

MARSRIVA

Solar Inverter

Clean Energy



MARSRIVA Technology Co., Ltd.

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Off-Grid Solar Inverter

Model: MR-SPF1200 / 2500 / 3000 / 5000

Features

- Pure sine wave solar inverter
- Wide PV input voltage range
- Maximum charging current of 100A
- Reserved communication port for BMS
- Built-in anti-dust kit
- Battery equalization technology optimizes battery performance and extends lifecycle



Specification

MODEL	MR-SPF1200	MR-SPF2500	MR-SPF3000	MR-SPF5000
RATED POWER	1200VA / 1200W	2500VA / 2500W	3000VA / 3000W	5000VA / 5000W
INPUT				
Nominal Input Voltage	230VAC			
Input Voltage Range	170 – 280VAC (For PC); 90 – 280VAC (For Home Appliances)			
Nominal Input Frequency	50Hz / 60Hz (Auto sensing)			
OUTPUT				
Output Voltage Regulation	230VAC ± 5% (50Hz)			
Waveform	Pure sine wave			
Transfer Time	10ms (For PC); 20ms (For Home Appliances)			
Surge Power	2400VA	5000VA	6000VA	10000VA
Peak Efficiency	95% at AC mode, 93% at Battery mode			
BATTERY				
Nominal Battery Voltage	12VDC	24VDC	24VDC	48VDC
Bulk Charging Voltage	14.6VDC (Flooded Battery); 14.1VDC (AGM/GEL)			
Floating Charging Voltage	13.5VDC	27VDC	27VDC	54VDC
Overcharge Protection	16VDC	32VDC	32VDC	63VDC
AC CHARGING & MPPT SOLAR CHARGING				
AC Charging Algorithm	3 step			
Max. PV Array Power	2000W	3000W	4000W	5000W
Max. PV Input Current	13A			
PV Array MPPT Voltage Range	60 - 300VDC	60 - 400VDC	60 - 450VDC	120 - 450VDC
Max. PV Array Open Circuit Voltage	350VDC	450VDC	450VDC	500VDC
AC Charging Current	80A Max. (@Nominal Input 230VAC)		100A Max. (@Nominal Input 230VAC)	
Max Charging Current	80A (AC charging plus solar charging)		100A (AC charging plus solar charging)	
PHYSICAL & COMMUNICATION				
Dimension, D x W x H (mm)	90 × 288 × 357		110 × 288 × 390	
Net Weight (kg)	6.5	7.2	9	10
Communication Interface	RS232		RS232 / RS485 optional WiFi	
ENVIRONMENT				
Humidity	5% to 95% Relative Humidity (Non-condensing)			
Operating Temperature	-10°C – 50°C			
Storage Temperature	-15°C – 60°C			

Specifications are subject to change without notice, all product drawings are for reference only.

Off-Grid Solar Inverter

Model: MR-SPF4000 / 6000 TWIN (Version3)

Features

- Dual outputs for intelligent load management
- Maximum PV input current of 27A
- Detachable LCD control module with various communication options
- Reserved communication port for BMS
- Built-in WiFi for mobile monitoring (App available)
- USB On-the-Go function supported
- User-friendly LCD operation
- Replaceable fan design for ease of maintenance



Specifications

MODEL	MR-SPF4000 TWIN (Version3)	MR-SPF6000 TWIN (Version3)
RATED POWER	4000VA / 4000W	6000VA / 6000W
INPUT		
Nominal Input Voltage	230VAC	
Input Voltage Range	170 – 280VAC (For PC); 90 – 280VAC (For Home Appliances)	
Nominal Input Frequency	50Hz / 60Hz (Auto sensing)	
OUTPUT		
Output Voltage Regulation	230VAC ± 5% (50Hz)	
Waveform	Pure sine wave	
Transfer Time	10ms (For PC); 20ms (For Home Appliances)	
Surge Power	8000 VA	12000 VA
Peak Efficiency	95% at AC mode, 93% at Battery mode	
BATTERY		
Bulk Charging Voltage	29.2VDC (Flooded Battery); 28.2VDC (AGM/GEL)	
Nominal Battery Voltage	24VDC	48VDC
Floating Charging Voltage	27VDC	54VDC
Overcharge Protection	33VDC	63VDC
AC CHARGING & MPPT SOLAR CHARGING		
AC Charging Algorithm	3 step	
Max. PV Input Current	27A	
Max. PV Array Power	4000W	6000W
PV Array MPPT Voltage Range	60VDC – 450VDC	
Max. PV Array Open Circuit Voltage	500VDC	
AC Charging Current	100A Max. (@Nominal Input 230VAC)	
Max Charging Current	120A (AC charging plus solar charging)	
PHYSICAL & COMMUNICATION		
Dimension, D x W x H (mm)	115 x 300 x 435	
Net Weight (kg)	9	10
WiFi	2.4GHz (EB-WF03-02)	
Communication Interface	USB / RS232 / RS485 / WiFi / Dry-contact	
ENVIRONMENT		
Humidity	5% to 95% Relative Humidity (Non-condensing)	
Operating Temperature	-10°C – 50°C	
Storage Temperature	-15°C – 60°C	

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Off-Grid Solar Inverter

Model: MR-SPF4000 / 6000 TWIN (Version4)

Features

- Dual outputs for intelligent load management
- Maximum PV input current of 27A
- Wide PV input voltage range
- Reserved communication port for BMS
- Built-in WiFi for mobile monitoring (App available)
- USB On-the-Go function supported
- Customizable status LED ring with RGB lights
- Touchable button with large 4.3" colored LCD
- Data log events stored in the inverter directly
- Built-in anti-dust kit



Specifications

MODEL	MR-SPF4000 TWIN (Version4)	MR-SPF6000 TWIN (Version4)
RATED POWER	4000VA / 4000W	6000VA / 6000W
INPUT		
Nominal Input Voltage	230VAC	
Input Voltage Range	170 – 280 VAC (For Personal Computers); 90 – 280 VAC (For Home Appliances)	
Nominal Input Frequency	50Hz / 60Hz (Auto sensing)	
OUTPUT		
Output Voltage Regulation	230VAC ± 5%	
Waveform	8000VA	12000VA
Transfer Time	90% – 93%	
Surge Power	10 ms (For Personal Computers) / 20 ms (For Home Appliances)	
Peak Efficiency	Pure sine wave	
BATTERY		
Nominal Battery Voltage	24VDC	48VDC
Bulk Charging Voltage	29.2VDC (Flooded Battery); 28.2VDC (AGM/GEL)	
Floating Charging Voltage	27VDC	54VDC
Overcharge Protection	33VDC	63VDC
AC CHARGING & MPPT SOLAR CHARGING		
AC Charging Algorithm	MPPT	
Max. PV Array Power	5000W	6000W
Max. PV Input Current	27A	
PV Array MPPT Voltage Range	60 – 450VDC	
Max. PV Array Open Circuit Voltage	500VDC	
AC Charging Current	100A Max. (@Nominal Input 230VAC)	
Max Charging Current	120A (AC charging plus solar charging)	
PHYSICAL & COMMUNICATION		
Dimension, D x W x H (mm)	119 x 313.6 x 457.5	
Net Weight (kg)	10	12
Communication Interface	USB / RS232 / RS485 / WiFi / Dry-contact	
ENVIRONMENT		
Humidity	5% to 95% Relative Humidity (Non-condensing)	
Operating Temperature	-10°C – 50°C	
Storage Temperature	-15°C – 60°C	

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Off-Grid Solar Inverter

Model: MR-SPF6000K / 6200K

Features

- Dual outputs for intelligent load management
- 0ms transfer time to protect mission-critical loads such as servers and ATMs
- Wide PV input voltage range
- Maximum PV input current of 27A
- Selectable high power charging current
- Configurable AC/Solar input priority via LCD setting
- Detachable LCD control module with various communication options
- Reserved communication port for BMS
- Built-in WiFi for mobile monitoring (App available)
- USB On-the-Go function supported
- Parallel operation up to 9 units



Specifications

MODEL	MR-SPF6000K	MR-SPF6200K
RATED POWER	6000VA / 6000W	6200VA / 6200W
PARALLEL CAPABILITY	Up to 9 units	
INPUT		
Nominal Input Voltage	230VAC	
Input Voltage Range	110 – 280VAC	
Nominal Input Frequency	50Hz / 60Hz (Auto sensing)	
OUTPUT		
Output Voltage Regulation	230VAC ± 5% (50Hz or 60Hz)	
Waveform	Pure sine wave	
Transfer Time	AC mode to Battery mode 0ms; Inverter to Bypass 4ms	
Surge Power	12000VA for 5s	
Peak Efficiency	93% at AC mode, 92% at Battery mode	
BATTERY		
Nominal Battery Voltage	48VDC	
Bulk Charging Voltage	58.4VDC (Flooded Battery); 56.4VDC (AGM/GEL)	
Floating Charging Voltage	54VDC	
Overcharge Protection	66VDC	
AC CHARGING & MPPT SOLAR CHARGING		
AC Charging Algorithm	3 step	
Max. PV Array Power	6000W	
Max. PV Input Current	27A	
PV Array MPPT Voltage Range	120VDC – 430VDC	
Max. PV Array Open Circuit Voltage	500VDC	
AC Charging Current (@Nominal Input Voltage)	Default: 60A, Max: 120A	
Solar Charging Current	120A Max.	
PHYSICAL & COMMUNICATION		
Dimension, D x W x H (mm)	140 × 295 × 468	
Net Weight (kg)	12	
Communication Interface	USB, RS232, Dry-contact, BMS, WiFi	
ENVIRONMENT		
Humidity	5% to 95% Relative Humidity (Non-condensing)	
Operating Temperature	-10°C – 50°C	
Storage Temperature	-15°C – 60°C	

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Off-Grid Solar Inverter

Model: MR-SPF8000 / 11000 (Version 1)

Features

- Dual outputs for intelligent load management
- Wide PV input voltage range
- Maximum PV input current of 27A
- Selectable high power charging current
- Reserved communication port for BMS
- Built-in WiFi for mobile monitoring (App available)
- Compatible with Utility Mains or generator input
- USB On-the-Go function supported
- Parallel operation up to 6 units
- Status indication with RGB lights
- Replaceable fan design for ease of maintenance
- Built-in anti-dust kit
- Optional DC output for DC fan, LED bulb, router and so on (only for 8K model)



Specifications

MODEL	MR-SPF8000 (Version 1)	MR-SPF11000 (Version 1)
RATED POWER	8000VA / 8000W	11000VA / 11000W
PARALLEL CAPABILITY	YES, 6 units	
INPUT		
Voltage	230VAC	
Selectable Voltage Range	170 – 280 VAC (For Personal Computers) / 90 – 280 VAC (For Home Appliances)	
Frequency Range	50Hz / 60Hz (Auto sensing)	
OUTPUT		
AC Voltage Regulation (Batt. Mode)	230VAC ± 10%	
Surge Power	16000VA	22000VA
Efficiency (Peak)	93%	
Transfer Time	10 ms (For Personal Computers) / 20 ms (For Home Appliances)	
Waveform	Pure sine wave	
Optional DC Voltage	12VDC ± 5%, 100W	N / A
BATTERY		
Battery Voltage	48VDC	48VDC
Floating Charge Voltage	54VDC	54VDC
Overcharge Protection	66VDC	63VDC
SOLAR CHARGER & AC CHARGER		
Solar Charger type	MPPT	
Maximum PV Array Power	8000W (4000*2)	11000W (5500*2)
MPPT Range @ Operating Voltage	90 – 450VDC	90 – 450VDC
Maximum PV Array Open Circuit Voltage	500VDC	500VDC
Maximum PV Input Current	27A x 2 (MAX 40A)	
Maximum Solar Charge Current	120A	150A
Maximum AC Charge Current	120A	150A
Maximum Charge Current	120A	150A
PHYSICAL		
Dimension, D x W x H (mm)	147.4 x 432.5 x 553.6	
Net Weight (kgs)	18.4	
WiFi frequency	2.4GHz	
Communication Interface	USB / RS232 / RS485 / WiFi / Dry-contact	
ENVIRONMENT		
Humidity	5% – 95% Relative Humidity (Non-condensing)	
Operating Temperature	-10°C – 50°C	
Storage Temperature	-15°C – 60°C	

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Off-Grid Solar Inverter

Model: MR-SPF8000 / 11000 (Version 2)

Features

- Dual outputs for intelligent load management
- Wide PV input voltage range
- Maximum PV input current of 27A
- Selectable high power charging current
- Reserved communication port for BMS
- Built-in WiFi for mobile monitoring (App available)
- Compatible with Utility Mains or generator input
- USB On-the-Go function supported
- Parallel operation up to 6 units
- Configurable AC/PV output usage timer and prioritization
- Status indication with RGB lights
- Replaceable fan design for ease of maintenance
- Built-in anti-dust kit
- Optional DC output for DC fan, LED bulb, router and so on (only for 8K model)



Specifications

MODEL	MR-SPF8000 (Version 2)	MR-SPF11000 (Version 2)
RATED POWER	8000VA / 8000W	11000VA / 11000W
PARALLEL CAPABILITY	YES, 6 units	
INPUT		
Voltage	230VAC	
Selectable Voltage Range	170 – 280 VAC (For Personal Computers) / 90 – 280 VAC (For Home Appliances)	
Frequency Range	50Hz / 60Hz (Auto sensing)	
OUTPUT		
AC Voltage Regulation (Batt. Mode)	230VAC ± 10%	
Surge Power	16000VA	22000VA
Efficiency (Peak)	93%	
Transfer Time	10 ms (For Personal Computers) / 20 ms (For Home Appliances)	
Waveform	Pure sine wave	
Optional DC Voltage	12VDC ± 5%, 100W	
BATTERY		
Battery Voltage	48VDC	48VDC
Floating Charge Voltage	54VDC	54VDC
Overcharge Protection	66VDC	63VDC
SOLAR CHARGER & AC CHARGER		
Solar Charger type	MPPT	
Maximum PV Array Power	8000W (4000*2)	11000W (5500*2)
MPPT Range @ Operating Voltage	90 – 450VDC	90 – 450VDC
Maximum PV Array Open Circuit Voltage	500VDC	500VDC
Maximum PV Input Current	27A x 2 (MAX 40A)	
Maximum Solar Charge Current	150A	150A
Maximum AC Charge Current	150A	150A
Maximum Charge Current	150A	150A
PHYSICAL		
Dimension, D x W x H (mm)	158.4 x 503.6 x 530.8	
Net Weight (kgs)	20	
WiFi frequency	2.4GHz	
Communication Interface	USB / RS232 / RS485 / WiFi / Dry-contact	
ENVIRONMENT		
Humidity	5% – 95% Relative Humidity (Non-condensing)	
Operating Temperature	-10°C – 50°C	
Storage Temperature	-15°C – 60°C	

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