	-40°C+90°(IEC) -40°C+75°C(UL)	
Upper Temperature Limit	+105°C (IEC)	
Degree of protection,mated	IP67	
unmaied	IP2X	
Comtact reastanceof plug conrwtors	0.5mΩ	
Safety class	П	
Contact material	Messing,verzinnt Copper Alloy,tin plated	
Insulation maternal	PC/PPO	
Lockirg system	Snap-in	
Flane class	UL-94-V0	
Salt mist spray test,degree of sevenity 5	IEC 60068-2-52	

#### ▶ Dimensions(mm)



#### Overview

DC connector MD-MC4 series are applicable for use in connection for photovoltaic devices like DC combiner box, Inverters, String Combiner Boxes, etc ,double electric shock free protection for load closure and disconnection, can meet quick connection and anti vibration function. rainproof,moisture-proof,dust-proof and durable .waterproof grade IP67.high heat resistance, wear resistance, durability, corrosion resistance, thick copper inner core, high quality material selection

#### ▶ Technical data

Connector system	Ф4mm	
Rated voltage	1500V DC(IEC) <sup>1</sup>	
Rated current	17A,22A,30A,45A(1.5mm²,2.5mm²; 14AWG,4mm², 12AWG,10AWG)	
Test voltage	6kV(50Hz,1min.)	
Temperature Range	-40°C+90°C(IEC)-40°C+75°C(UL)	
Upper Temperature Limit	+105°C(IEC)	
Degree of protection, mated	IP67	
unmated	IP2X	
Comtact rcsistanccof plug connectors	0.5mΩ	
Safety class	П	
Contact material	Messing,verzinnt Copper Alloy,tin plated	
Insulation material	PC/PV	
Locking system	Snap-in	
Flams class	UL-94-V0	
Salt mist spray test, degree of severity 5	IEC 60068-2-52	



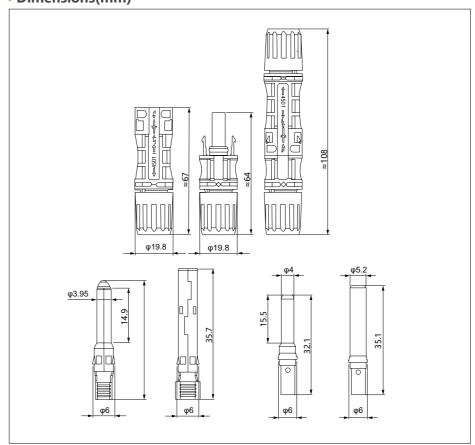








### **▶** Dimensions(mm)







MOREDAY







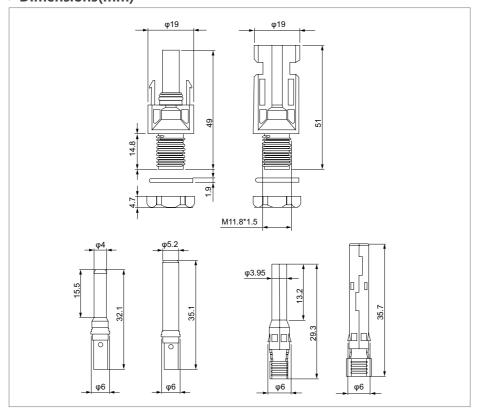
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#### ► Technical data

Connector system	Ф4mm	
Rated voltage	1000V/1500V DC(IEC)1	
Rated current	17A,22A,30A(1.5mm²,2.5mm²; 14AWG,4mm²; 6mm²; 12AWG,10AWG)	
Test voltage	6kV(50Hz,1min.)	
Temperature Range	-40°C+90°(IEC) -40°C+75°C(UL)	
Upper Temperature Limit	+105°C (IEC)	
Degree of protection,mated	IP67	
unmated	IP2X	
Comtact resistanceof plug connectors	0.5mΩ	
Safety class	П	
Contact material	Messing,verzinnt Copper Alloy,tin plated	
Insulation mtacenal	PC/PPO	
Locking system	Snap-in	
Fameclass	UL-94-V0	
Salt mist spray test, degree of severity 5	IEC 60068-2-52	

#### ▶ Dimensions(mm)



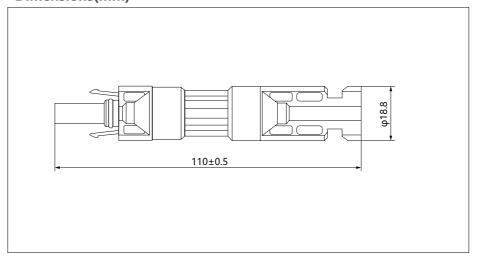
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#### ► Technical data

Connector system	Φ4mm	
Rated voltage	1000V DC(IEC) <sup>1</sup>	
Rated current	10A,15A,20A(1.5mm²,2.5mm²; 14AWG,4mm²; 6mm²; 12AWG,10AWG)	
Test voltage	6kV(50Hz,1min.)	
Temperature Range	-40°C+90°(IEC) -40°C+75°C(UL)	
Upper Temperature Limit	+105°C (IEC)	
Degree of protection,mated	IP67	
unmated	IP2X	
Comtact resistanceof plug connectors	0.5mΩ	
Safety class	п	
Contact material	Messing,verzinnt Copper Alloy,tin plated	
Insulation mtacenal	PC/PPO	
Locking system	Snap-in	
Fameclass	UL-94-V0	
Salt mist spray test,degree of severity 5	IEC 60068-2-52	

#### ▶ Dimensions(mm)















MOREDAY







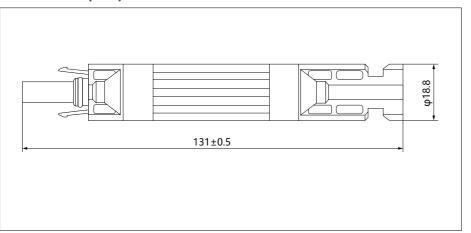
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#### ► Technical data

Connector system	Ф4mm
Rated voltage	1000V/1500V DC(IEC) <sup>1</sup>
Rated current	10A,15A,20A,30A(1.5mm²,2.5mm²; 14AWG,4mm²; 6mm²; 12AWG,10AWG)
Test voltage	6kV(50Hz,1min.)
Temperature Range	-40°C+90°(IEC) -40°C+75°C(UL)
Upper Temperature Limit	+105°C (IEC)
Degree of protection,mated	IP67
unmated	IP2X
Comtact resistanceof plug connectors	0.5mΩ
Safety class	п
Contact material	Messing,verzinnt Copper Alloy,tin plated
Insulation mtacenal	PC/PPO
Locking system	Snap-in
Fameclass	UL-94-V0
Salt mist spray test,degree of severity 5	IEC 60068-2-52

#### **▶** Dimensions(mm)



#### **▶**Overview

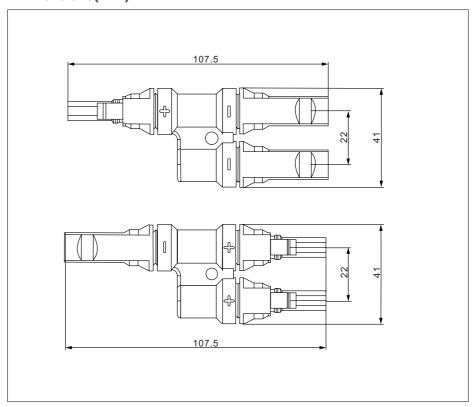
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#### ► Technical data

Insulation Material	PPO
Contact Material	Copper,Tin plated
Suitable Current	30A
Rated Voltage	1000V (TUV) 600V (UL)
Test Voltage	6KV (TUV50Hz,1min)
Contact Resistance	<0.5mΩ
Degree Of Protection	IP 67
Temperature Range	-40°C~+ 85°C
Flame Class	UL94-V0
Safety Class	П
Pin Dimensions	Φ4mm
	'



### ▶Dimensions(mm)









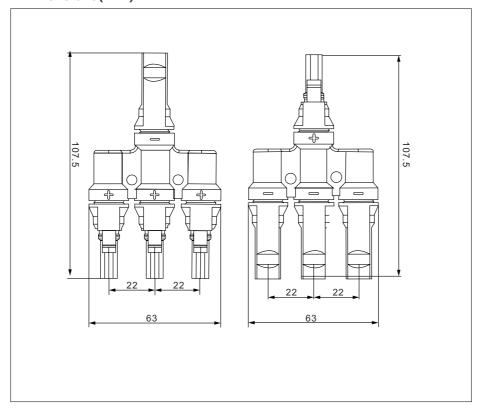
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Degree Of Protection	IP 67	
Temperature Range	-40°C~ + 85°C	
Flame Class	UL94-V0	
Safety Class	п	
Pin Dimensions	Ф4mm	

#### ▶ Dimensions(mm)



#### Overview

DC connector MD-MC4 series are applicable for use in connection for photovoltaic devices like DC combiner box, Inverters, String Combiner Boxes, etc., double electric shock free protection for load closure and disconnection, can meet quick connection and antivibration function. rainproof, moisture-proof, dust-proof and durable .waterproof grade IP67.high heat resistance, wear resistance, durability, corrosion resistance, thick copper inner core, high quality material selection.

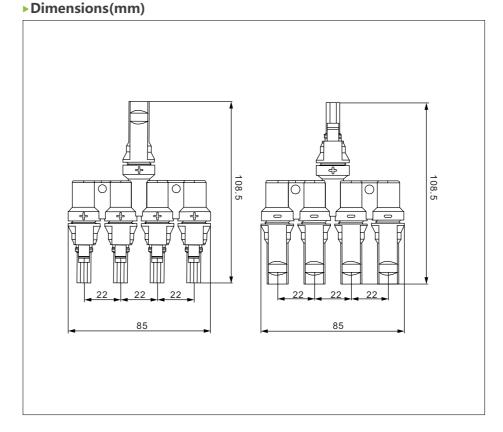
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Suitable Current	30A
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Flame Class	UL94-V0
Safety Class	П
Pin Dimensions	Ф4mm















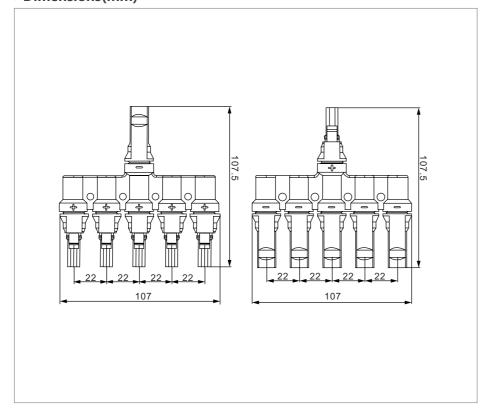
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Suitable Current	30A
Rated Voltage	1000V (TUV) 600V (UL)
Test Voltage	6KV (TUV50Hz,1min)
Contact Resistance	<0.5mΩ
Degree Of Protection	IP 67
Temperature Range	-40°C~ + 85°C
Flame Class	UL94-V0
Safety Class	П
Pin Dimensions	Φ4mm

#### ▶ Dimensions(mm)



#### **▶** Overview

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#### ► Technical data

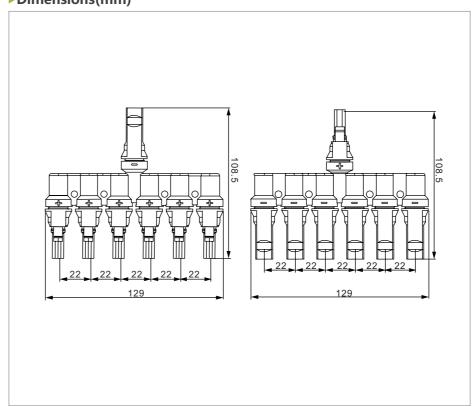
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Suitable Current	30A
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Flame Class	UL94-V0
Safety Class	п
Pin Dimensions	Ф4mm







#### ▶ Dimensions(mm)











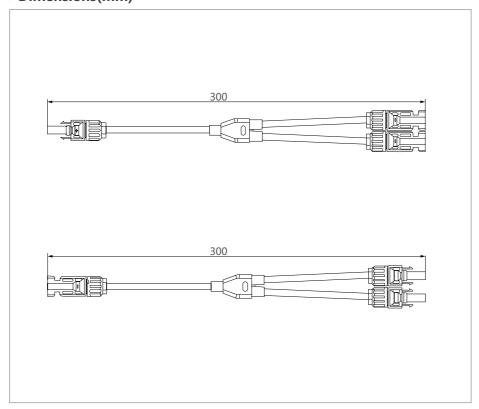
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#### ► Technical data

Connector system	Ф4mm	
Rated voltage	1000V DC(IEC) <sup>1</sup>	
Rated current	30A	
Test voltage	6kV(50Hz,1min.)	
Temperature Range	-40°C+90°C(IEC)-40°C+75°C(UL)	
Upper Temperature Limit	+105°C(IEC)	
Degree of protection, mated	IP67	
unmated	IP2X	
Comtact rcsistanccof plug connectors	0.5mΩ	
Safetyclass	П	
Contact material	Messing,verzinnt Copper Alloy,tin plated	
Insulation material	PC/PA	
Locking system	Snap-in	
Flams class	UL-94-V0	
Salt mist spray test,degree of severity 5	IEC 60068-2-52	

#### ▶ Dimensions(mm)



#### **▶**Overview

DC connector MD-MC4 series are applicable for use in connection for photovoltaic devices like DC combiner box, Inverters, String Combiner Boxes, etc., double electric shock free protection for load closure and disconnection, can meet quick connection and antivibration function. rainproof, moisture-proof, dust-proof and durable .waterproof grade IP67.high heat resistance, wear resistance, durability, corrosion resistance, thick copper inner core, high quality material selection.



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Rated current	30A	
Test voltage	6kV(50Hz,1min.)	
Temperature Range	-40°C+90°C(IEC)-40°C+75°C(UL)	
Upper Temperature Limit	+105°C(IEC)	
Degree of protection, mated	IP67	
Unmated	IP2X	
Comtact rcsistanccof plug connectors	0.5mΩ	
Safetyclass	П	
Contact material	Messing,verzinnt Copper Alloy,tin plated	
Insulation material	PC/PA	
Locking system	Snap-in	
Flams class	UL-94-V0	
Salt mist spray test,degree of severity 5	IEC 60068-2-52	

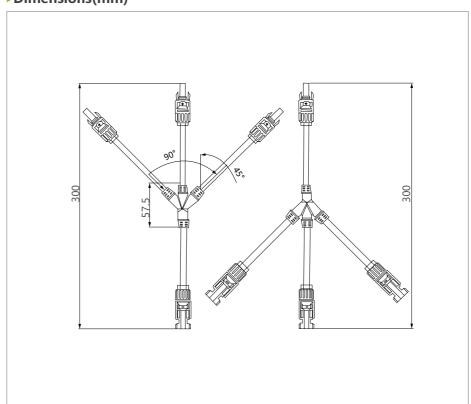








#### **▶**Dimensions(mm)







65





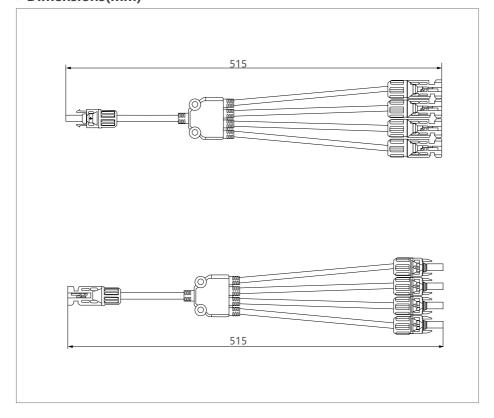
## Overview

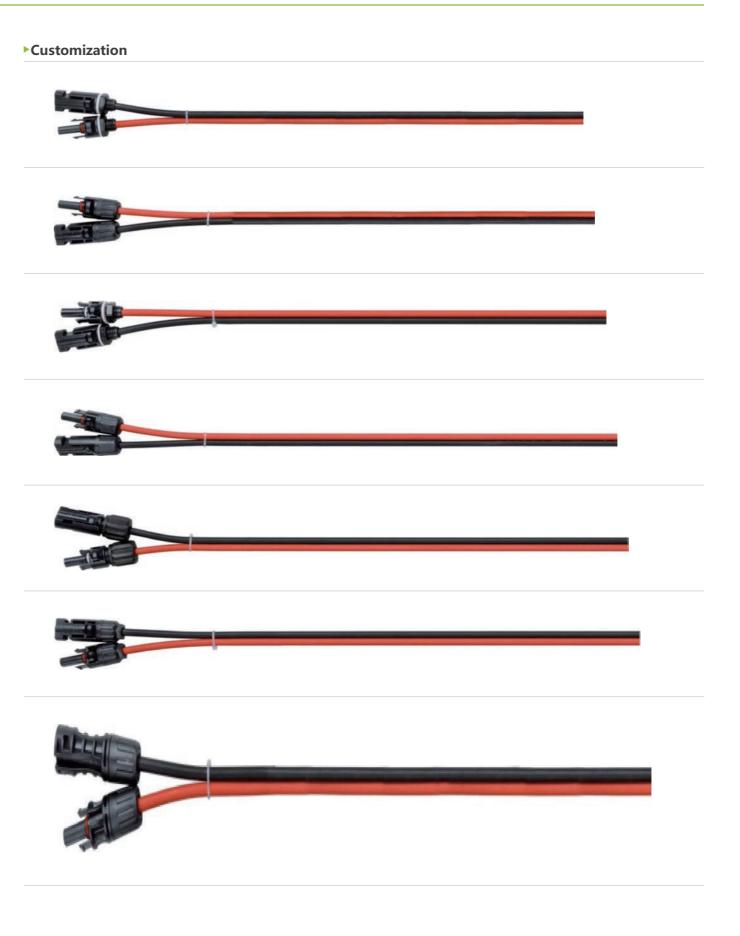
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Connector system	Ф4mm	
Rated voltage	1000V DC(IEC) <sup>1</sup>	
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Test voltage	6kV(50Hz,1min.)	
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Upper Temperature Limit	+105°C(IEC)	
Degree of protection,mated	IP67	
Unmated	IP2X	
Comtact rcsistanccof plug connectors	0.5mΩ	
Safetyclass	П	
Contact material	Messing,verzinnt Copper Alloy,tin plated	
Insulation material	PC/PA	
Locking system	Snap-in	
Flams class	UL-94-V0	
Salt mist spray test, degree of severity 5	IEC 60068-2-52	

#### ▶ Dimensions(mm)







## **▶** Extension cord processing customization

2.5m<sup>2</sup>







4m²



6m²





#### PV-MDT1









connector can be placed in a small bag on the side.

## **PV-MDS Tow-set spanners**

MD-MC4(1500V)Specidized	MD-MC4(1000V)Specidized	MD-MC4(1000V)
PV-MDS1	PV-MDS2	PV-MDS3

# **PV-MDT3 Crimping Tool**

### **▶** Main Specoality

Suitable for crimping the cable of  $2.5\sim6.0$ mm<sup>2</sup> (AWG10-14); Suitable for solar system installation site, flexible application





## **Modular Intelligent Prefabricated Cabin**



#### **▶** Main Specoality

Suitable for crimping the cable of 2.5~6.0mm²( AWG10-14 ); Suitable for solar system installation site,flexible application





## **PV-MDT5 Crimping Tool**

#### **▶** Main Specoality

Suitable for crimping the cable of 2.5~6.0mm<sup>2</sup>( AWG10-14 ); Suitable for solar system installation site,flexible application





## **PV-MDT6 Stripping Tool**

#### **▶** Main Specoality

Suitable for crimping the cable of 2.5~6.0mm<sup>2</sup>( AWG10-14 );Suitable for solar system installation site,flexible application





#### **▶ Modular Intelligent Prefabricated Cabin Features**

The cabin provides a fully modular pre-installed solution for the substation, reducing floor space by 30% and reducing system design, installation and commissioning cycles by 70%.

It adopts all-metal prefabrication cabin and is equipped with intelligent environmental control

system, which can be applied to complex climate and geographical environment such as high temperature, high humidity and sand dust.

eCloud energy cloud platform access, remote health diagnosis, fault analysis, maintenance guidance and other functions to achieve unattended substation and equipment life cycle management.

#### ► Application Field

Wind power station, photovoltaic power generation, offshore wind power, distributed; photovoltaic power generation and other new energy field booster stations; Power grid 11kV~40.5kV substation;

 $Large\text{-}scale\ factory\ and\ mine\ enterprise\ self\text{-}use\ substation.}$ 



## **KYN High voltage grid-connected cabinet**

#### Overview

The product meets the design specifications "," photovoltaic "distributed power grid technology" and "provisions of 3.6kV~40.5kV switch equipment and control equipment" and other relevant national standards, suitable for distributed photovoltaic power generation and ground high side switch station access equipment (also called high voltage switchgear with grid).

#### ► The main technical parameters

Project	Parameter
Rated voltage	12kV、24kV、35kV
Rated current	630A、1250A、1600A、2000A、2500A、3150A
Nominal function	Overload and short circuit protection, loss of voltage tripping protection, isolated island protection,fault disassembly, power quality monitoring, lightning protection



## **MDXGGD** Low voltage grid-connected cabinet

#### Overview

The product meets the technical requirements of the national standard "PV power design specifications", "distributed power access to the power grid technical regulations" and "low-voltage switchgear and control equipment" and other related standards, applicable to distributed and ground-based photovoltaic power generation low-voltage side access Switchgear (also known as low-voltage power grid cabinet).

#### ▶ The main technical parameters

Project	Parameter
Rated voltage	380V
Rated current	1600A
Standard features	Overload and short circuit protection, loss of voltage trip protection, significant isolation disconnect point, lightning protection
Optional function	Anti-island protection



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## Integrated photovoltaic substation

## **American-Style Photovoltaic Substation**



#### Overview

The integrated photovoltaic power station integrates the box-type inverter station and the box $type\ booster\ station.\ The\ photovoltaic\ DC\ input\ to\ the\ three-phase\ high-voltage\ AC\ output\ can$ be completed in one box. The function is more perfect, the volume is smaller, the equipment is all factory construction and debugging, and the cables and cable trenches between the original box-type inverter station and the box-type booster station are omitted, benefits for owners. This type of substation can be called "substation with inverter function", which is divided into 35kV European-style integrated photovoltaic substation and 35kV American integrated photovoltaic power station.



#### ▶ Features

Integrated ceiling, high-grade products.

Integrated air duct, large ventilation volume, safer and more efficient inverter operation. The cabinet is integrated, the modules of the cabinet change are integrated with the cabinet, and the appearance is high-grade.

The space is optimized, and the space in the box is fully utilized, which is convenient for inspection and maintenance.

## **European-Style Photovoltaic Substation**

#### Overview

The box is divided into three parts: the high pressure chamber, the low voltage chamber and the transformer, which can be arranged according to the "mesh" type.

The inner and outer surfaces of the box are flat, free of rust, coating peeling and bumping damage, The coating layer is firm no obvious contrast reflection.

The base of the cabinet and all exposed metal parts are treated with anti-corrosion, anti-rust and sprayed with a durable protective layer.

The top cover of the cabinet is provided with a rainproof sealing cover and a rain cover, and the double-layered cover of the box can prevent heat radiation.

The cabinet is made of stainless steel, and the paint is imported automobile paint. All of them are made of enamel paint, anti-smoke, anti-humidity, anti-mold, and outdoor weather resistance. The temperature of the photovoltaic power station is low.



#### **▶** Use Of Environmental Conditions

Altitude: ≤3000m;

Ambient temperature: -40°C ~ +85°C;

The outdoor wind speed does not exceed 35m/s;

Shockproof: horizontal acceleration 0.3m/s<sup>2</sup>; vertical acceleration is not more than 0.15m/s<sup>2</sup>;

Flood control level: Level III;

Installation location: outdoor;

When the above normal use environment conditions are exceeded, the company can personalize the design according to the user's requirements.

#### **▶** The Main Technical Parameter

High voltage side rated voltage: 6kV, 12kV, 24kV, 35kV, 36.75kV, 38.5kV

Low voltage side rated voltage: 0.27kV, 0.3kV, 0.315kV, 0.4kV

Rated frequency: 50Hz Phase number: three phase

Overview

The box variable structure is divided into six parts: the transformer body, the high pressure chamber, the low pressure chamber, the detection chamber, the switch operation room and the fuse chamber, which can be arranged according to the "mesh" type. The high-voltage side is protected by a terminal type load switch plus a fuse, and the fuse is a full-range current limiting

The load switch and the fuse are installed in the transformer oil tank, and the insulating oil of the transformer is used as the insulating medium and the heat dissipating medium, With the advantages of compact structure and good heat dissipation performance. The high-pressure side  $outlet\,adopts\,a\,high-pressure\,dry\,casing\,to\,support\,the\,Tongan\,busbar\,structure, which\,is$ convenient for connecting multiple cable wires. The low-voltage side outlet can be directly routed or configured according to user requirements. The box changing door adopts a windproof hinge, and all the doors on the box are opened outward, the opening angle is not less than 90°, and a positioning device is provided. The doors are sealed, equipped with door seals, cushioning, and equipped with handles that protect against rain, blockage, rust and vandal. The box body is sealed by anti-theft structure. It is sealed with high-strength bolts and oil-resistant rubber gaskets. The whole box has no exposed detachable bolts.

The box body is made of stainless steel plate, the paint is imported car paint, all adopt the enamel paint method, anti-smoke, anti-humid heat, anti-mold, outdoor weather resistance.



#### ▶ Use Of Environmental Conditions

Altitude: ≤3000m;

Ambient temperature: -40°C ~ +85°C;

The outdoor wind speed does not exceed 35m/s;

Shockproof: horizontal acceleration 0.3m/s<sup>2</sup>; vertical acceleration is not more than 0.15m/s<sup>2</sup>;

Flood control level: Level III:

Installation location: outdoor:

When the above normal use environment conditions are exceeded, the company can personalize the design according to the user's requirements.

#### ▶ The Main Technical Parameter

High voltage side rated voltage: 6kV, 12kV, 35kV, 36.75kV, 38.5kV

Low voltage side rated voltage: 0.27kV, 0.3kV, 0.315kV, 0.4kV

Rated frequency: 50Hz

Phase number: three phase

Protection level: fuel tank IP68, high and low pressure room IP54, high voltage room door open IP3X

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