

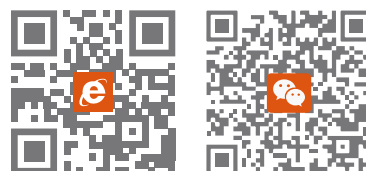


PHOTOVOLTAIC SOLAR ENERGY STRING BOX



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Committed to becoming a world-class manufacturer of intelligent electric

<https://www.maxge.com>



COMPANY PROFILE

MAXGE Electric Technology Co., Ltd was founded in 2006 with a registered capital of 50 million RMB. Its headquarter is located in Deqing County, Huzhou City, Zhejiang Province. It is a large-scale comprehensive high-tech enterprise integrating design, research and development, manufacturing, marketing and service.

Since its establishment, MAXGE has been professionally oriented and committed to the design and manufacturing of a series of products such as low voltage circuit breakers & controlgear for domestic, industrial protection and new energy power distribution, in order to meet user needs and provide high-quality solutions.

At present, MAXGE has won many honors such as National High-tech Enterprise, National Specialized and Sophisticated "Little Giant", Zhejiang Enterprise Technology Center, Zhejiang High-level Enterprise R&D Center, Zhejiang Export Brand and Zhejiang Digital Workshop.

In the process of production and operation, we have obtained ISO9001, ISO14001 and ISO45001 and obtained SGS certifications, and the testing center has won the national CNAS laboratory certification. The products have obtained CE, CB, VDE, KEMA, TUV, INTERTEK, BV, ASTA, EAC, INMETRO certifications with reliable quality, and are exported to more than 60 countries and regions such as the European Union, the South America, Middle East, Africa, and Southeast Asia. We have multiple branches in the United Kingdom, Spain, Netherlands and Hong Kong, and we are dedicated to providing high-quality products and services to global customers.



2006

The Company Was
Established In 2006



60⁺

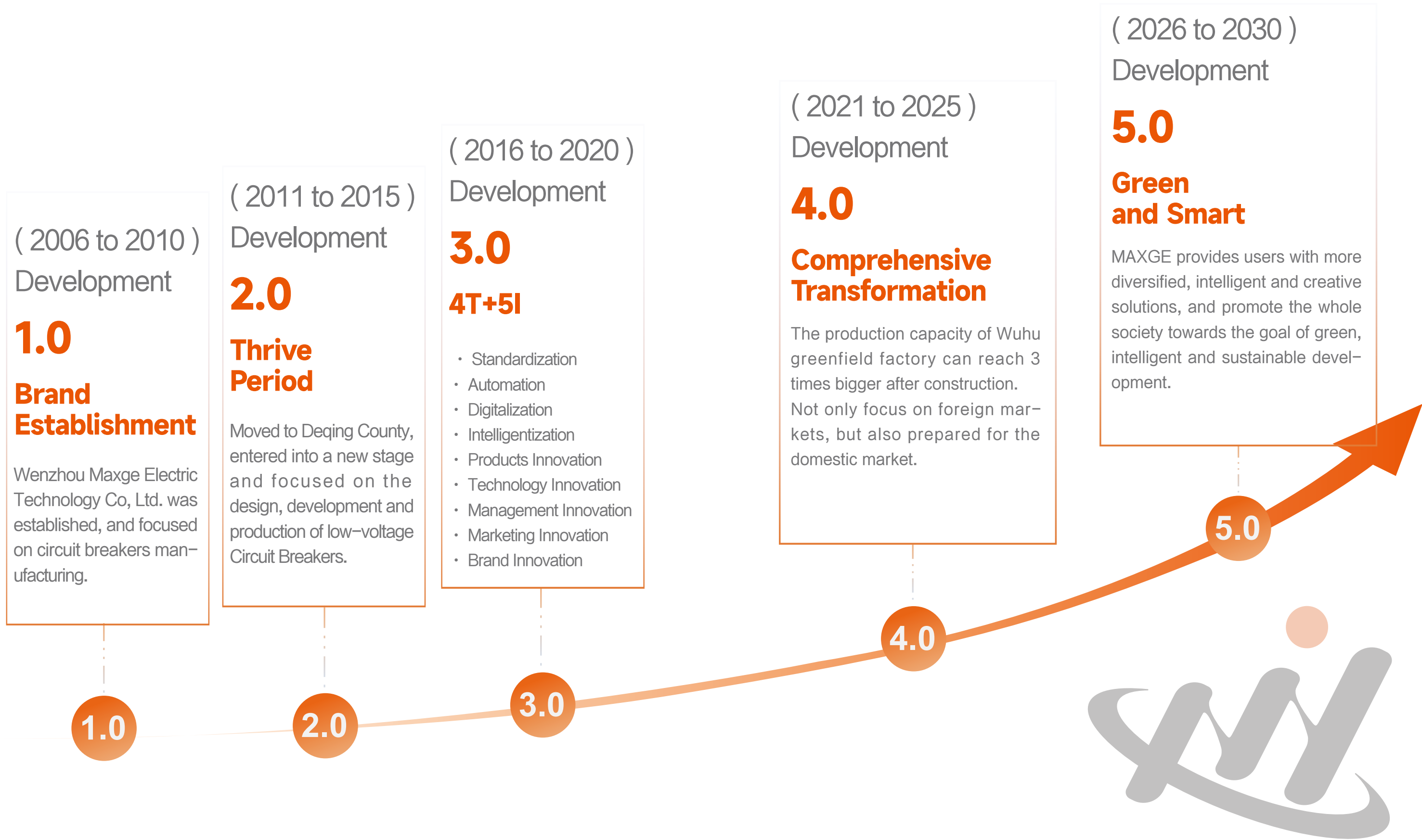
We Provide Products To Over
60 Countries Around The World

Currently MAXGE has a R&D team of more than 100 personnel and nearly 1,000 employees, equipped with state of the art automatic production lines, CNAS affiliated laboratories and testing centers. MAXGE has obtained more than 100 invention and utility model patents, 10 software copyright, and participated in the formulation of national, industry and group standards.

There are over 133,000 square meters of Modern Intelligent Manufacturing Bases in Zhejiang Hangzhou, Huzhou and Anhui Wuhu.

The Huzhou factory covers an area of over 33,000 square meters, with a total investment of 500 million RMB. At present, there are 42 production lines in the automation workshops, among which the automatic assembly production line, semi-automatic assembly production line and automatic inspection line cover more than 90%.

DEVELOPMENT HISTORY

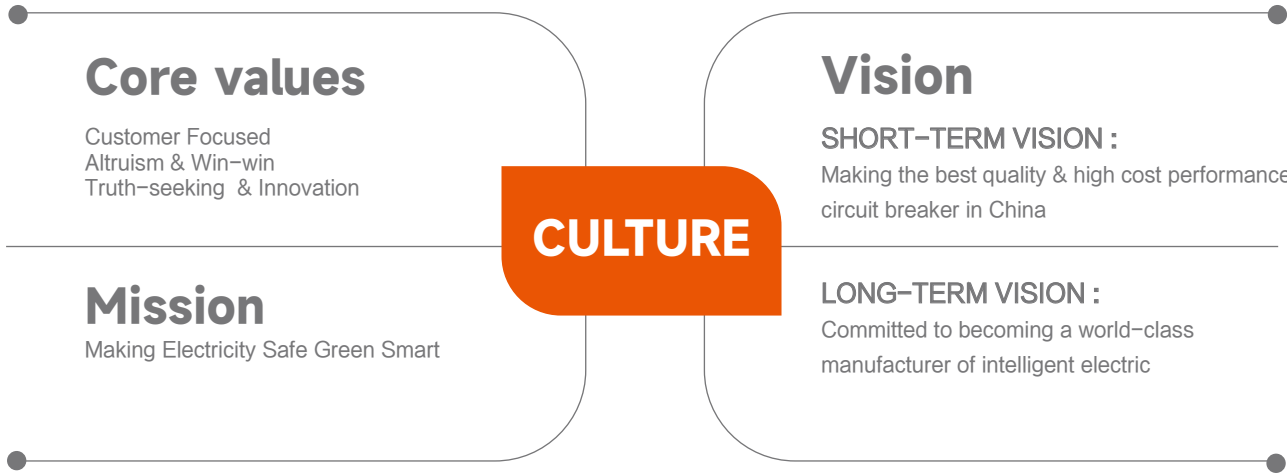


CORPORATE CULTURE



Brand Interpretation

- Chinese Name: Mei Gao
- Mei: Perfection in Excellence
- Gao: Virtue in Action
- English Name: MAXGE
- MAX: Maximum
- GE: Global Electric



The Heart of Altruism

Remain true to the original aspiration
Keep the mission firmly in mind

Link the hearts tightly
Be upright and integrity



The Tree of Wisdom

“Stay Hungry
Stay Foolish”

Be wise and enlightened
Self-growth and self-motivated



The Spirit of Struggle

Keep going, never give up
Strive continuously to strengthen oneself

Be loyal and trustworthy
Have ample virtue and accommodate all things

HONORARY QUALIFICATION

- National High-tech Enterprise
- National Standard Setting Enterprise
- Provincial Export Brand
- Provincial Enterprise Technology Center
- Provincial Intellectual Property Demonstration Enterprise
- Made in Zhejiang Group Standard Leading Enterprise
- Provincial new generation of information technology and manufacturing integrated development pilot enterprise
- National Specialized and Sophisticated "Little Giant"
- Provincial High-tech Enterprise R&D Center
- Provincial Specialized and Sophisticated SMEs
- Provincial Credit Management Demonstration Enterprise



PATENT CERTIFICATE



MAXGE has obtained more than **100** invention and utility model patents

SCALE CONFIGURATION



01 Mold & Tooling Workshop

Equipped with made in Switzerland GF AgieCharmilles, Japan Sodick wire cutting machine & EDM machine and Vertical milling CNC processing area. At present, it has achieved independent design, manufacturing and production of press tools & molds, with a comprehensive manufacturing capacity of more than 30 sets per month. Now the complete mold manufacturing process has been established, and an independent mold quality inspection group is equipped to realize the full inspection of the mold processing to ensure the precision and accuracy of mold.



02 Stamping Workshop

Equipped with high & medium speed stamping presses, and auxiliary equipment. The average punching speed can reach 100 to 300 strokes per minute, the highest punching speed can reach 500 strokes per minute, and the monthly production capacity of the workshop is to cater stamped parts for 5 million MCB, 500K RCCB, 500K RCBO & 200K MCCB.



03 Spot Welding Workshop

Equipped with automatic coil winding machines, automatic braid compacting & cutting machines, automatic thermal and magnetic welding group assembly machines, automatic armature assembly machines, automatic pad printing on handle and latch holder machines. The automation level is over 90%, and it is mainly responsible for the production of welding groups required by the finished product workshop. Through the integrated technology of winding and welding, automatic welding production has been realized. Thermal assembly heat treatment process is adopted to improve first pass yield during thermal verification process.

04 Injection Molding Workshop

Equipped with 38 injection molding machines from 60 to 350 ton capacity, overhead cranes and auxiliary equipment such as automatic warpage prevention machines, mould temperature controllers, granulators. The automation level is over 90%, realizing an automatic and efficient production process. Adopted centralised material feeding system to improve production efficiency and realize effective utilization of resources. Smart humidifying room, use advanced humidification process to strengthen the mechanical properties of the product. MAXGE adapts online CCD image detection unit though which critical parts of mechanism undergoes 100% inspection to ensure delatch free breakers. Through CCD image detection equipment, efficient, accurate and reliable image detection and analysis can be realized to ensure product quality.





05 ACB Automatic Testing Line

The product will go through the steps of manual assembly, contact parameters tests such as trip force, trip distance, ACB & cradle assembly by robot ,mechanical operation test unit to verify internal accessories and motor, current characteristic test unit , high voltage and loop resistance test unit, & appearance inspection by CCD device. Automation level has reached 80% and the monthly detection capacity has reached more than 1000 ACB.



06 MCCB Automatic Workshop

It mainly produces Moulded Case Circuit Breaker such as thermal magnetic type, electronic type, and ELCB type, as well as Intelligent Air Circuit Breaker. There are currently 8 automatic production lines & one manual line, and the monthly production capacity reaches 200,000 units. It has realized the automatic assembly & inspection of the whole process, including contact parameters such as automatic open distance, overtravel, on-off, synchronicity, trip force, trip distance, loop resistance, lift force & routine tests such as magnetic, thermal, reliability & HV test. Test line also equipped with laser printing & final appearance inspection by CCD device. The automation level has reached to 80%.

07 MCB Automatic Workshop

It mainly produces Miniature Circuit Breakers. There are 11 automatic production lines and 4 U-shaped lean production lines. At present, the average monthly production capacity can reach about 5 million poles. Equipped with automatic assembly, laser printing, riveting, Deltach test, terminal screw test, thermal calibration, cooling, thermal verification, automatic multi-pole assembly, magnetic test, on-off test and high voltage test, plasma arc cleaning, laser marking, pad printing, din clip fixing ,automatic packaging and other equipment, the automation level is over 90%. Through magnetic test, on-off test and high voltage test, to verify the response speed of the product and ensure that the power supply can be connected or disconnected stably. Adopt double-track automatic production line to improve production efficiency, add automatic tripping force measurement unit, conduct full inspection of products, and comprehensively monitor product quality.



08 RCCB Automatic Workshop

It mainly produces magnetic relay, electronic and electro-magnetic Residual Current Circuit Breakers, plastic and metal type single-phase and three-phase Distribution Boxes, Photovoltaic Combiner Boxes and controlgear products. There are 4 automatic production lines and 4 U-shaped lean production lines. At present, the average monthly production capacity can reach about 400,000 poles. The key component of RCCB named magnetic relay is produced in a clean room of class one rating & temperature, humidity conditions are maintained within standard range. Equipped with magnetic relay workshop grinding machine, finished product workshop automatic demagnetization machine, automatic calibration bench, automatic on-off and HV test machine, magnetic relay automatic winding machine and other equipment, the detection automation level has reached 80%.

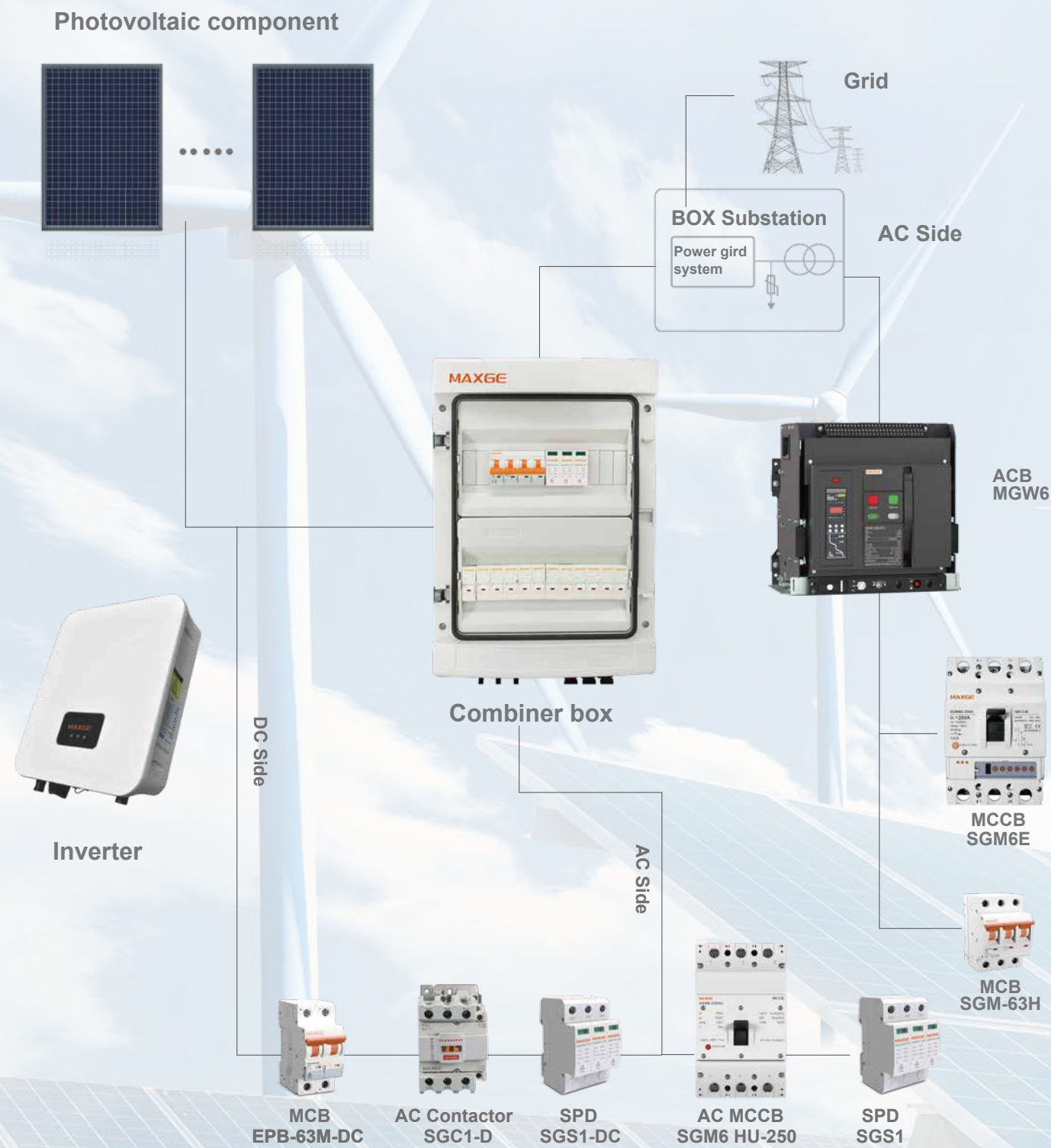


09 RCBO Automatic Workshop

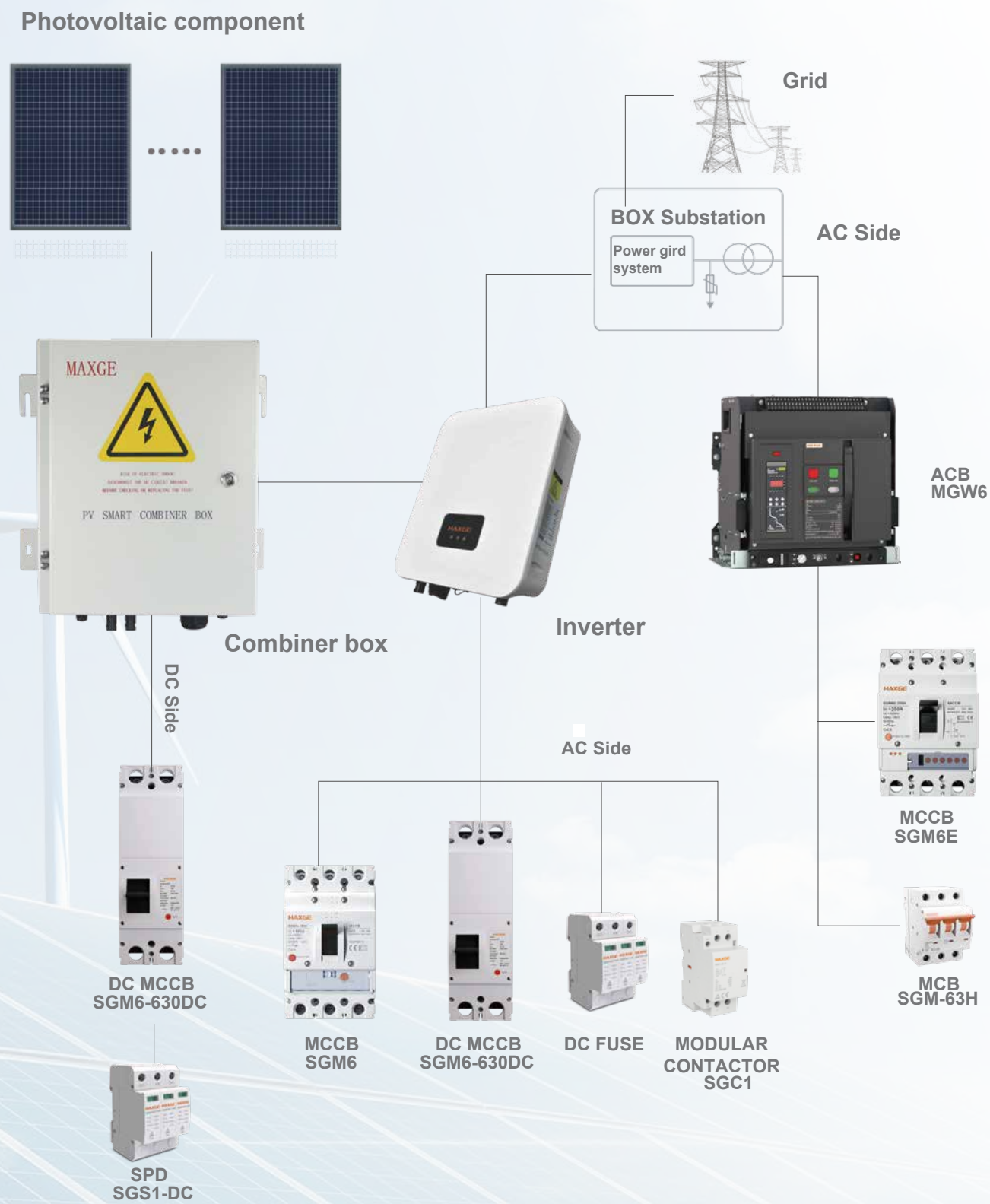
It mainly produces Residual Current Circuit Breaker with Over Current Protection with different variants such as 2P Electronic RCBO, DPN RCBO, 1P Electronic RCBO, multipole RCBO, electromagnetic type RCBO & Arc Fault Detection Device. There are 5 automatic production lines, 2 semi-automatic production lines and 3 U-shaped lean assembly lines. At present, the average monthly production capacity can reach about 500,000 poles. Equipped with automatic riveting, Deltach test, terminal screw test, magnetic test, on-off test, high voltage test, leakage current detection, thermal calibration, cooling, thermal verification, plasma arc cleaning, laser marking, pad printing and automatic packaging and other equipment, the automation level is over 85%.



String Photovoltaic Power System solutions



Centralized Photovoltaic Power System solutions



DC MCB EPB SERIES
FOR NEW ENERGY
SOLUTION

- Higher ARC extinguishing performance•
- Excellent current-limiting performance•
- Smaller volume & Mature technology•
- Saved & Wide application•



Safety Guarantee of
Photovoltaic Power

EPS1-SPD SERIES
FOR NEW ENERGY
SOLUTION

- Rapid response time•
- Lightning protection•
- Electrical appliances protection•
- Easy to use•
- Safe and anti-explosive•



Never worry about your
electricity at thunderstorms.

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DC COMBINER BOX

MG-PV1/1 DC COMBINER BOX	01/02
MG-PV2/1 DC COMBINER BOX	03/04
MG-PV2/2 DC COMBINER BOX	05/06
MG-PV4/1 DC COMBINER BOX	07/08
MG-PV6/1 DC COMBINER BOX	09/10
MG-PV4/2 DC COMBINER BOX	11/12
MG-PV6/1 DC COMBINER BOX	13/14
MG-PV8/1 DC COMBINER BOX	15/16
MG-PV12/1 DC COMBINER BOX	17/18
MG-PV16/1 DC COMBINER BOX	19/20
MG-PV6/2 DC COMBINER BOX	21/22
MG-PV6/3 DC COMBINER BOX	23/24
MG-PV8/2 DC COMBINER BOX	25/26

2

AC COMBINER BOX

MG-AC4/1 AC COMBINER BOX	27/28
MG-AC6/1 AC COMBINER BOX	29/30
MG-AC8/1 AC COMBINER BOX	31/32

3

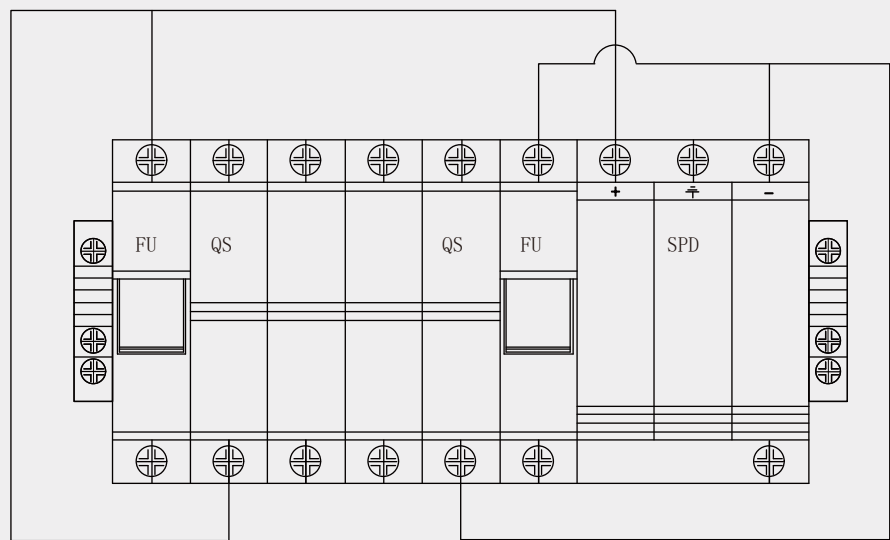
ACCESSORY

FR-DCMG-MKPD DC monitor products	33/34
MGISO 1200V True DC for solar PV application	35/36
EPB-63M-DC Series Miniature Circuit Breaker	37/40
EPF-32 Series Fuse Holder and Links	41/42
SGS1-DC Series Surge Protective Device	43/44
DC Moulded Case Circuit Breaker	45/45
High Voltage AC Moulded Case Circuit Breakerr	46/46

MG-PV1/1

DC COMBINER BOX

High reliability
With DC FUSE
With DC Surge Protection Device
With DC circuit breaker or DC load isolation switch.
Strong adaptability
IP65 design, waterproof, anti dust and anti ultraviolet.
Strict test for high and low temperature, used widely.
The simple installation, the simplified system wiring, the convenient wiring.
The box body is made of ABS and transparent door made of PC.
Flexible configuration
Used for single crystal silicon solar modules, polycrystalline silicon solar modules, thin film solar modules. Current rating of the photovoltaic fuse,circuit breaker.Load isolation switch is modified.



■ Description

MG-PV1/1 combiner box is suitable for inverter (MAX input voltage DC500V/DC1000V, 1 PV input channel,1 output channel,single inverter), Box body is made of PVC engineering materials, with test for fire retardant, temperature rise, anti impact, anti ultraviolet, and other testing.IP65 protection grade.

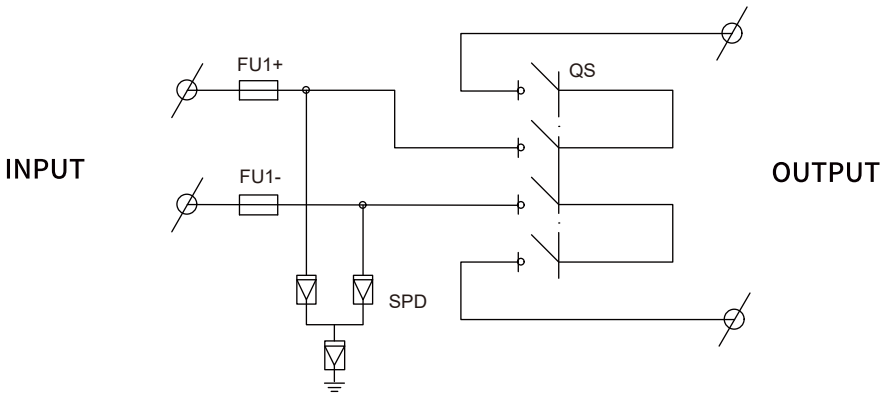
MG-PV1/1

DC COMBINER BOX

■ Technical parameters

Name	MG-PV1/1	
Electric parameter		
System maximum DC voltage	500	1000
Maximum input current for each string	15A	
Maximum input strings	1	
Maximum output switch current	16A/20A	
Number of inverter	1	
Number of Output strings	1	
Lightning protection		
Category of test	II grade protection	
Nominal discharge current	20KA	
Maximum discharge current	40KA	
Voltage protection level Up	2.8KV	3.8KV
Maximum continuous operating voltage Uc	630V	1050V
Poles	2P	3P
Structure characteristic	Plug-push module	
System		
Protection grade	IP65	
Output switch	DC isolation switch(standard)/DC circuit breaker(optional)	
SMC4 Waterproof Connectors	Standard	
PV DC fuse	Standard	
PV surge protector	Standard	
Monitoring module	Optional	
Preventing diode	Optional	
Box material	PVC	
Installation method	Wall mounting type	
Operating temperature	-25℃~+55℃	
Elevation of temperature	2000M	
Permissible relative humidity	0-95%, no condensation	

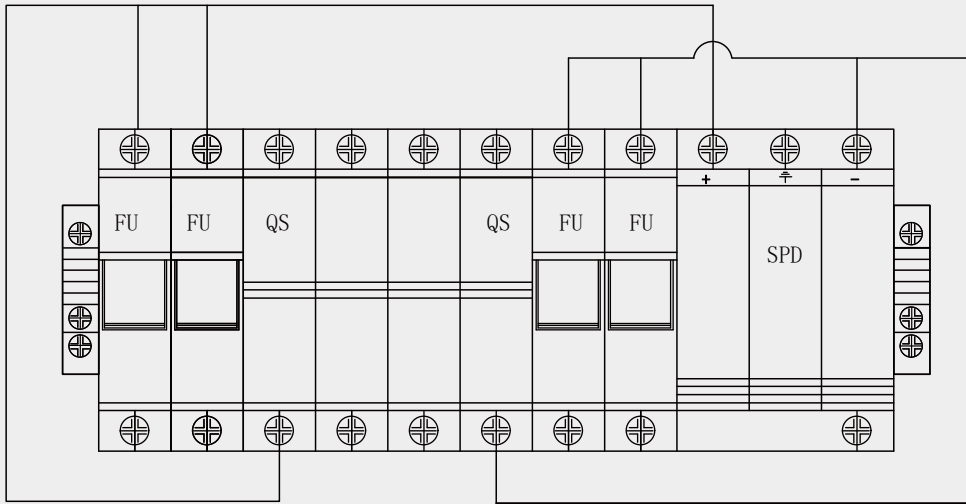
■ Schematic diagram



MG-PV2/1

DC COMBINER BOX

High reliability
With DC FUSE
With DC Surge Protection Device
With DC circuit breaker or DC load isolation switch.
Strong adaptability
IP65 design, waterproof, anti dust and anti ultraviolet.
Strict test for high and low temperature, used widely.
The simple installation, the simplified system wiring, the convenient wiring.
The box body is made of ABS and transparent door made of PC.
Flexible configuration
Used for single crystal silicon solar modules, polycrystalline silicon solar modules, thin film solar modules. Current rating of the photovoltaic fuse,circuit breaker.load isolation switch is modified.



■ Description

MG-PV2/1 combiner box is suitable for inverter (MAX input voltage DC500V/DC1000V, 2 PV input channel,1 output channel,single inverter), Box body is made of PVC engineering materials, with test for fire retardant, temperature rise, anti impact, anti ultraviolet, and other testing.IP65 protection grade.

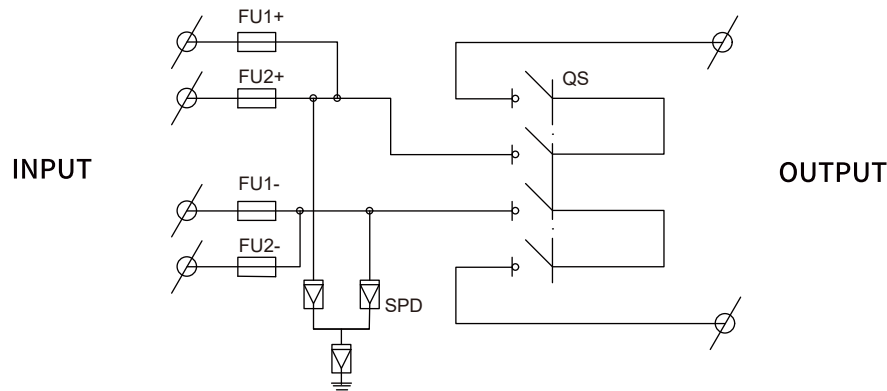
MG-PV2/1

DC COMBINER BOX

■ Technical parameters

Name	MG-PV2/1	
Electric parameter		
System maximum DC voltage	500	1000
Maximum input current for each string	15A	
Maximum input strings	2	
Maximum output switch current	20A/32A	
Number of inverter	1	
Number of Output strings	1	
Lightning protection		
Category of test	II grade protection	
Nominal discharge current	20KA	
Maximum discharge current	40KA	
Voltage protection level Up	2.8KV	3.8KV
Maximum continuous operating voltage Uc	630V	1050V
Poles	2P	3P
Structure characteristic	Plug-push module	
System		
Protection grade	IP65	
Output switch	DC isolation switch(standard)/DC circuit breaker(optional)	
SMC4 Waterproof Connectors	Standard	
PV DC fuse	Standard	
PV surge protector	Standard	
Monitoring module	Optional	
Preventing diode	Optional	
Box material	PVC	
Installation method	Wall mounting type	
Operating temperature	-25℃~+55℃	
Elevation of temperature	2000M	
Permissible relative humidity	0-95%, no condensation	

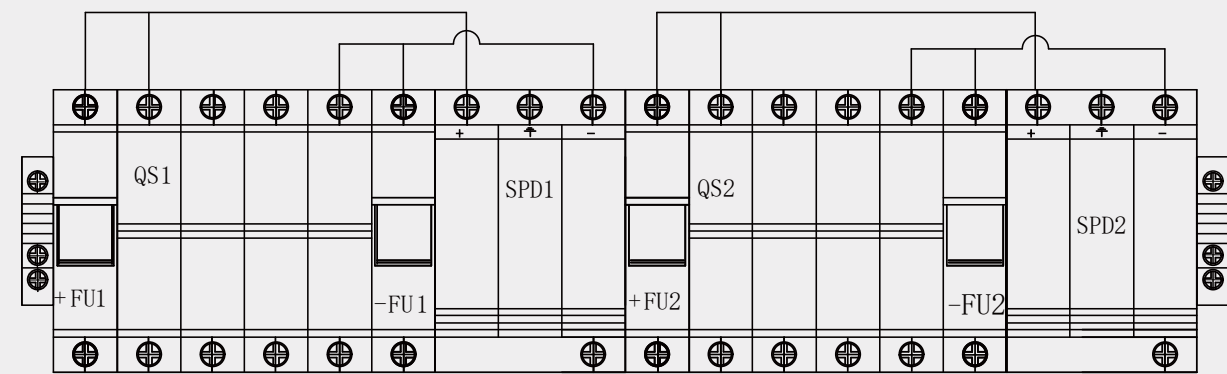
■ Schematic diagram



MG-PV2/2

DC COMBINER BOX

High reliability
With DC FUSE
With DC Surge Protection Device
With DC circuit breaker or DC load isolation switch.
Strong adaptability
IP65 design, waterproof, anti dust and anti ultraviolet.
Strict test for high and low temperature, used widely.
The simple installation, the simplified system wiring, the convenient wiring.
The box body is made of ABS and transparent door made of PC.
Flexible configuration
Used for single crystal silicon solar modules, polycrystalline silicon solar modules, thin film solar modules. Current rating of the photovoltaic fuse,circuit breaker.load isolation switch is modified.



■ Description

MG-PV2/2 combiner box is suitable for inverter (MAX input voltage DC500V/DC1000V, 2 PV input channel,2 output channel,single inverter), Box body is made of PVC engineering materials, with test for fire retardant, temperature rise, anti impact, anti ultraviolet, and other testing.IP65 protection grade.

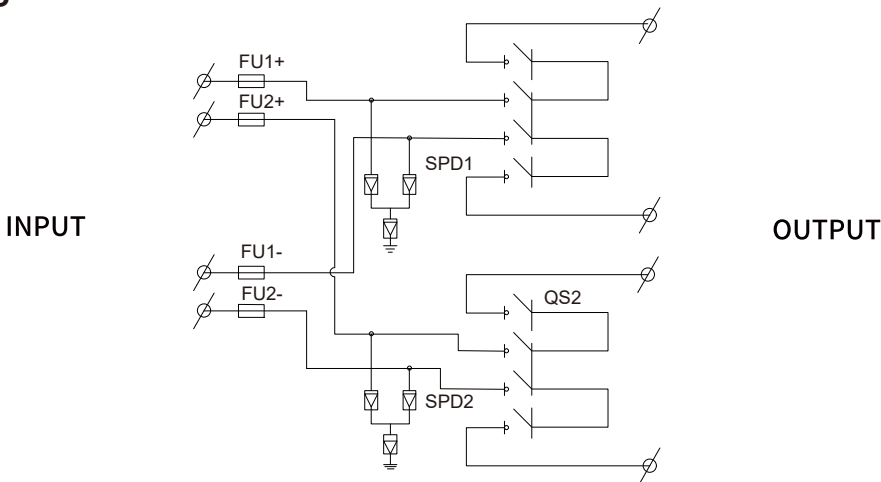
MG-PV2/2

DC COMBINER BOX

■ Technical parameters

Name	MG-PV2/2	
Electric parameter		
System maximum DC voltage	500	1000
Maximum input current for each string	15A	
Maximum input strings	2	
Maximum output switch current	16A/20A	
Number of inverter	1	
Number of Output strings	1	
Lightning protection		
Category of test	II grade protection	
Nominal discharge current	20KA	
Maximum discharge current	40KA	
Voltage protection level Up	2.8KV	3.8KV
Maximum continuous operating voltage Uc	630V	1050V
Poles	2P	3P
Structure characteristic	Plug-push module	
System		
Protection grade	IP65	
Output switch	DC isolation switch(standard)/DC circuit breaker(optional)	
SMC4 Waterproof Connectors	Standard	
PV DC fuse	Standard	
PV surge protector	Standard	
Monitoring module	Optional	
Preventing diode	Optional	
Box material	PVC	
Installation method	Wall mounting type	
Operating temperature	-25°C~+55°C	
Elevation of temperature	2000M	
Permissible relative humidity	0-95%, no condensation	

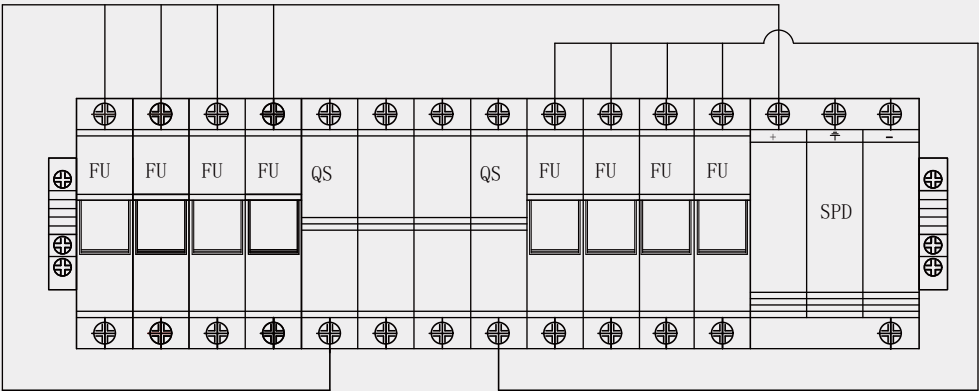
■ Schematic diagram



MG-PV4/1

DC COMBINER BOX

High reliability
With DC FUSE
With DC Surge Protection Device
With DC circuit breaker or DC load isolation switch.
Strong adaptability
IP65 design, waterproof, anti dust and anti ultraviolet.
Strict test for high and low temperature, used widely.
The simple installation, the simplified system wiring, the convenient wiring.
The box body is made of ABS and transparent door made of PC.
Flexible configuration
Used for single crystal silicon solar modules, polycrystalline silicon solar modules, thin film solar modules. Current rating of the photovoltaic fuse,circuit breaker.load isolation switch is modified.



■ Description

MG-PV4/1 combiner box is suitable for inverter (MAX input voltage DC500V/DC1000V, 4 PV input channel,1 output channel,single inverter), Box body is made of PVC engineering materials, with test for fire retardant, temperature rise, anti impact, anti ultraviolet, and other testing.IP65 protection grade.

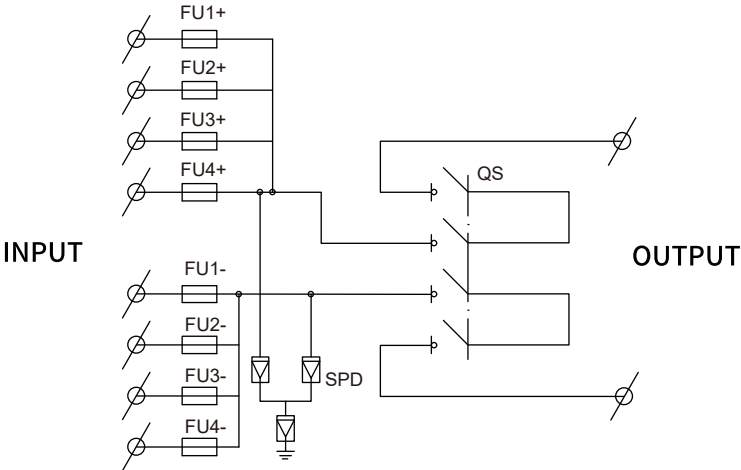
MG-PV4/1

DC COMBINER BOX

■ Technical parameters

Name	MG-PV4/1	
Electric parameter		
System maximum DC voltage	500	1000
Maximum input current for each string	15A	
Maximum input strings	4	
Maximum output switch current	40A/63A	
Number of inverter	1	
Number of Output strings	1	
Lightning protection		
Category of test	II grade protection	
Nominal discharge current	20KA	
Maximum discharge current	40KA	
Voltage protection level Up	2.8KV	3.8KV
Maximum continuous operating voltage Uc	630V	1050V
Poles	2P	3P
Structure characteristic	Plug-push module	
System		
Protection grade	IP65	
Output switch	DC isolation switch(standard)/DC circuit breaker(optional)	
SMC4 Waterproof Connectors	Standard	
PV DC fuse	Standard	
PV surge protector	Standard	
Monitoring module	Optional	
Preventing diode	Optional	
Box material	PVC	
Installation method	Wall mounting type	
Operating temperature	-25°C~+55°C	
Elevation of temperature	2000M	
Permissible relative humidity	0-95%, no condensation	

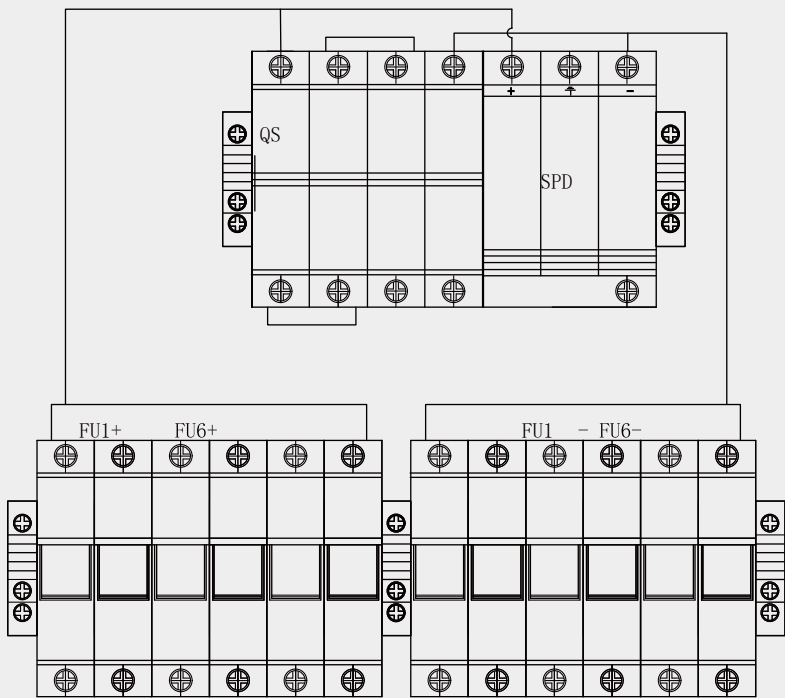
■ Schematic diagram



MG-PV6/1

DC COMBINER BOX

High reliability
With DC FUSE
With DC Surge Protection Device
With DC circuit breaker or DC load isolation switch.
Strong adaptability
IP65 design, waterproof, anti dust and anti ultraviolet.
Strict test for high and low temperature, used widely.
The simple installation, the simplified system wiring, the convenient wiring.
The box body is made of ABS and transparent door made of PC.
Flexible configuration
Used for single crystal silicon solar modules, polycrystalline silicon solar modules, thin film solar modules. Current rating of the photovoltaic fuse,circuit breaker.load isolation switch is modified.



■ Description

MG-PV6/1 combiner box is suitable for inverter (MAX input voltage DC 1000V, 6 PV input channel,1 output channel,single inverter).Box body is made of PVC engineering materials, with test for fire retardant, temperature rise, anti impact, anti ultraviolet, and other testing.IP65 protection grade.

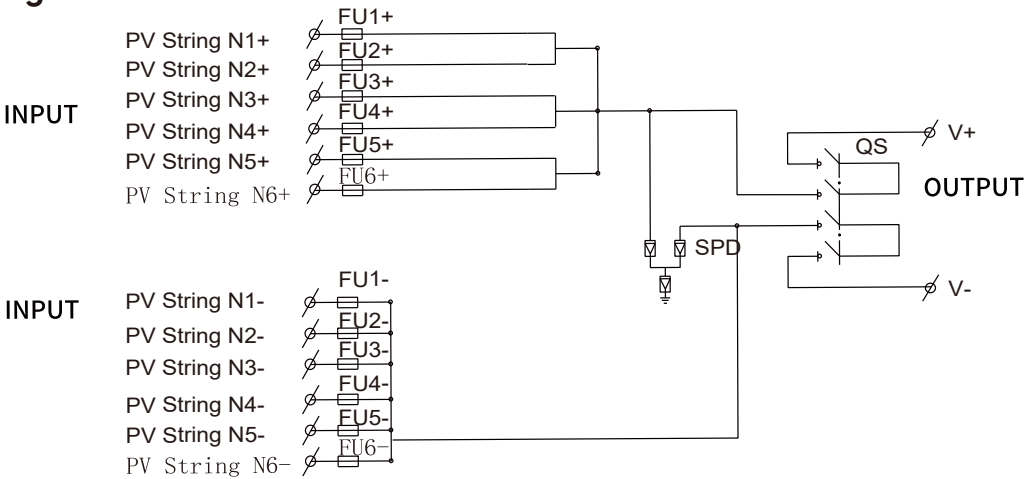
MG-PV6 /1

DC COMBINER BOX

■ Technical parameters

Name	MG-PV6/1
Electric parameter	
System maximum DC voltage	1000
Maximum input current for each string	15A
Maximum input strings	6
Maximum output switch current	63A
Number of inverter	1
Number of Output strings	1
Lightning protection	
Category of test	II grade protection
Nominal discharge current	20KA
Maximum discharge current	40KA
Voltage protection level Up	3.8KV
Maximum continuous operating voltage Uc	1050V
Poles	3P
Structure characteristic	Plug-push module
System	
Protection grade	IP65
Output switch	DC isolation switch(standard)/DC circuit breaker(optional)
SMC4 Waterproof Connectors	Standard
PV DC fuse	Standard
PV surge protector	Standard
Monitoring module	Optional
Preventing diode	Optional
Box material	Metal
Installation method	Wall mounting type
Operating temperature	-25℃~+55℃
Elevation of temperature	2000M
Permissible relative humidity	0-95%, no condensation

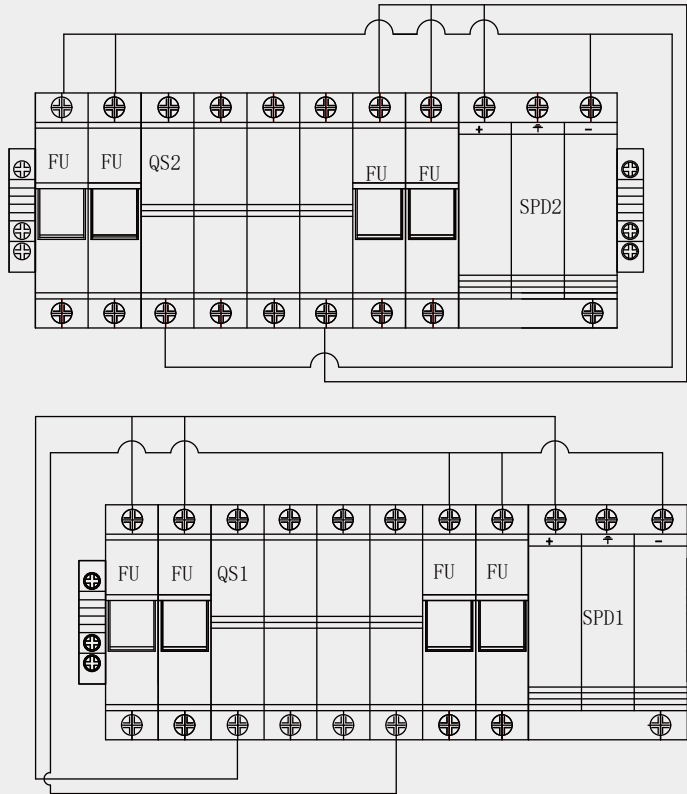
■ Schematic diagram



MG-PV4/2

DC COMBINER BOX

High reliability
With DC FUSE
With DC Surge Protection Device
With DC circuit breaker or DC load isolation switch.
Strong adaptability
IP65 design, waterproof, anti dust and anti ultraviolet.
Strict test for high and low temperature, used widely.
The simple installation, the simplified system wiring, the convenient wiring.
The box body is made of ABS and transparent door made of PC.
Flexible configuration
Used for single crystal silicon solar modules, polycrystalline silicon solar modules, thin film solar modules. Current rating of the photovoltaic fuse,circuit breaker,load isolation switch is modified.



■ Description

MG PV4/2 combiner box is suitable for inverter (MAX input voltage DC500V/DC1000V, 4 PV input channel,2 output channel,double inverter).Box body is made of PVC engineering materials, with test for fire retardant, temperature rise, anti impact, anti ultraviolet, and other testing.IP65 protection grade.

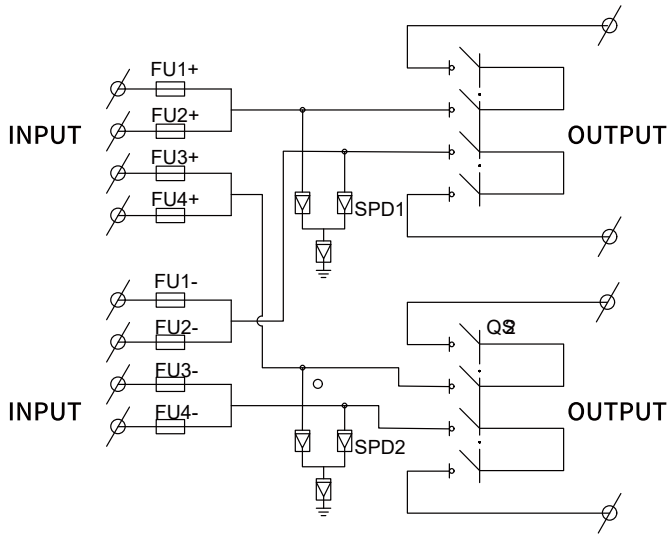
MG-PV4/2

DC COMBINER BOX

■ Technical parameters

Name	MG-PV4/2	
Electric parameter		
System maximum DC voltage	500	1000
Maximum input current for each string	15A	
Maximum input strings	4	
Maximum output switch current	20A/32A	
Number of inverter	2	
Number of Output strings	2	
Lightning protection		
Category of test	II grade protection	
Nominal discharge current	20KA	
Maximum discharge current	40KA	
Voltage protection level Up	2.8KV	3.8KV
Maximum continuous operating voltage Uc	630V	1050V
Poles	2P	3P
Structure characteristic	Plug-push module	
System		
Protection grade	IP65	
Output switch	DC isolation switch(standard)/DC circuit breaker(optional)	
SMC4 Waterproof Connectors	Standard	
PV DC fuse	Standard	
PV surge protector	Standard	
Monitoring module	Optional	
Preventing diode	Optional	
Box material	PVC	
Installation method	Wall mounting type	
Operating temperature	-25℃~+55℃	
Elevation of temperature	2000M	
Permissible relative humidity	0-95%, no condensation	

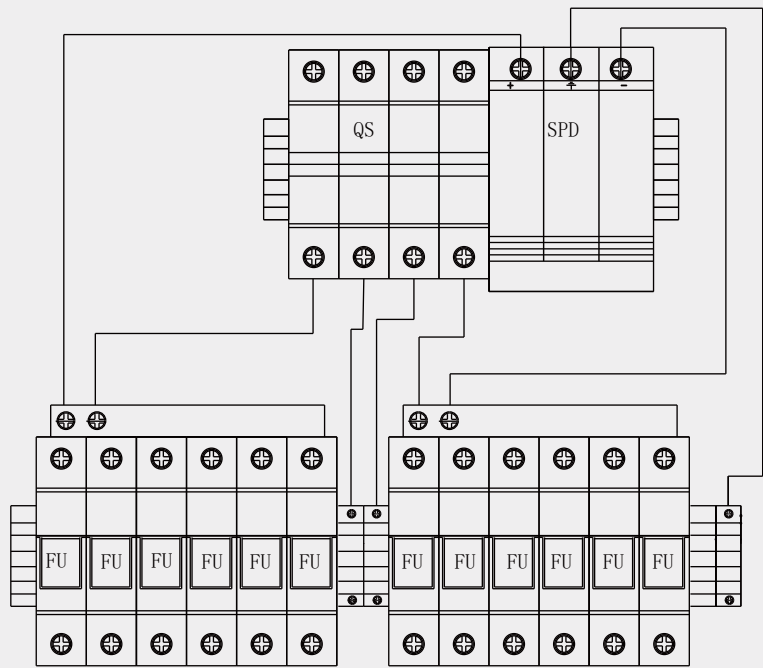
■ Schematic diagram



MG-PV6/1

DC COMBINER BOX

- High reliability
- With DC FUSE
- With DC Surge Protection Device
- With DC circuit breaker or DC load isolation switch.
- Strong adaptability
- IP65 design, waterproof, anti dust and anti ultraviolet.
- Strict test for high and low temperature, used widely.
- The simple installation, the simplified system wiring, the convenient wiring.
- The box body is made of cold rolled steel and other metal materials.
- Flexible configuration
- Used for single crystal silicon solar modules, polycrystalline silicon solar modules, thin film solar modules. Current rating of the photovoltaic fuse,circuit breaker,load isolation switch is modified.



■ Description

MG-PV6/1 PV combiner box bus synthetic DC input of 6 PV components to 1 output each channel is with a fuse. Output side is equipped with lightning protection and circuit breaker. It greatly improves wiring of DC power distribution cabinet and inverter.Realize lightning protection, short circuit protection and grounding protectin.PV combiner box divides into two types:intelligent box and non-intelligent box. Intelligent PV combiner box is equipped with monitoring unit, then detect input current of each string,detect inside temperature, detect lightning protection status, detect circuit breaker status and summarize output voltage and so on. Provicng users with a safe, brief, beautiful and applicable photovoltaic system products. The product adopts outdoor wall mounted type,which adapts to the harsh environment. In addition to the core components,the other can be customized by user requirements.

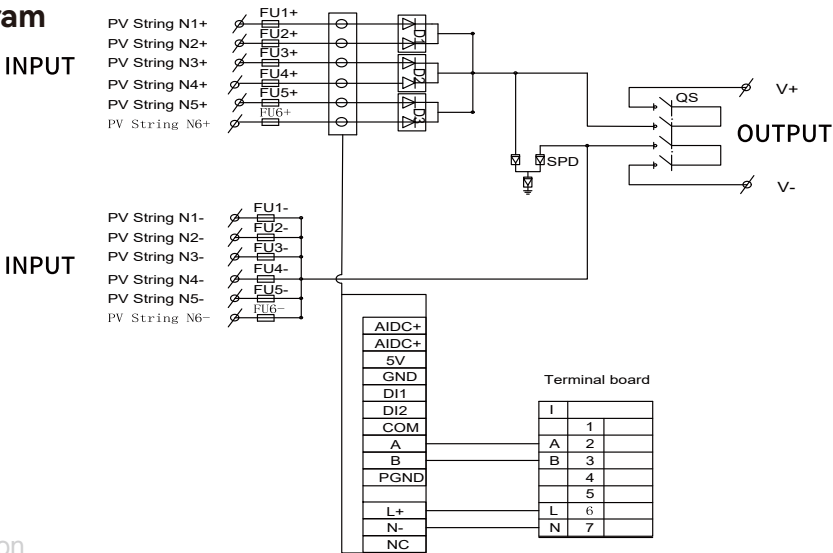
MG-PV6/1

DC COMBINER BOX

■ Technical parameters

Name	MG-PV6/1
Electric parameter	
System maximum DC voltage	1000
Maximum input current for each string	15A
Maximum input strings	6
Maximum output switch current	125A
Number of inverter	1
Number of Output strings	1
Lightning protection	
Category of test	II grade protection
Nominal discharge current	20KA
Maximum discharge current	40KA
Voltage protection level Up	3.8KV
Maximum continuous operating voltage Uc	1050V
Poles	3P
Structure characteristic	Plug-push module
System	
Protection grade	IP65
Output switch	DC isolation switch(standard)/DC circuit breaker(optional)
SMC4 Waterproof Connectors	Standard
PV DC fuse	Standard
PV surge protector	Standard
Monitoring module	Optional
Preventing diode	Optional
Box material	Metal
Installation method	Wall mounting type
Operating temperature	-25°C~+55°C
Elevation of temperature	2000M
Permissible relative humidity	0-95%, no condensation

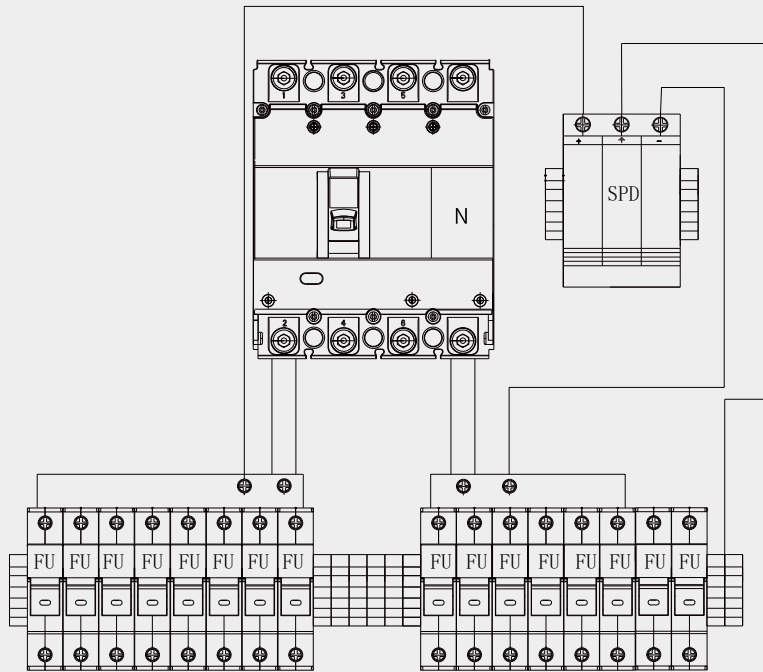
■ Schematic diagram



MG-PV8/1

DC COMBINER BOX

- High reliability
- With DC FUSE
- With DC Surge Protection Device
- With DC circuit breaker or DC load isolation switch.
- Strong adaptability
- IP65 design, waterproof, anti dust and anti ultraviolet.
- Strict test for high and low temperature, used widely.
- The simple installation, the simplified system wiring, the convenient wiring.
- The box body is made of cold rolled steel and other metal materials.
- Flexible configuration
- Used for single crystal silicon solar modules, polycrystalline silicon solar modules, thin film solar modules. Current rating of the photovoltaic fuse,circuit breaker,load isolation switch is modified.



■ Description

MG-PV8/1 PV combiner box bus synthetic DC input of 8 PV components to 1 output each channel is with a fuse. Output side is equipped with lightning protection and circuit breaker. It greatly improves wiring of DC power distribution cabinet and inverter.Realize lightning protection, short circuit protection and grounding protectin.PV combiner box divides into two types:intelligent box and non-intelligent box. Intelligent PV combiner box is equipped with monitoring unit, then detect input current of each string,detect inside temperature, detect lightning protection status, detect circuit breaker status and summarize output voltage and so on. Provicing users with a safe, brief, beautiful and applicable photovoltaic system products. The product adopts outdoor wall mounted type,which adapts to the harsh environment. In addition to the core components,the other can be customized by user requirements.

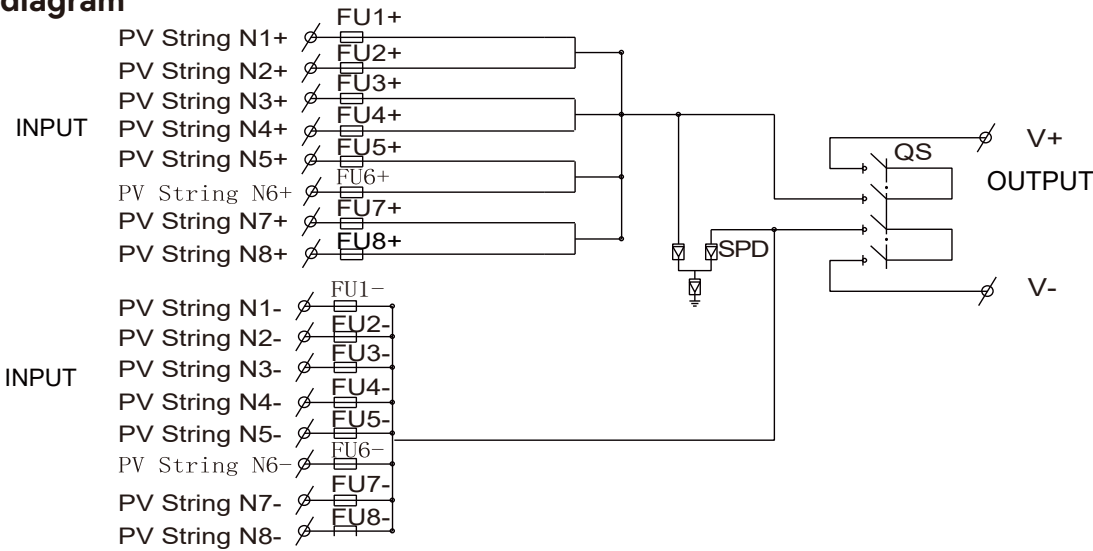
MG-PV8/1

DC COMBINER BOX

■ Technical parameters

Name	MG-PV8/1
Electric parameter	
System maximum DC voltage	1000
Maximum input current for each string	15A
Maximum input strings	6
Maximum output switch current	125A
Number of inverter	8
Number of Output strings	1
Lightning protection	
Category of test	II grade protection
Nominal discharge current	20KA
Maximum discharge current	40KA
Voltage protection level Up	3.8KV
Maximum continuous operating voltage Uc	1050V
Poles	3P
Structure characteristic	Plug-push module
System	
Protection grade	IP65
Output switch	DC isolation switch(standard)/DC circuit breaker(optional)
SMC4 Waterproof Connectors	Standard
PV DC fuse	Standard
PV surge protector	Standard
Monitoring module	Optional
Preventing diode	Optional
Box material	Metal
Installation method	Wall mounting type
Operating temperature	-25°C~+55°C
Elevation of temperature	2000M
Permissible relative humidity	0-95%, no condensation

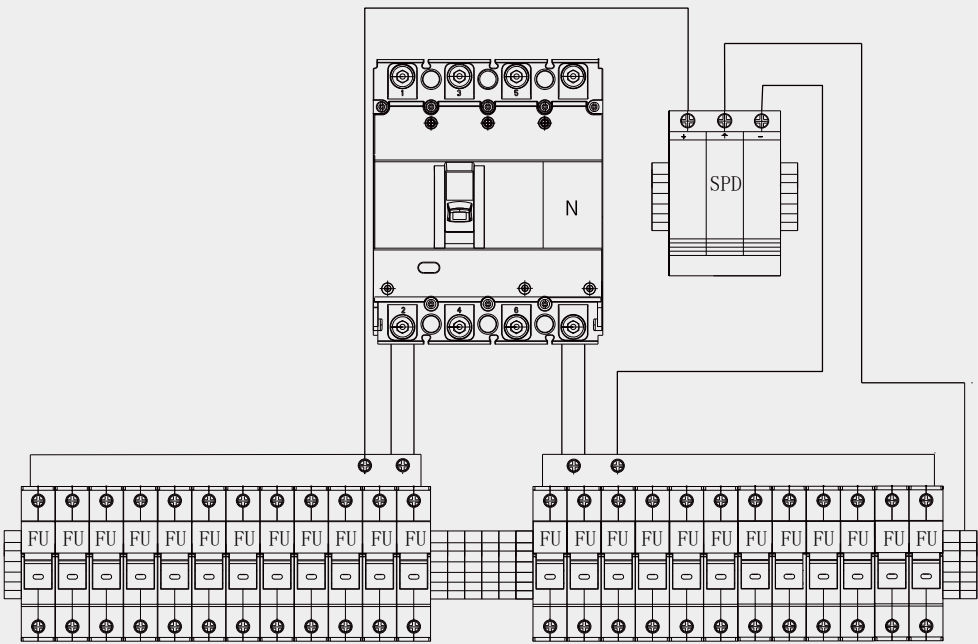
■ Schematic diagram



MG-PV12/1

DC COMBINER BOX

- High reliability
- With DC FUSE
- With DC Surge Protection Device
- With DC circuit breaker or DC load isolation switch.
- Strong adaptability
- IP65 design, waterproof, anti dust and anti ultraviolet.
- Strict test for high and low temperature, used widely.
- The simple installation, the simplified system wiring, the convenient wiring.
- The box body is made of cold rolled steel and other metal materials.
- Flexible configuration
- Used for single crystal silicon solar modules, polycrystalline silicon solar modules, thin film solar modules. Current rating of the photovoltaic fuse,circuit breaker,load isolation switch is modified.



■ Description

MG-PV12/1 PV combiner box bus synthetic DC input of 12 PV components to 1 output each channel is with a fuse. Output side is equipped with lightning protection and circuit breaker. It greatly improves wiring of DC power distribution cabinet and inverter.Realize lightning protection, short circuit protection and grounding protectin.PV combiner box divides into two types:intelligent box and non-intelligent box. Intelligent PV combiner box is equipped with monitoring unit, then detect input current of each string,detect inside temperature, detect lightning protection status, detect circuit breaker status and summarize output voltage and so on. Provicng users with a safe, brief, beautiful and applicable photovoltaic system products. The product adopts outdoor wall mounted type,which adapts to the harsh environment. In addition to the core components,the other can be customized by user requirements.

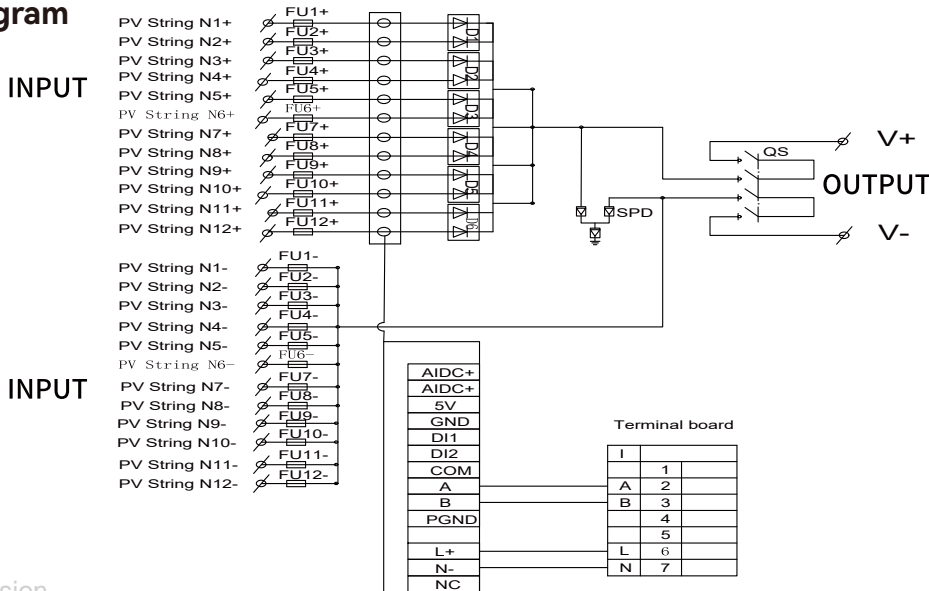
MG-PV12/1

DC COMBINER BOX

■ Technical parameters

Name	MG-PV12/1
Electric parameter	
System maximum DC voltage	1000
Maximum input current for each string	15A
Maximum input strings	12
Maximum output switch current	200A
Number of inverter	1
Number of Output strings	1
Lightning protection	
Category of test	II grade protection
Nominal discharge current	20KA
Maximum discharge current	40KA
Voltage protection level Up	3.8KV
Maximum continuous operating voltage Uc	1050V
Poles	3P
Structure characteristic	Plug-push module
System	
Protection grade	IP65
Output switch	DC isolation switch(standard)/DC circuit breaker(optional)
SMC4 Waterproof Connectors	Standard
PV DC fuse	Standard
PV surge protector	Standard
Monitoring module	Optional
Preventing diode	Optional
Box material	Metal
Installation method	Wall mounting type
Operating temperature	-25℃~+55℃
Elevation of temperature	2000M
Permissible relative humidity	0~95%, no condensation

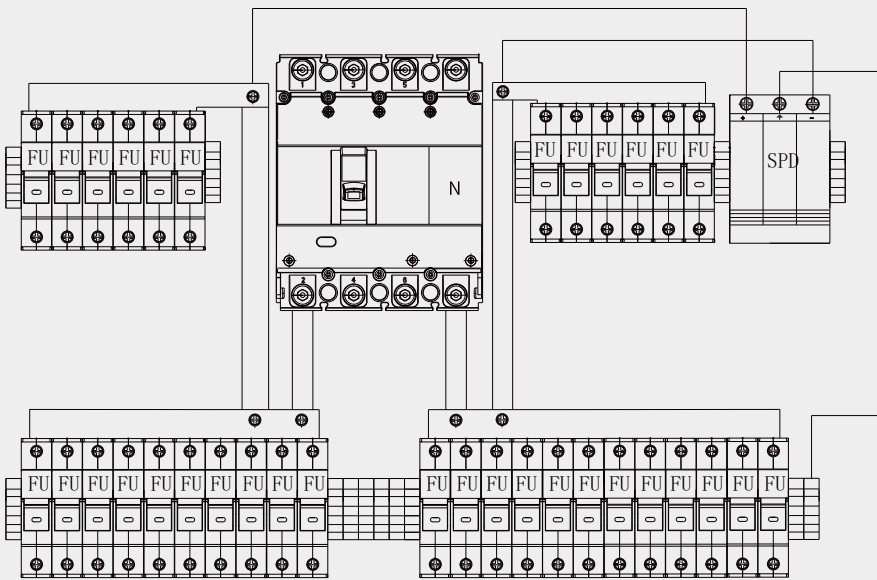
■ Schematic diagram



MG-PV16/1

DC COMBINER BOX

- High reliability
- With DC FUSE
- With DC Surge Protection Device
- With DC circuit breaker or DC load isolation switch.
- Strong adaptability
- IP65 design, waterproof, anti dust and anti ultraviolet.
- Strict test for high and low temperature, used widely.
- The simple installation, the simplified system wiring, the convenient wiring.
- The box body is made of cold rolled steel and other metal materials.
- Flexible configuration
- Used for single crystal silicon solar modules, polycrystalline silicon solar modules, thin film solar modules. Current rating of the photovoltaic fuse,circuit breaker,load isolation switch is modified.



■ Description

MG-PV16/1 PV combiner box bus synthetic DC input of 16 PV components to 1 output each channel is with a fuse. Output side is equipped with lightning protection and circuit breaker. It greatly improves wiring of DC power distribution cabinet and inverter.Realize lightning protection, short circuit protection and grounding protectin.PV combiner box divides into two types:intelligent box and non-intelligent box. Intelligent PV combiner box is equipped with monitoring unit, then detect input current of each string,detect inside temperature, detect lightning protection status, detect circuit breaker status and summarize output voltage and so on. Provicng users with a safe, brief, beautiful and applicable photovoltaic system products. The product adopts outdoor wall mounted type,which adapts to the harsh environment. In addition to the core components,the other can be customized by user requirements.

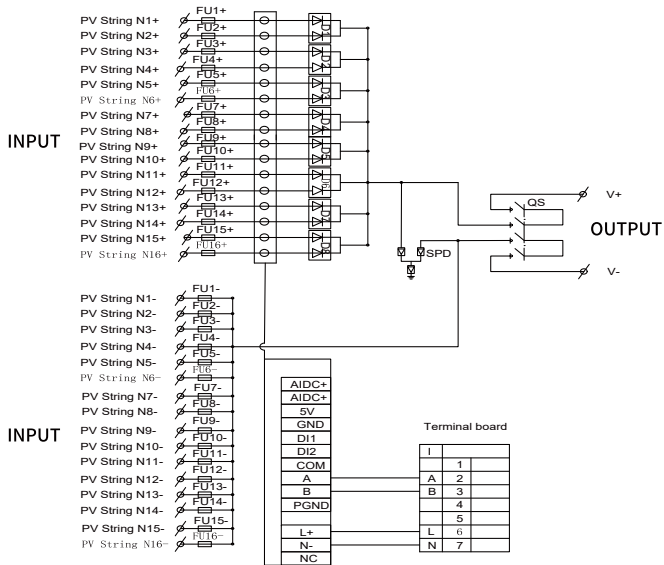
MG-PV16/1

DC COMBINER BOX

■ Technical parameters

Name	MG-PV16/1
Electric parameter	
System maximum DC voltage	1000
Maximum input current for each string	15A
Maximum input strings	16
Maximum output switch current	200A
Number of inverter	1
Number of Output strings	1
Lightning protection	
Category of test	II grade protection
Nominal discharge current	20KA
Maximum discharge current	40KA
Voltage protection level Up	3.8KV
Maximum continuous operating voltage Uc	1050V
Poles	3P
Structure characteristic	Plug-push module
System	
Protection grade	IP65
Output switch	DC isolation switch(standard)/DC circuit breaker(optional)
SMC4 Waterproof Connectors	Standard
PV DC fuse	Standard
PV surge protector	Standard
Monitoring module	Optional
Preventing diode	Optional
Box material	Metal
Installation method	Wall mounting type
Operating temperature	-25°C~+55°C
Elevation of temperature	2000M
Permissible relative humidity	0-95%, no condensation

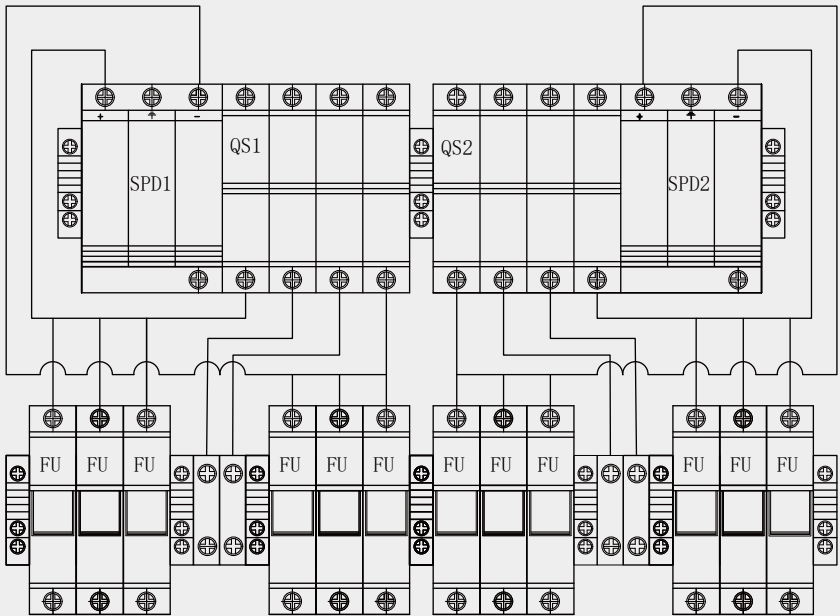
■ Schematic diagram



MG-PV6/2

DC COMBINER BOX

- High reliability
- With DC FUSE
- With DC Surge Protection Device
- With DC circuit breaker or DC load isolation switch.
- Strong adaptability
- IP65 design, waterproof, anti dust and anti ultraviolet.
- Strict test for high and low temperature, used widely.
- The simple installation, the simplified system wiring, the convenient wiring.
- The box body is made of cold rolled steel and other metal materials.
- Flexible configuration
- Used for single crystal silicon solar modules, polycrystalline silicon solar modules, thin film solar modules. Current rating of the photovoltaic fuse,circuit breaker,load isolation switch is modified.



■ Description

MG-PV6/2 PV combiner box bus synthetic DC input of 6 PV components to 2 output each channel is with a fuse. Output side is equipped with lightning protection and circuit breaker. It greatly improves wiring of DC power distribution cabinet and inverter.Realize lightning protection, short circuit protection and grounding protectin.PV combiner box divides into two types:intelligent box and non-intelligent box. Intelligent PV combiner box is equipped with monitoring unit, then detect input current of each string,detect inside temperature, detect lightning protection status, detect circuit breaker status and summarize output voltage and so on. Provicing users with a safe, brief, beautiful and applicable photovoltaic system products. The product adopts outdoor wall mounted type,which adapts to the harsh environment. In addition to the core components,the other can be customized by user requirements.

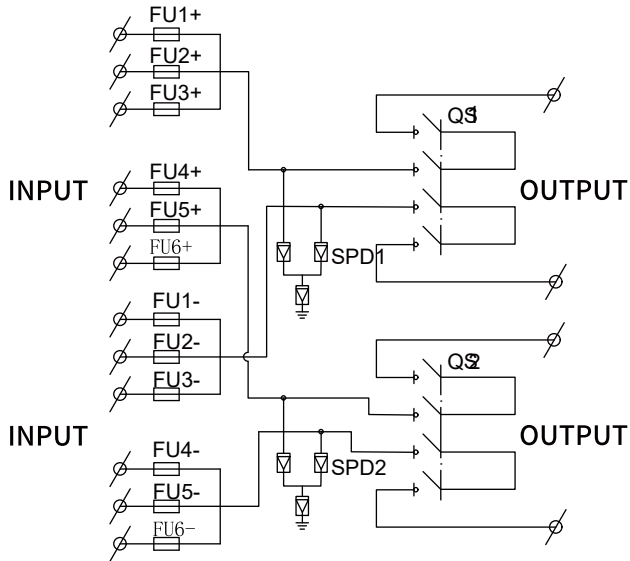
MG-PV6/2

DC COMBINER BOX

■ Technical parameters

Name	MG-PV6/2	
Electric parameter		
System maximum DC voltage	500	1000
Maximum input current for each string	15A	
Maximum input strings	6	
Maximum output switch current	32A/40A	
Number of inverter	2	
Number of Output strings	2	
Lightning protection		
Category of test	II grade protection	
Nominal discharge current	20KA	
Maximum discharge current	40KA	
Voltage protection level Up	3.8KV	
Maximum continuous operating voltage Uc	1050V	
Poles	3P	
Structure characteristic	Plug-push module	
System		
Protection grade	IP65	
Output switch	DC isolation switch(standard)/DC circuit breaker(optional)	
SMC4 Waterproof Connectors	Standard	
PV DC fuse	Standard	
PV surge protector	Standard	
Monitoring module	Optional	
Preventing diode	Optional	
Box material	Metal	
Installation method	Wall mounting type	
Operating temperature	-25℃~+55℃	
Elevation of temperature	2000M	
Permissible relative humidity	0-95%, no condensation	

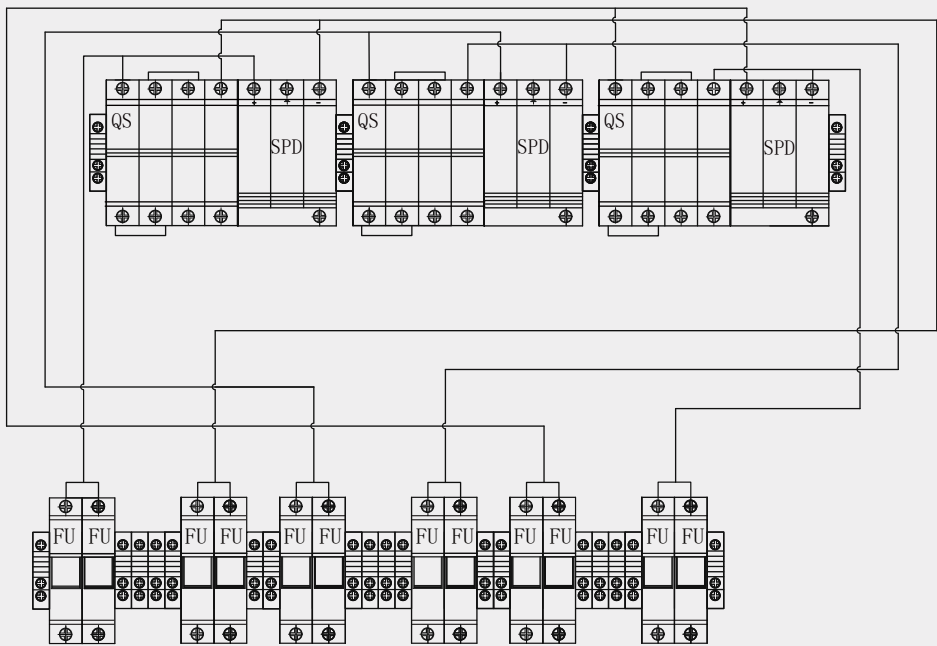
■ Schematic diagram



MG-PV6/3

DC COMBINER BOX

- High reliability
- With DC FUSE
- With DC Surge Protection Device
- With DC circuit breaker or DC load isolation switch.
- Strong adaptability
- IP65 design, waterproof, anti dust and anti ultraviolet.
- Strict test for high and low temperature, used widely.
- The simple installation, the simplified system wiring, the convenient wiring.
- The box body is made of cold rolled steel and other metal materials.
- Flexible configuration
- Used for single crystal silicon solar modules, polycrystalline silicon solar modules, thin film solar modules. Current rating of the photovoltaic fuse,circuit breaker,load isolation switch is modified.



■ Description

MG-PV6/3 PV combiner box bus synthetic DC input of 6 PV components to 3 output each channel is with a fuse. Output side is equipped with lightning protection and circuit breaker. It greatly improves wiring of DC power distribution cabinet and inverter.Realize lightning protection, short circuit protection and grounding protectin.PV combiner box divides into two types:intelligent box and non-intelligent box. Intelligent PV combiner box is equipped with monitoring unit, then detect input current of each string,detect inside temperature, detect lightning protection status, detect circuit breaker status and summarize output voltage and so on. Provicing users with a safe, brief, beautiful and applicable photovoltaic system products. The product adopts outdoor wall mounted type,which adapts to the harsh environment. In addition to the core components,the other can be customized by user requirements.

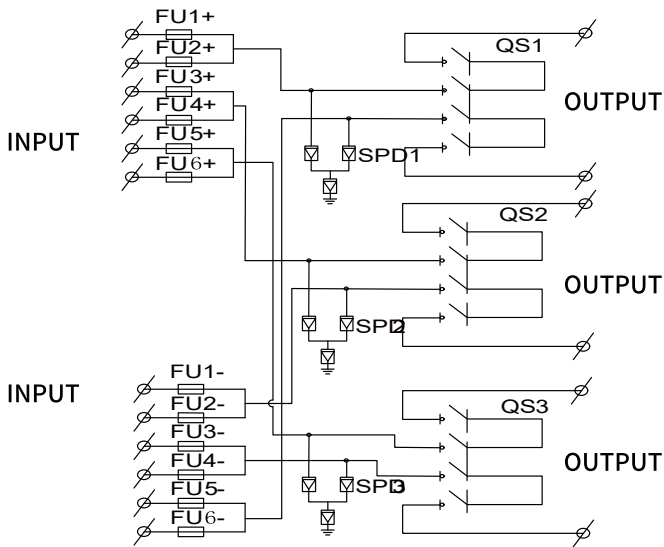
MG-PV6/3

DC COMBINER BOX

■ Technical parameters

Name	MG-PV6/3	
Electric parameter		
System maximum DC voltage	500	1000
Maximum input current for each string	15A	
Maximum input strings	6	
Maximum output switch current	20A/32A	
Number of inverter	3	
Number of Output strings	3	
Lightning protection		
Category of test	II grade protection	
Nominal discharge current	20KA	
Maximum discharge current	40KA	
Voltage protection level Up	3.8KV	
Maximum continuous operating voltage Uc	1050V	
Poles	3P	
Structure characteristic	Plug-push module	
System		
Protection grade	IP65	
Output switch	DC isolation switch(standard)/DC circuit breaker(optional)	
SMC4 Waterproof Connectors	Standard	
PV DC fuse	Standard	
PV surge protector	Standard	
Monitoring module	Optional	
Preventing diode	Optional	
Box material	Metal	
Installation method	Wall mounting type	
Operating temperature	-25℃~-+55℃	
Elevation of temperature	2000M	
Permissible relative humidity	0~95%, no condensation	

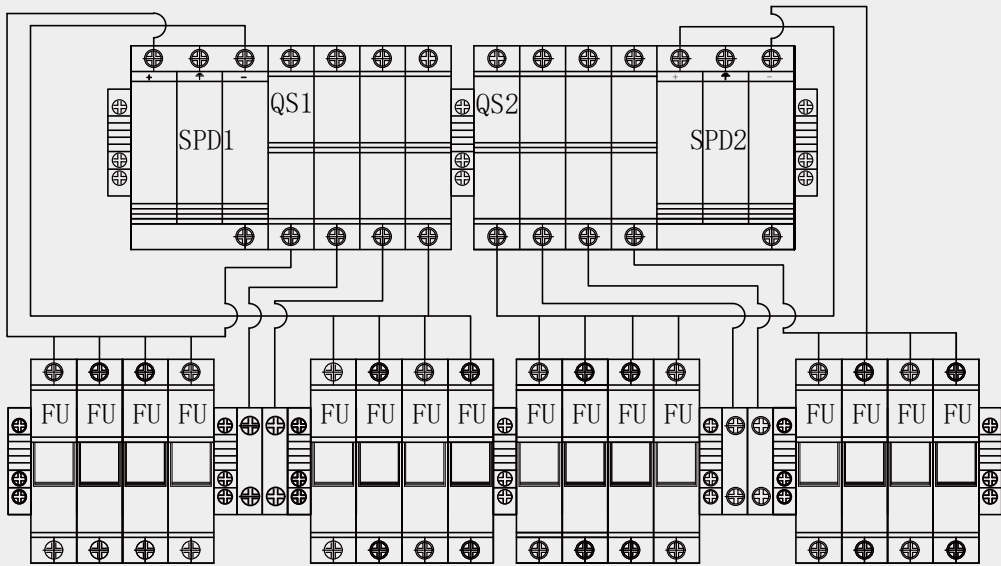
■ Schematic diagram



MG-PV8/2

DC COMBINER BOX

High reliability
With DC FUSE
With DC Surge Protection Device
With DC circuit breaker or DC load isolation switch.
Strong adaptability
IP65 design, waterproof, anti dust and anti ultraviolet.
Strict test for high and low temperature, used widely.
The simple installation, the simplified system wiring, the convenient wiring.
The box body is made of cold rolled steel and other metal materials.
Flexible configuration
Used for single crystal silicon solar modules, polycrystalline silicon solar modules, thin film solar modules. Current rating of the photovoltaic fuse,circuit breaker,load isolation switch is modified.



■ Description

MG-PV8/2 PV combiner box bus synthetic DC input of 8 PV components to 2 output each channel is with a fuse. Output side is equipped with lightning protection and circuit breaker. It greatly improves wiring of DC power distribution cabinet and inverter.Realize lightning protection, short circuit protection and grounding protectin.PV combiner box divides into two types:intelligent box and non-intelligent box. Intelligent PV combiner box is equipped with monitoring unit, then detect input current of each string,detect inside temperature, detect lightning protection status, detect circuit breaker status and summarize output voltage and so on. Proving users with a safe, brief, beautiful and applicable photovoltaic system products. The product adopts outdoor wall mounted type,which adapts to the harsh environment. In addition to the core components,the other can be customized by user requirements.

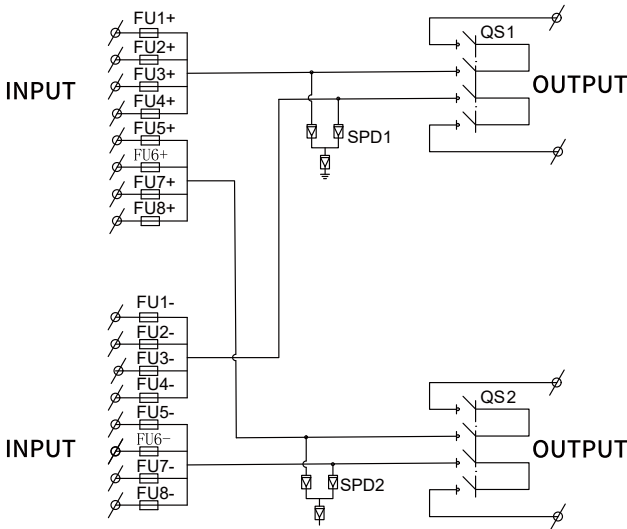
MG-PV8/2

DC COMBINER BOX

■ Technical parameters

Name	MG-PV8/2
Electric parameter	
System maximum DC voltage	1000
Maximum input current for each string	15A
Maximum input strings	8
Maximum output switch current	20A/32A
Number of inverter	2
Number of Output strings	2
Lightning protection	
Category of test	II grade protection
Nominal discharge current	20KA
Maximum discharge current	40KA
Voltage protection level Up	3.8KV
Maximum continuous operating voltage Uc	1050V
Poles	3P
Structure characteristic	Plug-push module
System	
Protection grade	IP65
Output switch	DC isolation switch(standard)/DC circuit breaker(optional)
SMC4 Waterproof Connectors	Standard
PV DC fuse	Standard
PV surge protector	Standard
Monitoring module	Optional
Preventing diode	Optional
Box material	Metal
Installation method	Wall mounting type
Operating temperature	-25°C~+55°C
Elevation of temperature	2000M
Permissible relative humidity	0~95%, no condensation

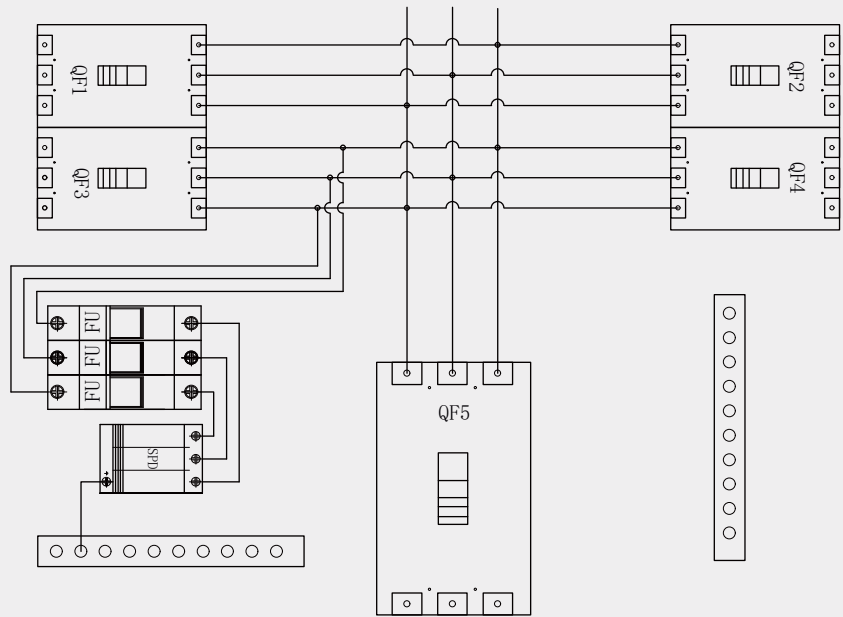
■ Schematic diagram



MG-AC4/1

AC COMBINER BOX

- High reliability
- With AC Surge Protection Device
- With AC circuit breaker, rated voltage AC690V.
- Strong adaptability
- IP65 design, waterproof, anti dust and anti ultraviolet.
- Strict test for high and low temperature, used widely.
- The simple installation, the simplified system wiring, the convenient wiring.
- The box body is made of cold rolled steel and other metal materials.
- Flexible configuration
- Used for AC output of 1-50kW inverter. Current rating of the photovoltaic fuse,circuit breaker is modified.



■ Description

MG-AC4/1 AC PV combiner box is applicable to the PV group on power system. It is an important part to undertake series inverter and AC power distribution cabinet or a step-up transtormer and access up to four sets of photo-votaic group on inverter.Into line with the input of circuit breaker and output line with circuit breaker or the load isolating switch. Busbar with two levels of lightning protection.Highest rated system voltage is AC 690.IP65 Protec-tion class as same as inverter Installed outdoor with waterproof, dustproof, anti UV, anti salt spray corrosion etc function.

The combiner box greatly simplifies the connection between series inverter and AC power distribution cabinet or boost transformer.Simple and clear internal structure make reasonable wiring.High reliability and simple mainte-nance. Outdoor wall mounted can adapt to the harsh environment.In addition to the material and size, it can be customized accoring to user requirements.

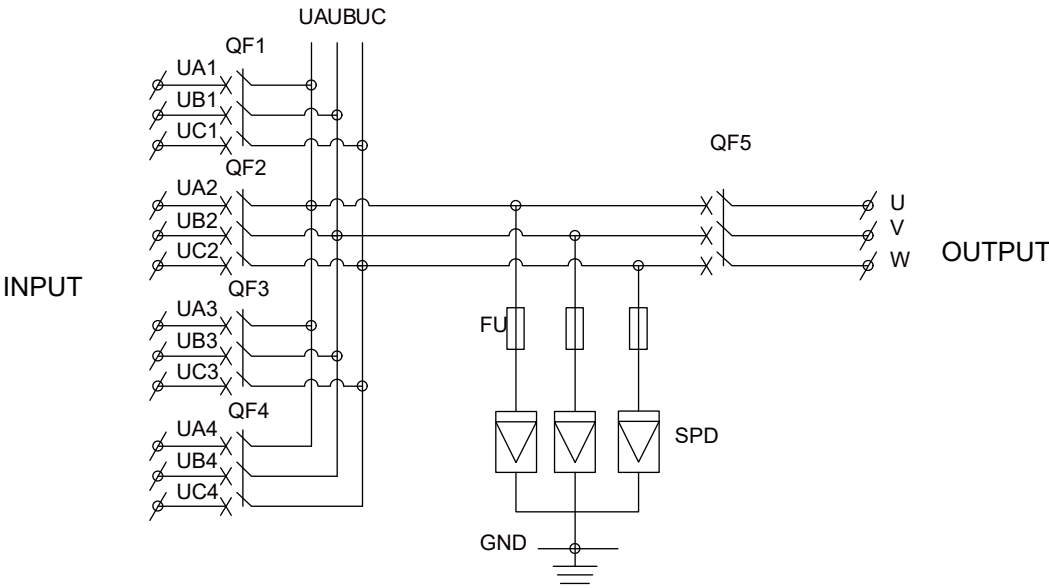
MG-AC4/1

AC COMBINER BOX

■ Technical parameters

Product model	MG-AC4/1
Number of input strings	4
Maximum input voltage	AC690
Input current for each string	0~100A
Maximum input current	250A
Rated working voltage Un	480VAC
Voltage protection level Up	≤3.2KV
Nominal discharge current(8/20us)	20KA(customizable)
Maximum discharge current Imax(8/20us)	40KA(customizable)
Response time	<25ns
Temperature and humidity	Working temperature:-40~+85.humidity95%,no condensation, No corrosive gas
Elevation	≤4000m
Input and output switch	Circuit breaker
Surge protector	Standard
Box material	Galvanized steel/stainless steel/cold rolled steel sheet/plastics
Enclosure protection grade	IP65
Cable protection grade	IP65

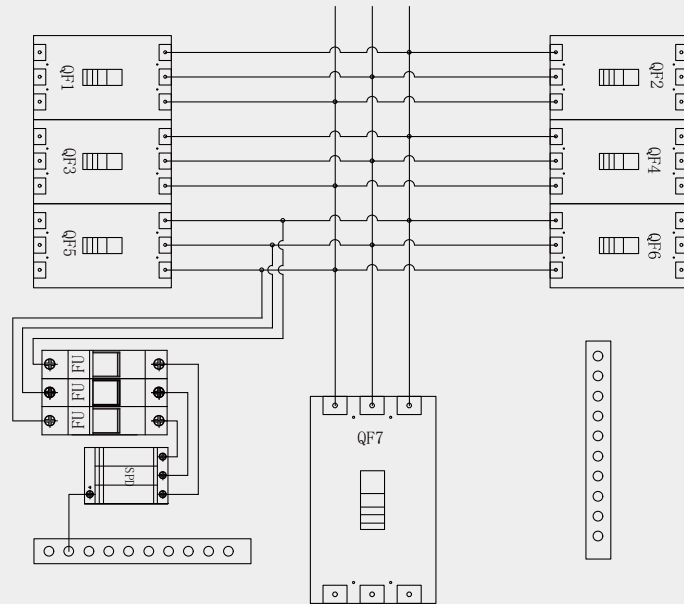
■ Schematic diagram



MG-AC6/1

AC COMBINER BOX

High reliability
With AC Surge Protection Device
With AC circuit breaker, rated voltage AC690V.
Strong adaptability
IP65 design, waterproof, anti dust and anti ultraviolet.
Strict test for high and low temperature, used widely.
The simple installation, the simplified system wiring, the convenient wiring.
The box body is made of cold rolled steel and other metal materials.
Flexible configuration
Used for AC output of 1-50kW inverter. Current rating of the photovoltaic fuse,circuit breaker is modified.



■ Description

MG-AC6 /1 AC PV combiner box is applicable to the PV group on power system. It is an important part to undertake series inverter and AC power distribution cabinet or a step-up transtormer and access up to four sets of photovotaic group on inverter.Into line with the input of circuit breaker and output line with circuit breaker or the load isolating switch. Busbar with two levels of lightning protection.Highest rated system voltage is AC 690.IP65 Protection class as same as inverter Installed outdoor with waterproof, dustproof, anti UV, anti salt spray corrosion etc function.
The combiner box greatly simplifies the connection between series inverter and AC power distribution cabinet or boost transformer.Simple and clear internal structure make reasonable wiring.High reliability and simple maintenance. Outdoor wall mounted can adapt to the harsh environment.In addition to the material and size, it can be customized accoring to user requirements.

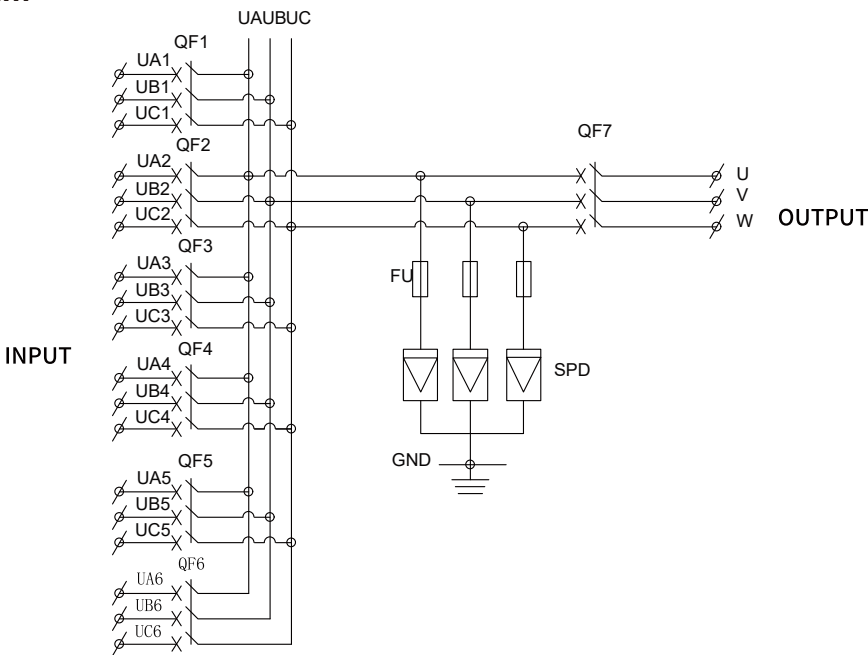
MG-AC6/1

AC COMBINER BOX

■ Technical parameters

Product model	MG-AC6/1
Number of input strings	6
Maximum input voltage	AC690
Input current for each string	0~100A
Maximum input current	400A
Rated working voltage Un	480VAC
Voltage protection level Up	≤3.2KV
Nominal discharge current(8/20us)	20KA(customizable)
Maximum discharge current Imax(8/20us)	40KA(customizable)
Response time	<25ns
Temperature and humidity	Working temperature:-40~+85.humidity95%,no condensation, No corrosive gas
Elevation	≤4000m
Input and output switch	Circuit breaker
Surge protector	Standard
Box material	Galvanized steel/stainless steel/cold rolled steel sheet/plastics
Enclosure protection grade	IP65
Cable protection grade	IP65

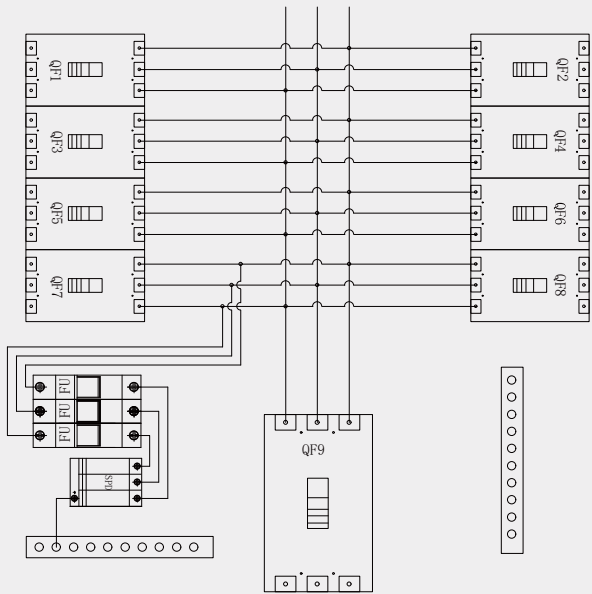
■ Schematic diagram



MG-AC8/1

AC COMBINER BOX

High reliability
With AC Surge Protection Device
With AC circuit breaker, rated voltage AC690V.
Strong adaptability
IP65 design, waterproof, anti dust and anti ultraviolet.
Strict test for high and low temperature, used widely.
The simple installation, the simplified system wiring, the convenient wiring.
The box body is made of cold rolled steel and other metal materials.
Flexible configuration
Used for AC output of 1-50kW inverter. Current rating of the photovoltaic fuse,circuit breaker is modified.



■ Description

MG-AC8/1 AC PV combiner box is applicable to the PV group on power system. It is an important part to undertake series inverter and AC power distribution cabinet or a step-up transtormer and access up to four sets of photo-votaic group on inverter.Into line with the input of circuit breaker and output line with circuit breaker or the load isolating switch. Busbar with two levels of lightning protection.Highest rated system voltage is AC 690.IP65 Protec-tion class as same as inverter Installed outdoor with waterproof, dustproof, anti UV, anti salt spray corrosion etc function.
The combiner box greatly simplifies the connection between series inverter and AC power distribution cabinet or boost transformer.Simple and clear internal structure make reasonable wiring.High reliability and simple mainte-nance. Outdoor wall mounted can adapt to the harsh environment.In addition to the material and size, it can be customized accoring to user requirements.

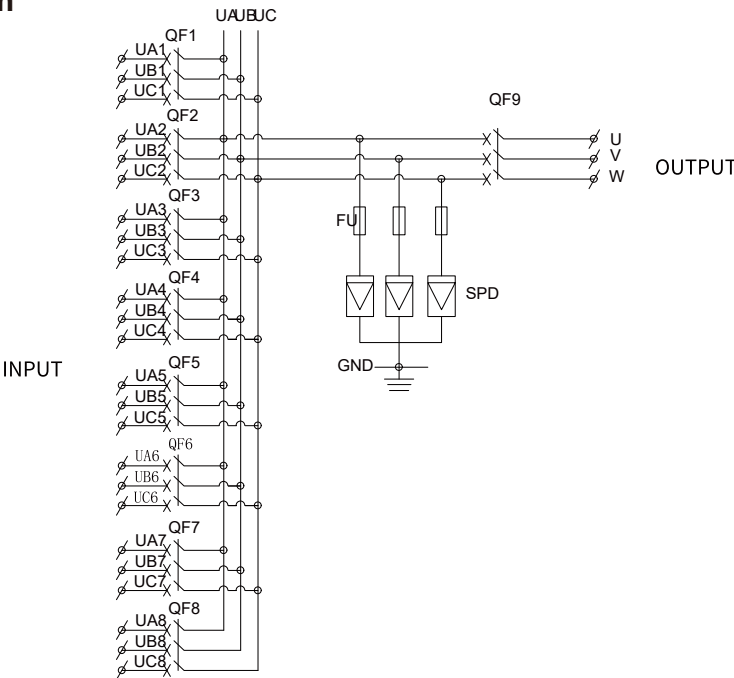
MG-AC8/1

AC COMBINER BOX

■ Technical parameters

Product model	MG-AC8/1
Number of input strings	8
Maximum input voltage	AC690
Input current for each string	0~100A
Maximum input current	630A
Rated working voltage Un	480VAC
Voltage protection level Up	≤3.2KV
Nominal discharge current(8/20us)	20KA(customizable)
Maximum discharge current Imax(8/20us)	40KA(customizable)
Response time	<25ns
Temperature and humidity	Working temperature:-40~+85.humidity95%,no condensation, No corrosive gas
Elevation	≤4000m
Input and output switch	Circuit breaker
Surge protector	Standard
Box material	Galvanized steel/stainless steel/cold rolled steel sheet/plastics
Enclosure protection grade	IP65
Cable protection grade	IP65

■ Schematic diagram



FR-DCMG-MKPD

Product Introduction

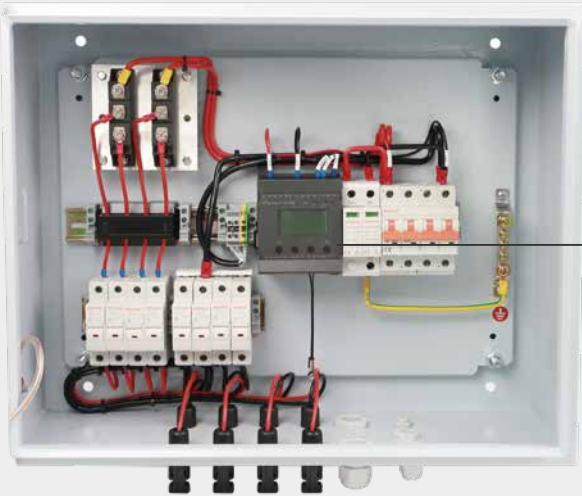
FR-DCMG-MKPD DC monitor products are mainly used in DC power transmission, distribution and other occasions, such as photovoltaic combiner boxes, DC cabinets, telecommunications equipment rooms and communication base stations. It communicates with the host computer through RS485. Its main functions include real-time monitoring of each branch current, bus voltage, box temperature, lightning protector status and DC circuit breaker status in the DC system. It can realize automatic alarm for abnormal conditions and supports applications within the maximum DC voltage range of 1000V.

■ Main function

- Monitoring function: real-time monitoring generated current, voltage, temperature of combiner box, lightning protector status, DC circuit breaker status and DC arc fault status etc. for each photovoltaic strings, communicating with the host computer through RS485.
- Display content: For the detected voltage, current, temperature, switching status, power generation and other data, FR-DCMG-MKPD can display a histogram interface through LCD, making it more intuitive to read current and other data.
- Alarm function: The alarm can be turned on or off according to the actual needs of the site. When an alarm occurs, an alarm message will pop up on the interface.
- Current calibration: identify zero drift and improve current identification accuracy. (off by default)
- Compatibility: Program compatible with model FR-DCMG-MMPD products

■ Article declare

- This manual is applicable to the monitoring host model FR-DCMG-MKPD

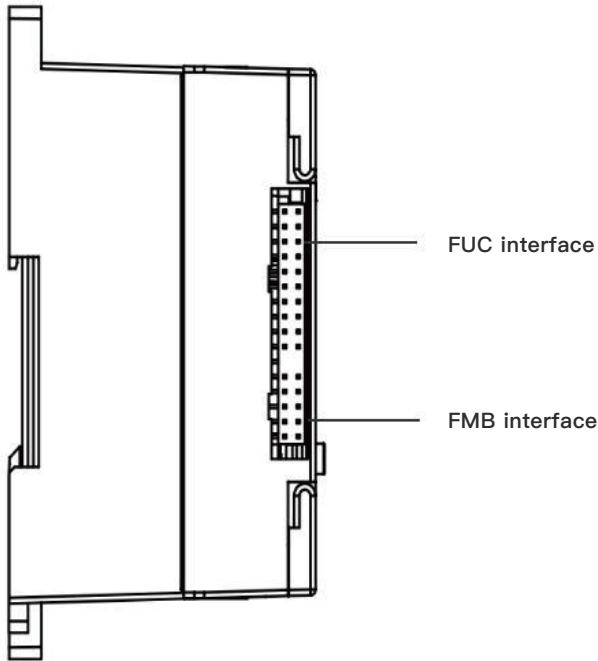
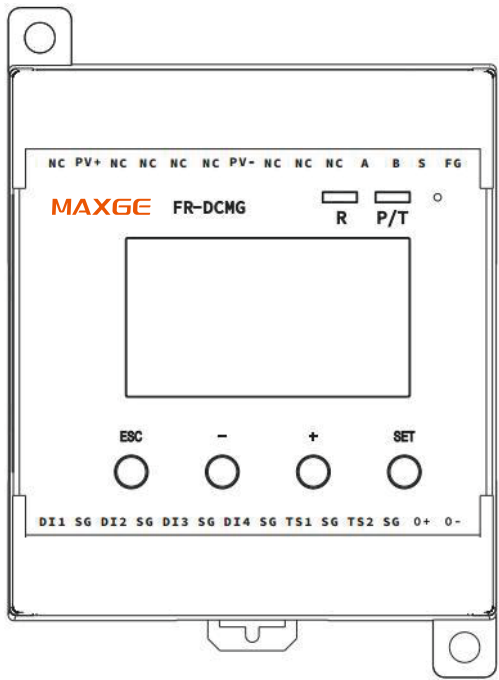


FR-DCMG-MKPD DC monitor products

FR-DCMG-MKPD

Product Introduction

■ Terminal Definition



■ Technical parameters

SYMBOL	MEANING
PV+/PV-	DC bus power supply terminal
NC	Not connected
S	Not connected
A/B	RS485 Communication terminal
FG	Ground terminal
TS1/TS2	External temperature sensor terminal
SG	Temperature sensor and digital input ground terminal
DI1/DI2/DI3/DI4	4 switching input terminals
FUC interface	Can connect modules that have FUC interface
FMB interface	Can connect modules that have FMB interface, for example, FR-DCMG-AS4A DC arc detector

MGISO 1200V True DC for solar PV application

IP66 1200V 32A true DC isolator switch MGISO-32, shall be installed between the solar arrays and solar inverter.For isolation the PV array during system installation or any maintenance.The switch must be rated for system voltage (1.15 x string open circuit voltage Voc) and current (1.25 x string short circuit current Isc) Recommend as a standard isolator to solar install-ers.Find more information from the grid connected solar PV systems install and supervise guidelines.

Specification

- 1200Vdc 32A
- IP66 for vertical and horizontal installation.
- UV resistance and flame retardant material
- Arc extinguished in 3ms
- IEC60947.1:2015
- Breathe valve
- Lockable at off position
- Anti-counterfeit label for original MAXGE
- 5 years warranty



Technical parameters		Model	MGISO
Rated insulation voltage	Ui	V	1200
Rated heating current	Ith	A	32
Rated impulse withstand voltage	Uimp	V	8000
Rated short-time withstand current(1s)	Icw	2,4	1000
		2H	1700
Rated short-circuit making capacity	Icm	2,4	1000
		2H	1700
Rated short-circuit current	Icc	A	5000
Maximum fuse specifications	gL(gG)	A	80
Mechanical life			10000
DC poles			2 or 4
Operating temperature		°C	-25 to +70
Storage temperature		°C	-40 to +70
Class of pollution			2
IP level			IP66

EPF-10V DC1000V Fuse and Fuse Holder Specification

Application

This series of fuse is suitable for solar photovoltaic power generation system, rated voltage to 1000V, rated current to 32A, connected with photovoltaic panels and batteries, to charge variable flow system for short circuit breaking protection in photovoltaic station and photovoltaic power generation system. The rated breaking capacity is 20kA, products confirms to IEC60269.6

Normal Working Conditions

Ambient Temperature:-40°C~+90°C. Equipment installation height: less than 2000m
(If you want to use in the position exceeds this height, we can design according to your requirements)

Use Category

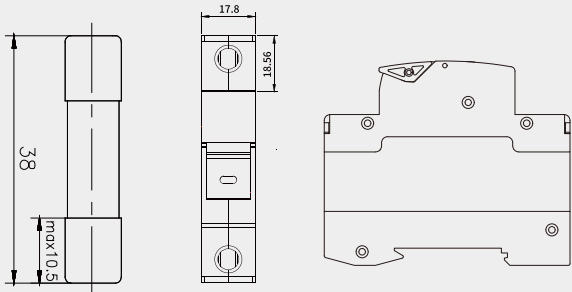
GPV means all range DC Fuse used for breaking protection in solar photovoltaic power generation system.

Structure

Fuse Link is made of pure silver, welding low tin and encapsulated in the high-strength porcelain, the fuse tube filled with high pure quartz sand with chemically processed as a arc medium, fuse body is connected with contacting terminals by spot welding.

Main Technical Specification

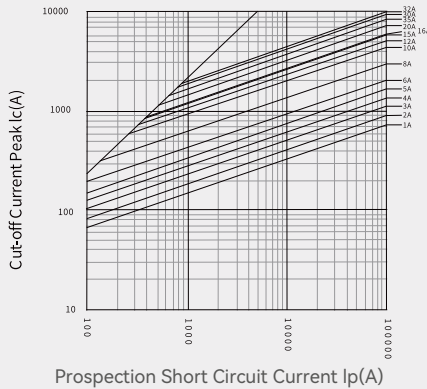
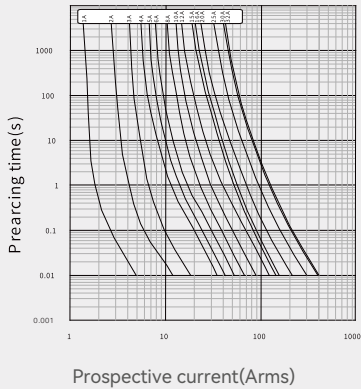
Model	EPF-10PV
Rated Voltage (V)	DC1000V
Rated Current (A)	1-32
Size(mm)	See Above Drawing




Testing Method(Appointed time and current)

GPV Fuse current rated(A)	Appointed Time(h)	Appointed Current	
		Inf	If
In≤63	1	1.13In	1.45In
63<In≤160	2		
160<In≤400	3		
In>400	4		

Main Technical Specification



EPB-63M-DC Series Miniature Circuit Breaker	
Standard	IEC/EN 60898-2
Breaking capacity(kA)	6
Protection	Against overload and short circuit
Rated current(A) In	1,2,3,4,6,10,13,16,20,25,32,40,50,63
Rated voltage(V)	1P DC 120;2P,3P,4P DC 240
Operational volatge	Min.:12
Ambient temperature (°C)	-25~+40,Max.95%humidity
Thermal operating limit	1.13 xIn No tripping within an hour
	1.45 xIn Tripping within an hour
Magnertic operating	(7-15)xIn
Number of poles	1P,2P,3P and 4P
Type of trip	Thermal/ magnetic release
Terminal capacity	16mm² flexible or 25mm² rigid up to 25A ratings 25mm² flexible or 35mm² rigid from 32A to 63A ratings
Protection degree	IP20
Installation	Mounting on 35mm DIN rail
Width	17.8mm per pole
Certification	



EPB-63M-DC-1P





EPB-63M-DC-2P





EPB-63M-DC-3P



EPB-63M-DC-4P

EPB-63M-DC Series Miniature Circuit Breaker			
	Rated current(A)	DC type	Packing unit
 EPB-63M-DC-1P	1	EPB-63M/1-DC1	12
	2	EPB-63M/1-DC2	
	3	EPB-63M/1-DC3	
	4	EPB-63M/1-DC4	
	6	EPB-63M/1-DC6	
	10	EPB-63M/1-DC10	
	13	EPB-63M/1-DC13	
	16	EPB-63M/1-DC16	
	20	EPB-63M/1-DC20	
	25	EPB-63M/1-DC25	
	32	EPB-63M/1-DC32	
	40	EPB-63M/1-DC40	
	50	EPB-63M/1-DC50	
	63	EPB-63M/1-DC63	
 EPB-63M-DC-2P	1	EPB-63M/2-DC1	6
	2	EPB-63M/2-DC2	
	3	EPB-63M/2-DC3	
	4	EPB-63M/2-DC4	
	6	EPB-63M/2-DC6	
	10	EPB-63M/2-DC10	
	13	EPB-63M/2-DC13	
	16	EPB-63M/2-DC16	
	20	EPB-63M/2-DC20	
	25	EPB-63M/2-DC25	
	32	EPB-63M/2-DC32	
	40	EPB-63M/2-DC40	
	50	EPB-63M/2-DC50	
	63	EPB-63M/2-DC63	

EPB-63M-DC Series		Miniature Circuit Breaker	
	Rated current(A)	DC type	Packing unit
 EPB-63M-DC-3P	1	EPB-63M/3-DC1	4
	2	EPB-63M/3-DC2	
	3	EPB-63M/3-DC3	
	4	EPB-63M/3-DC4	
	6	EPB-63M/3-DC6	
	10	EPB-63M/3-DC10	
	13	EPB-63M/3-DC13	
	16	EPB-63M/3-DC16	
	20	EPB-63M/3-DC20	
	25	EPB-63M/3-DC25	
	32	EPB-63M/3-DC32	
	40	EPB-63M/3-DC40	
	50	EPB-63M/3-DC50	
	63	EPB-63M/3-DC63	
 EPB-63M-DC-4P	1	EPB-63M/4-DC1	3
	2	EPB-63M/4-DC2	
	3	EPB-63M/4-DC3	
	4	EPB-63M/4-DC4	
	6	EPB-63M/4-DC6	
	10	EPB-63M/4-DC10	
	13	EPB-63M/4-DC13	
	16	EPB-63M/4-DC16	
	20	EPB-63M/4-DC20	
	25	EPB-63M/4-DC25	
	32	EPB-63M/4-DC32	
	40	EPB-63M/4-DC40	
	50	EPB-63M/4-DC50	
	63	EPB-63M/4-DC63	

EPB-63M-DC Series

Miniature Circuit Breaker

Overcurrent protecting characteristics

NO.	Rated current of release(A)	Initial state	Test current	Specified time	Result to be obtained	Remarks
1	1-63	cold state	1.05In	t≤1h	Non-trip	
2	1-63	upon the previous test	1.30In	t<1h	trip	Setting current up to specified value steadily in 5s
3	In≤32 In>32	cold state	2.55In	1s<t<60s 1s<t<120s	trip	
	1-63	cold state	7In 15In	t≤0.1s t<0.1s	Non-trip trip	C type

Endurance(operations)

Category	Operations	Operation frequency	Rated current
Electrical endurance	4000	240/h	0.5-32
		120/h	40-63
Mechanical endurance	10000	240/h	0.5-63

Features

Much higher short circuit breaking capacity, Dual-connection convenient for both standard busbar and conductor connection. Improved safety of operators offered by special design from terminals. Much longer service life thanks to energy-storage operating mechanism.Enclosure and functional parts made from imported plastics with fame-retarcant, heat-resistant, and impulse-proof properties.Higher current-limiting capacity ensuring a cost-effective range of products. Different handle color for different rated current with contactor condition indicator.

Overall and mounting dimensions

Technical drawings of the EPB-63M-DC circuit breaker showing front, side, and top views with dimensions.

Front view dimensions (mm):

- Single pole: 17.8±0.2
- Two poles: 35.6±0.4
- Three poles: 53.4±0.6
- Four poles: 71.2±0.8


Top view dimensions (mm):

- Overall width: 81.5±0.3
- Terminal spacing: 35.5±0.15
- Mounting hole spacing: 45±0.15
- Terminal width: 50±0.15
- Overall depth: 76.6±0.35

EPR-63M-DC

EPF-32 Series



Fuse Holder and Links


Standard	IEC 60947-3
Description	Fuse switch disconnecter with LED indicator
Number of Poles	1P,2P,3P,4P
Fuse size	10X38
Rated operational current Ie(A)	2-32
Rated operational voltage Ue	AC 250V(1P)/AC 500V(2P-4P)
Rated insulation voltage(V)	AC 500
Rated impulse withstand voltage(kV)	4
Conditional short-circuit current(kA)	20
Utilization category with fuse	g G
Protection degree	IP20
Mounting method	Din rail installation
Certification	



EPF-32 Series

Fuse Holder and Links

	Code NO.	Fuse link size	Link current	Packing unit (holder)	Packing unit(link)
 EPF-32-1P	EPF-32-1 EPF-32X-1	10X38mm	2A	12	200
			4A		
			6A		
			10A		
			16A		
			20A		
			25A		
			32A		
 EPF-32-2P	EPF-32-2 EPF-32X-2	10X38mm	2A	6	200
			4A		
			6A		
			10A		
			16A		
			20A		
			25A		
			32A		
 EPF-32-3P	EPF-32-3 EPF-32X-3	10X38mm	2A	4	200
			4A		
			6A		
			10A		
			16A		
			20A		
			25A		
			32A		
 EPF-32-4P	EPF-32-4 EPF-32X-4	10X38mm	2A	3	200
			4A		
			6A		
			10A		
			16A		
			20A		
			25A		
			32A		



SGS1-DC Series Surge Protective Device	
Standard	EN50539-11
Protection	Protect electric system and on-loading electrical appliances from thunder and instantaneous over-voltage
Ambient temperature(°C)	-40 to +70
Number of poles	2P,3P
PV system operating voltage ucpv(V)	500/1000/1500
Standard discharge current(8/20μs) In(kA)	20
Maximum discharge current(8/20μs) Imax(kA)	40
Protection level Up(V)	≤2.5 Uc:DC 500 ≤3.5 Uc:DC 1000 ≤5.5 Uc:DC 1500
Response time (ns)	<25
On-Off indicating window	Green: normal function Red: functionless, immediate replacement required
Type of terminal	Pin type
Installation	Mounting on 35mm DIN rail
Certification	



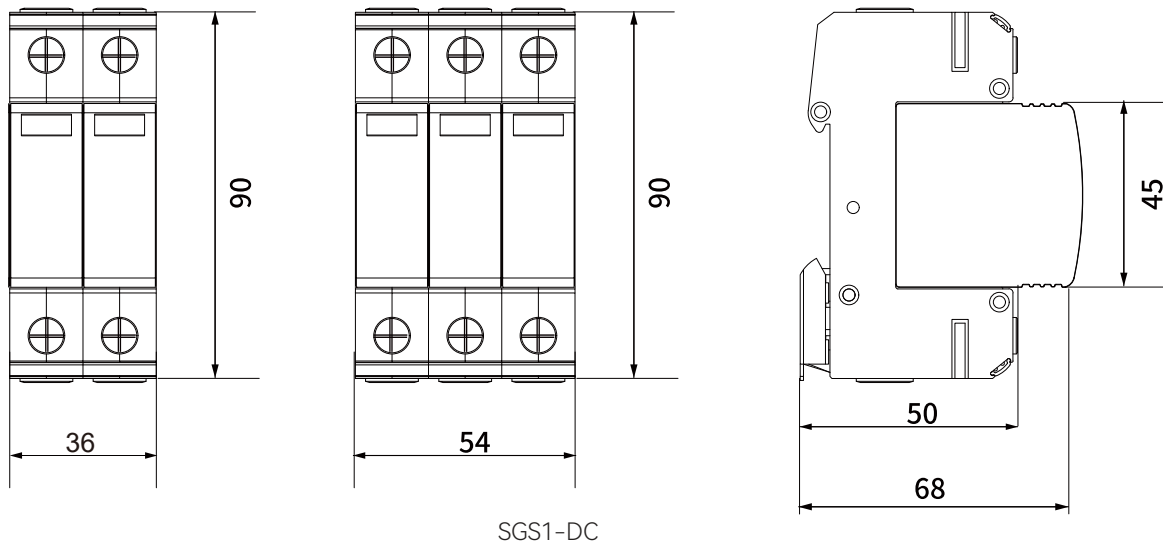
SGS1-DC/2




SGS1-DC/3

SGS1-DC Series				Surge Protective Device			
	Type	Poles	Uc(V~)	Discharge current		Up(kV)	Photovoltaic voltage
				Nominal(kA)	I _{max} .(kA)		
 SGS1-DC/2	SGS1-DC/2-500/40	2	500	20	40	≤2.5	500V
	SGS1-DC/2-1000/40	2	1000	20	40	≤3.5	1000V
 SGS1-DC/3	SGS1-DC/3-500/40	3	500	20	40	≤2.5	500V
	SGS1-DC/3-1000/40	3	1000	20	40	≤3.5	1000V
	SGS1-DC/3-1500/40	3	1500	20	40	≤5.5	1500V

Overall and mounting dimensions



DC Moulded Case Circuit Breaker	
Frame Size	 630
Model	SGM6 DC-630
Rated current(A) In	250,320,400,450,500,630
Number of poles	2
Standard	IEC60947-2
Reference temperature	+40°C
Rated operational voltage Ue(V)	1500
Rated insulation voltage Ui (V)	1600
Rated impluse withstand voltage Uimp (kV)	12
Rated ultimate short-circuit breaking capacity Icu(kA)	1500V/20KA、(T=10ms)
Rated service short-circuit breaking capacity Ics(kA)	1500V/20KA、(T=10ms); 750V/50KA、(T=15ms)
Single pole short-circuit breaker capacity Iit(kA)	2.5
Electrical Endurance	1000
Selectivity category	A
Arcing distance	≠100
Dimensions mm(LxWxH)	98X310X130

High Voltage AC Moulded Case Circuit Breaker		
Frame Size	 250	 630
Model	SGM6 HU-250	SGM6 HU-630
Rated current(A) In	100,125,140 180,200,225,250	400,500,630
Standard	IEC60947-2	
Reference temperature	40°C/55°C	
Rated operational voltage	800	
Rated insulation voltage Ui (V)	1000	
Rated impluse withstand voltage Uimp (kV)	8	
Breaking capacity level	M	M
Rated ultimate short-circuit breaking capacity Icu(kA)	25	36.5
Rated service short-circuit breaking capacity Ics(kA)	25	36.5
Mechanical Endurance Electrical Endurance	10000 5000	7000 2000
Arcing distance	≤35	≤35
Dimensions mm(LxWxH)	200X116X96	280X150X130