

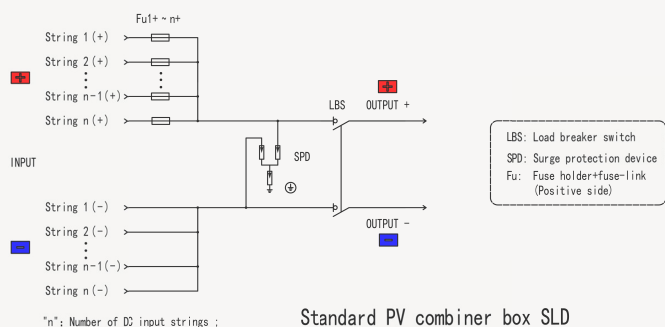
# PHOTOVOLTAIC COMBINER BOX PRODUCT



Combiner / Disconnect / Connector

LONGMAX TECHNOLOGY CO.,LTD

 **LONGMAX**  
Enjoy The Sunny Life



## DC1500V Standard PV Combiner Box

### About

The Longmax Standard PV Combiner Box is compliant with NEC 2017/2020 and is used to combine per string up to a 35A fuse-link(1500V-specific PV fuse,positive terminal),output circuit breaker rating 400A or 500A.

In a photovoltaic power generation system, a device that combines several PV string parallel for one output.Used between PV modules and inverter.

NEMA 4X enclosure ratings, meeting the outdoor installation and usage requirements.Installation and maintenance simple, convenient, it has a long service life.

### Features

- Finger-safe fuse holders
- 400A or 500A, 1500V load breaker switch
- Plated bus bars rated for 90°C, Cu/Al
- Breather vent reduces internal condensation
- Safety insulation shield covers all live components
- Designed for ease of cable installation
- 1500V-Specific PV SPD, Type I+II
- NEMA 4X lockable enclosure
- Standard 5-year warranty
- Compliant with NEC 2017/2020
- Meet UL1741 standard/compliance

### Flexible

- Pre-installed input glands or MC4 terminal connectors
- Pre-installed output/grounding glands
- Pre-installed breather valve
- Pre-installed mounted brackets
- Output Cu/Al bus bars:cable cross section area 500~1000AWG/kcmil, Easy 2-hole output plug access

### Certificate



### TECHNICAL DATASHEET

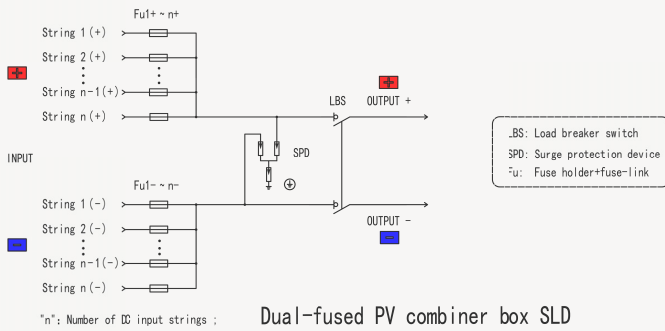
MODELS	LM-PVSZ-SG16-GNP <sup>(a)</sup>	LM-PVSZ-SG20-GNP <sup>(a)</sup>	LM-PVSZ-SG24-GNP <sup>(a)</sup>
Maximum system voltage	1500 V dc	1500 V dc	1500 V dc
Rated output current	320A	400A	480A
Rated input current per string	20A <sup>(b)</sup>	20A <sup>(b)</sup>	20A <sup>(b)</sup>
Maximum fuse	Up to 35A(positive side)	Up to 35A(positive side)	Up to 35A(positive side)
Maximum circuit breaker rating	400A ~ 500A (external handle)	400A ~ 500A (external handle)	400A ~ 500A (external handle)
Number of DC input circuits	16	20	24
Input cable	8~12 AWG	8~12 AWG	8~12 AWG
Output cable	2*(1*500~800)AWG/kcmil Cu or Al	2*(1*800~1000)AWG/kcmil Cu or Al	2*(1*800~1000)AWG/kcmil Cu or Al
Grounding cable	1/0~6 AWG	1/0~6 AWG	1/0~6 AWG
SPD	Type I+II,max:40KA, Iimp:6.25KA,Uc:1500V	Type I+II,max:40KA, Iimp:6.25KA,Uc:1500V	Type I+II,max:40KA, Iimp:6.25KA,Uc:1500V
Enclosure ratings	Type 4X	Type 4X	Type 4X
Maximum air ambient	50°C	50°C	50°C
Environment material	Steel plate/fiber glass	Steel plate/fiber glass	Steel plate/fiber glass
Enclosure size (inches,W * H * D)	30" * 30" * 9"/37" * 29" * 10" <sup>(c)</sup>	33" * 30" * 9"/37" * 29" * 10" <sup>(c)</sup>	37" * 30" * 9"/ 37" * 29" * 10" <sup>(c)</sup>
Weight(pounds)	~101 lbs/~197 lbs	~115 lbs/~112 lbs	~125 lbs/~121 lbs

(a) "PNP" is for plastic&non monitor&Positive fuse,"GNP" is for steel sheet&non monitor&Positive fuse.

(b) Module Isc(STC)+bifacial output-rearside power gain. Positive&Negative:1-string cable.

(c) Refer to the project drawings for the final dimensions.Please note dimensions and weight may vary for any custom solutions.





# DC1500V Dual-fused PV Combiner Box

## About

The Longmax Dual-fuse PV Combiner Box is compliant with NEC 2017/2020 and is used to combine per string up to a 35A fuse-link(1500V-specific PV fuse,both positive and negative terminal),output circuit breaker rating 400A or 500A. In a photovoltaic power generation system, a device that combines several PV string parallel for one output.Used between PV modules and inverter. NEMA 4X enclosure ratings, meeting the outdoor installation and usage requirements.Installation and maintenance simple, convenient, it has a long service life.

## Features

- Finger-safe fuse holders
- 400A or 500A, 1500V load breaker switch
- Plated bus bars rated for 90°C, Cu/Al
- Breather vent reduces internal condensation
- Safety insulation shield covers all live components
- Designed for ease of cable installation
- 1500V-Specific PV SPD, Type I+II
- NEMA 4X lockable enclosure
- Standard 5-year warranty
- Compliant with NEC 2017/2020
- Meet UL1741 standard/compliance

## Flexible

- Pre-installed input glands or MC4 terminal connectors
- Pre-installed output/grounding glands
- Pre-installed breather valve
- Pre-installed mounted brackets
- Output Cu/Al bus bars:cable cross section area 500~1000AWG/kcmil, Easy 2-hole output plug access

## Certificate

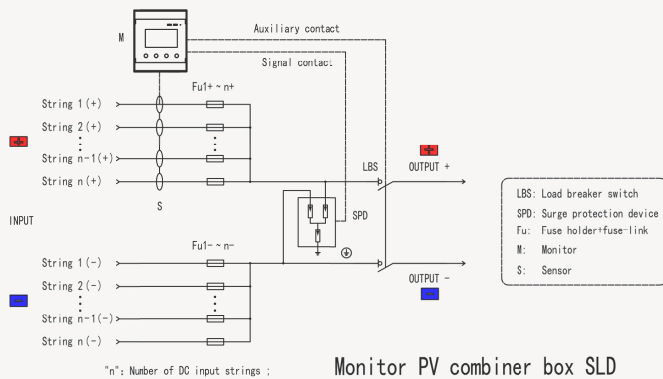


## TECHNICAL DATASHEET

MODELS	LM-PVSZ-DG16-GN <sup>(a)</sup>	LM-PVSZ-DG20-GN <sup>(a)</sup>	LM-PVSZ-DG24-GN <sup>(a)</sup>
Maximum system voltage	1500 V dc	1500 V dc	1500 V dc
Rated output current	320A	400A	480A
Rated input current per string	20A <sup>(b)</sup>	20A <sup>(b)</sup>	20A <sup>(b)</sup>
Maximum fuse	Up to 35A	Up to 35A	Up to 35A
Maximum circuit breaker rating	400A ~ 500A (external handle)	400A ~ 500A (external handle)	400A ~ 500A (external handle)
Number of DC input circuits	16	20	24
Input cable	8~12 AWG	8~12 AWG	8~12 AWG
Output cable	2*(1*500~800)AWG/kcmil Cu or Al	2*(1*800~1000)AWG/kcmil Cu or Al	2*(1*800~1000)AWG/kcmil Cu or Al
Grounding cable	1/0~6 AWG	1/0~6 AWG	1/0~6 AWG
SPD	Type I+II,max:40KA, Iimp:6.25KA,Uc:1500V	Type I+II,max:40KA, Iimp:6.25KA,Uc:1500V	Type I+II,max:40KA, Iimp:6.25KA,Uc:1500V
Enclosure ratings	Type 4X	Type 4X	Type 4X
Maximum air ambient	50°C	50°C	50°C
Environment material	Steel plate/fiber glass	Steel plate/fiber glass	Steel plate/fiber glass
Enclosure size (inches,W * H * D)	30" * 30" * 9"/37" * 29" * 10" <sup>(c)</sup>	33" * 30" * 9"/37" * 29" * 10" <sup>(c)</sup>	37" * 30" * 9"/37" * 29" * 10" <sup>(c)</sup>
Weight(pounds)	~110 lbs/~106 lbs	~121 lbs/~118 lbs	~132 lbs/~127 lbs

(a) "PN" is for plastic&non monitor,"GN" is for steel sheet&non monitor.  
 (b) Module I<sub>sc</sub>(STC)+bifacial output-rearside power gain. Positive&Negative:1-string cable.  
 (c) Refer to the project drawings for the final dimensions.Please note dimensions and weight may vary for any custom solutions.





## DC1500V Monitor PV Combiner Box

### About

The Longmax Monitor PV Combiner Box is compliant with NEC 2017/2020 and is used to combine per string up to a 35A fuse-link(1500V-specific PV fuse,both positive and negative terminal),output circuit breaker rating 400A or 500A.

In a photovoltaic power generation system, a device that combines several PV string parallel for one output.Used between PV modules and inverter.

NEMA 4X enclosure ratings, meeting the outdoor installation and usage requirements.Installation and maintenance simple, convenient, it has a long service life.

### Features

Including all features of "dual-fused PV Combiner Box"

### Monitor

- Per string current and bus voltage monitoring
- Power, electrical energy monitoring
- Normal and failed status of SPD
- On and off status of output LBS
- Product internal temperature
- RS 485 communication port/Modbus protocol
- Self-powered,Input voltage:450~1500 Vdc
- Input rated current range:0~20A
- Wireless communication(Optional)

### Flexible

- Pre-installed input glands or MC4 terminal connectors
- Pre-installed output/grounding glands
- Pre-installed breather valve
- Pre-installed mounted brackets
- Output Cu/Al bus bars:cable cross section area 500~1000AWG/kcmil, Easy 2-hole output plug access

### Certificate



### TECHNICAL DATASHEET

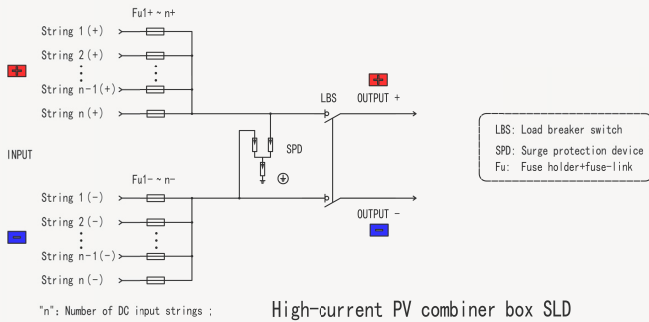
MODELS	LM-PVSZ-MG16-G <sup>(a)</sup>	LM-PVSZ-MG20-G <sup>(a)</sup>	LM-PVSZ-MG24-G <sup>(a)</sup>
Maximum system voltage	1500 V dc	1500 V dc	1500 V dc
Rated output current	320A	400A	480A
Rated input current per string	20A <sup>(b)</sup>	20A <sup>(b)</sup>	20A <sup>(b)</sup>
Maximum fuse	Up to 35A	Up to 35A	Up to 35A
Maximum circuit breaker rating	400A ~ 500A (external handle)	400A ~ 500A (external handle)	400A ~ 500A (external handle)
Number of DC input circuits	16	20	24
Input cable	8~12 AWG	8~12 AWG	8~12 AWG
Output cable	2*(1*500~800)AWG/kcmil Cu or Al	2*(1*800~1000)AWG/kcmil Cu or Al	2*(1*800~1000)AWG/kcmil Cu or Al
Grounding cable	1/0~6 AWG	1/0~6 AWG	1/0~6 AWG
SPD	Type I+II,max:40KA, Iimp:6.25KA,Uc:1500V	Type I+II,max:40KA, Iimp:6.25KA,Uc:1500V	Type I+II,max:40KA, Iimp:6.25KA,Uc:1500V
Enclosure ratings	Type 4X	Type 4X	Type 4X
Maximum air ambient	50°C	50°C	50°C
Environment material	Steel plate	Steel plate	Steel plate
Enclosure size (inches,W * H * D)	35" * 24" * 9" (c)	39" * 24" * 9" (c)	43" * 24" * 9" (c)
Weight(pounds)	~125 lbs	~132 lbs	~143 lbs

(a) "P" is for plastic&monitor,"G" is for steel sheet&monitor.

(b) Module Isc(STC)+bifacial output-rearside power gain. Positive&Negative:1-string cable.

(c) Refer to the project drawings for the final dimensions.Please note dimensions and weight may vary for any custom solutions.





# DC1500V High-Current PV Combiner Box

## About

The Longmax High Current PV Combiner Box is compliant with NEC 2017/2020 and is used to combine multiple strings per circuit up to a 65A fuse-link(1500V-specific PV fuse,both positive and negative terminal),output circuit breaker rating 400A or 500A. NEMA 4X enclosure ratings, meeting the outdoor installation and usage requirements.Installation and maintenance simple, convenient, it has a long service life.

## Features

- Finger-safe fuse holders
- 400A or 500A, 1500V load breaker switch
- Plated bus bars rated for 90°C, Cu/Al
- Breather vent reduces internal condensation
- Safety insulation shield covers all live components
- Designed for ease of cable installation
- 1500V-Specific PV SPD, Type I+II
- NEMA 4X lockable enclosure
- Standard 5-year warranty
- Compliant with NEC 2017/2020
- Meet UL1741 standard/compliance

## Flexible

- Pre-installed input glands or MC4 terminal connectors
- Pre-installed output/grounding glands
- Pre-installed breather valve
- Pre-installed mounted brackets
- Output Cu/Al bus bars:cable cross section area 500~1000AWG/kcmil, Easy 2-hole output plug access

## Certificate

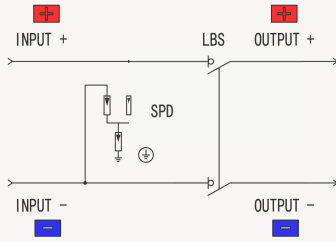


## TECHNICAL DATASHEET

MODELS	LM-PVSZ-HG8-GN <sup>(a)</sup>	LM-PVSZ-HG10-GN <sup>(a)</sup>	LM-PVSZ-HG12-GN <sup>(a)</sup>
Maximum system voltage	1500 V dc	1500 V dc	1500 V dc
Rated output current	320A	400A	480A
Rated input current per string	40A <sup>(b)</sup>	40A <sup>(b)</sup>	40A <sup>(b)</sup>
Maximum fuse	Up to 65A	Up to 65A	Up to 65A
Maximum circuit breaker rating	400A(external handle)	500A(external handle)	500A(external handle)
Number of DC input circuits	8	10	12
Input cable	1~8 AWG	1~8 AWG	1~8 AWG
Output cable	2*(1*500~800)AWG/kcmil Cu or Al	2*(1*800~1000)AWG/kcmil Cu or Al	2*(1*800~1000)AWG/kcmil Cu or Al
Grounding cable	1/0~6 AWG	1/0~6 AWG	1/0~6 AWG
SPD	Type I+II,max:40KA, Iimp:6.25KA,Uc:1500V	Type I+II,max:40KA, Iimp:6.25KA,Uc:1500V	Type I+II,max:40KA, Iimp:6.25KA,Uc:1500V
Enclosure ratings	Type 4X	Type 4X	Type 4X
Maximum air ambient	50°C	50°C	50°C
Environment material	Steel plate/fiber glass	Steel plate/fiber glass	Steel plate/fiber glass
Enclosure size (inches,W * H * D)	30" * 30" * 9"/37" * 29" * 10" <sup>(c)</sup>	30" * 30" * 9"/37" * 29" * 10" <sup>(c)</sup>	33" * 30" * 9"/37" * 29" * 10" <sup>(c)</sup>
Weight(pounds)	~99 lbs/~95 lbs	~110 lbs/~106 lbs	~121 lbs/~115 lbs

(a) "PN" is for plastic&non monitor,"GN" is for steel sheet&non monitor.  
 (b) Module Isc(STC)+bifacial output-rearside power gain. Positive&Negative:2-string harness.  
 (c) Refer to the project drawings for the final dimensions.Please note dimensions and weight may vary for any custom solutions.





LBS: Load breaker switch  
SPD: Surge protection device

Disconnect box SLD



## DC1500V Disconnect Box

### About

The Longmax Disconnect Box is compliant with NEC 2017/2020 and is used to disconnect inverter input circuits; circuit breaker rating 400A or 500A can be customized to fit the solar custom' s specific needs.

Disconnect Box can service a single inverter with one input and help meet NEC disconnect servicing requirements..

NEMA 4X enclosure ratings, meeting the outdoor installation and usage requirements. Installation and maintenance simple, convenient, it has a long service life.

### Features

- 400A or 500A, 1500V load breaker switch
- Plated bus bars rated for 90°C, Cu/Al
- Breather vent reduces internal condensation
- Safety insulation shield covers all live components
- Designed for ease of cable installation
- 1500V-Specific PV SPD, Type I+II
- NEMA 4X lockable enclosure
- Standard 5-year warranty
- Compliant with NEC 2017/2020
- Meet UL1741 standard/compliance

### Flexible

- Pre-installed input/output/grounding glands
- Pre-installed breather valve
- Pre-installed mounted brackets
- Floating/Bi-polar configurations
- Output Cu/Al bus bars: cable cross section area 500~1000AWG/kcmil, Easy 2-hole output plug access
- Dual output lug(options)

### TECHNICAL DATASHEET

MODELS	LM-PVNZ-DB-G1-4	LM-PVNZ-DB-G1-5
Maximum system voltage	1500 V dc	1500 V dc
Rated output current	320A	400A
Rated input current per string	320A	400A
Maximum fuse	400A(external handle)	500A(external handle)
Maximum circuit breaker rating	1	1
Number of DC input circuits	1	1
Input cable	2*(1*500~800)AWG/kcmil Cu or Al	2*(1*800~1000)AWG/kcmil Cu or Al
Output cable	2*(1*500~800)AWG/kcmil Cu or Al	2*(1*800~1000)AWG/kcmil Cu or Al
Grounding cable	1/0~6 AWG	1/0~6 AWG
SPD	Type I+II,max:40KA, Iimp:6.25KA,Uc:1500V	Type I+II,max:40KA, Iimp:6.25KA,Uc:1500V
Enclosure ratings	Type 4X	Type 4X
Maximum air ambient	50°C	50°C
Environment material	Steel plate/fiber glass	Steel plate/fiber glass
Enclosure size (inches,W * H * D)	24" * 28" * 9"/23" * 29" * 10" (a)	24" * 28" * 9"/23" * 29" * 10" (a)
Weight(pounds)	~78 lbs/~75 lbs	~78 lbs/~75 lbs

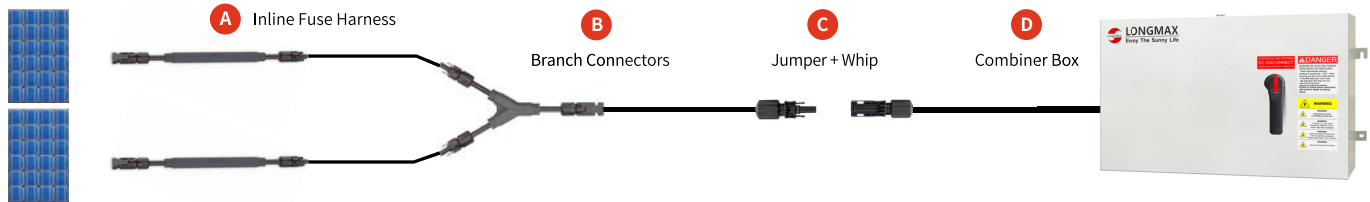
(a) Refer to the project drawings for the final dimensions. Please note dimensions and weight may vary for any custom solutions. Contact longmax for details.

### Certificate



# DC1500V Wire Solutions

LONGMAX Wire Solutions are your link to smarter, faster solar projects so you can complete more projects and maximize financial value. Our team works as an extension of yours – applying our unrivaled knowledge of the PV project lifecycle to design custom wire solutions that tackle complexity upfront delivering best in class lead times and simple on-site execution.



- Inline fuse harness with branch connectors that are customized per your project specs
- Source circuits cut to length per wire schedule

- Factory installed whips
- Built to factory-controlled tolerances for higher quality and longevity

## Features

- ✓ Listed to UL-9703
- ✓ Prefabricated manufacturing allows for plug and play connection in the field requiring less labor and time on site
- ✓ Reliable and trustworthy service
- ✓ Flexibility at scale
- ✓ Unique customer needs met without sacrificing quality and timeliness
- ✓ High quality & longevity
- ✓ Unrivaled knowledge of the PV project lifecycle

## Inline Fuse Harness

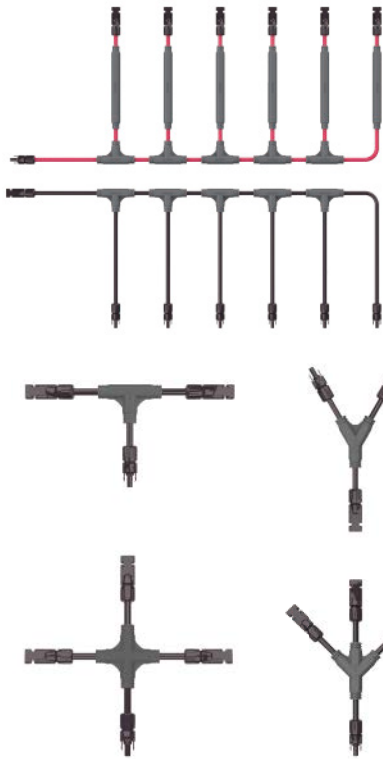


LMX Inline Fuse Harness is made of high-quality weather-resistant materials and mold-sealed manufacturing process to ensure long-term reliability. They can be installed on site. Low contact resistance and high current transfer capability ensure high production efficiency. With IP68 water proof rating, it can be used in a wide operating temperature range.

## Technical Data

Nominal Voltage	1500V DC
Interrupting Ratings	30kA
Fuse-link	Standard Ref.to: UL248-19 , IEC 60269-6
Insulation Material	Special-Hotmelt, UV-stable, IP68 (please take note of connector's IP-protection)
Flame Class	Self-extinguishing UL94-VI
Working Enviroment	Temperature range: -40C~ +60'C, Humidity range: 5% ~95%
Over Voltage Category/Pollution Degree	CATIII/3
Safety Degree	II

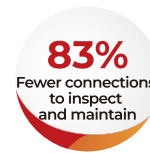
## Branch Connectors



We offer individual cable solutions for professional and safe cabling.  
Pre-assembled solutions ensure consistently high levels of quality and speed up assembly.

### Features

- ✓ Hi-tech sealing technology
- ✓ Appearance patent
- ✓ TPV material
- ✓ IP68
- ✓ Easy to install
- ✓ Reduce material consumption & labor costs
- ✓ ETL certified to UL9703, cert.No.: 5024311



## Jumper + Whip



Jumper



Whip



### Characteristics

Cable Insulation Material	Double XLPO (Optional)
Cable Conductor	Bare or tinned copper, Aluminum
Connector Material	PC/PA/PPE
Rated Current	TUV30A/UL 20A
Rated Voltage	1000V ~ 1500V DC
Contact Resistance	≤0.5mΩ
Ambient Temp	-40°C~+90°C
Plug Force	≤50N
Withdraw Force	≥50N
IP Level	IP68
Safety Class	II
Flame Class	UL94-VO
Cable Size	Solar cable 4mm <sup>2</sup> /2AWG 6mm <sup>2</sup> /10AWG

Remark : Customized length is acceptable.



**ENJOY THE *SUNNY LIFE***

**LONGMAX TECHNOLOGY CO.,LTD.**

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