

# SOFAR

SOFAR

ENERGY TO POWER  
YOUR LIFE

PRODUCT *catalogue*

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Shenzhen SOFARSOLAR Co., Ltd.

Version No.: SOFARSOLAR Catalogue\_EN\_202309\_V5.3  
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## SOFAR INTRODUCTION

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SOFAR is a global leading supplier of solar PV and energy storage solutions and committed to be the leader of digital energy solutions. SOFAR supports the transition to renewable energy through a comprehensive portfolio including PV inverters range from 1 kW to 255 kW, hybrid inverters range from 3 kW to 20 kW, battery storage system and smart energy management solutions for residential, commercial & industrial, and utility-scale applications.

Founded in 2013, SOFAR has always insisted on independent innovation and established a global R&D network with three R&D centers. Over 300 employees of its workforce is assigned to R&D, ensuring continuous innovation in order to remain a pioneer in the PV and energy storage industry.

SOFAR has implemented a globalization strategy since its establishment and now has two global manufacturing bases with an annual production capacity of 10 GW PV and storage inverters, and 1 GWh batteries. Its extensive service network contains over 20 branch offices worldwide. SOFAR offices can now be found in the UK, Poland, Germany, South Korea, UAE, Pakistan, Australia, etc. By the end of 2021, SOFAR had shipped over 1 million inverters to more than 90 countries.

As the world's fastest-growing solar energy brand, SOFAR stands firmly among the mainstream solar energy brands with a compound annual growth rate of 86% from 2019 till 2021. SOFAR has received many awards for its state-of-the-art solutions, including the China "CQC" certification, the Chinese Top 5 String Inverter Brand, and the TOP 5 Global Hybrid Inverter Manufacturer. SOFAR has also been entitled by EuPD as TOP Brand PV Inverter in India, Poland, the U.K., Italy and Brazil.

Looking forward, SOFAR believes technology drives the green energy transition. Through independent, continuous innovation and state-of-the-art PV solar and energy storage solutions, SOFAR aims to play a key role in this global transition.

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## PRODUCT PORTFOLIO

### Single-phase Inverter

01-07

- SOFAR 1100TL-G3 / 1600TL-G3 / 2200TL-G3 / 2700TL-G3 / 3000TL-G3 / 3300TL-G3
  - SOFAR 3KTLM-G3 / 3.6KTLM-G3-J / 3.6KTLM-G3 / 4KTLM-G3 / 4.6KTLM-G3 / 5KTLM-G3 / 5KTLM-G3-A / 6KTLM-G3
  - SOFAR 7KTLM-G3 / 7.7KTLM-G3 / 8KTLM-G3 / 9KTLM-G3 / 10KTLM-G3 / 10.5KTLM-G3
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### Three-phase Inverter

09-23

- SOFAR 3.3KTLX-G3 / 4.4KTLX-G3 / 5.5KTLX-G3 / 6.6KTLX-G3 / 8.8KTLX-G3 / 11KTLX-G3 / 10KTLX-G3-A / 12KTLX-G3
  - SOFAR 15KTLX-G3 / 17KTLX-G3 / 20KTLX-G3 / 22KTLX-G3 / 24KTLX-G3
  - SOFAR 25KTLX-G3 / 30KTLX-G3 / 33KTLX-G3 / 36KTLX-G3 / 40KTLX-G3 / 45KTLX-G3 / 50KTLX-G3
  - SOFAR 60KTLX2-G3 / 80KTLX-G3
  - SOFAR 100KTLX-G4 / 110KTLX-G4 / 125KTLX-G4
  - SOFAR 255KTL-HV
  - SOFAR 350KTLX0
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### Energy Storage System

25-43

- ME 3000SP
  - ME 5KTL-3PH / 6KTL-3PH / 8KTL-3PH / 10KTL-3PH / 15KTL-3PH / 20KTL-3PH
  - HYD 3000-EP / 3680-EP / 4000-EP / 4600-EP / 5000-EP / 5500-EP / 6000-EP
  - HYD 5KTL-3PH / 6KTL-3PH / 8KTL-3PH / 10KTL-3PH / 10KTL-3PH-A / 15KTL-3PH / 20KTL-3PH
  - GTX3000-H4 / H5 / H6 / H7 / H8 / H9 / H10
  - GTX5000-PRO
  - BTS E5-DS5 / E10-DS5 / E15-DS5 / E20-DS5
  - SOFAR PowerAll : ESI 3K-S1 / 3.68K-S1 / 4K-S1 / 4.6K-S1 / 5K-S1 / 5K-S1-A / 6K-S1
  - GTX5000S
-

**Micro Inverter Energy Storage Solution**

45-55

- MR500
- MR600 / MR800 / MR1000
- MR1600 / MR2000 / MR2400
- HU80
- BT5000A

**C&I Energy Storage Solution**

57-63

- SOFAR 100K-125KTLX-G4
- CBS5000-H4 / H5 / H6 / H7 / H8 / H9 / H10
- CBS5000-BOT

**Utility ESS**

65-71

- BESS
- SMART STRING PCS

**Smart Energy**

73-81

- LSW-3 / LSE-3
- SOFAR COMMUNICATION MANAGER
- FEED-IN LIMITATION BOX
- SOFAR MONITOR



**01 Single-phase Inverter**

# SOFAR 1100~3300TL-G3

1100 / 1600 / 2200 / 2700 / 3000 / 3300 W

## SINGLE-PHASE SINGLE MPPT



### Product advantages

- Max. efficiency up to 97.7%
- Lightweight, quick and easy to install
- 140% DC overload
- IP65 design for outdoor
- RS485
- Feed-in limitation function
- Optional: WiFi/Ethernet



Model	SOFAR 1100TL-G3	SOFAR 1600TL-G3	SOFAR 2200TL-G3	SOFAR 2700TL-G3	SOFAR 3000TL-G3	SOFAR 3300TL-G3
<b>Input (DC)</b>						
Max. input voltage	500V		550V			
Rated input voltage	360V			70V		
Start-up voltage	70V			70V		
MPPT operating voltage range	50-500V		50-550V			
Number of MPP trackers	1			1		
Number of DC inputs	1			1		
Max. input MPPT current	12A			12A		
Max. input short circuit current	15A			15A		
<b>Output (AC)</b>						
Rated output power	1100W	1600W	2200W	2700W	3000W	3300W
Max. apparent power	1100VA	1600VA	2200VA	2700VA	3000VA	3300VA
Max. output current	5.3A	7.7A	10.6A	13A	14.5A	16A
Rated output voltage	L/N/PE, 230Vac					
Output voltage range	180Vac-276Vac					
Rated output frequency	50/60Hz					
Output frequency range	45Hz-55Hz/55Hz-65Hz					
Active power adjustable range	0-100%					
THDi	<3%					
Power factor	1 (adjustable +/-0.8)					
<b>Efficiency</b>						
Max. efficiency	97.5%		97.7%			
European efficiency	96.9%		97.2%			
<b>Protection</b>						
DC reverse polarity protection	Yes			Yes		
Anti-islanding protection	Yes			Yes		
Leakage current protection	Yes			Yes		
Ground fault monitoring	Yes			Yes		
PV-array string fault monitoring	Yes			Yes		
DC switch	Yes			Yes		
SPD	PV: type III, AC: type III					
<b>General Data</b>						
Ambient temperature range	-30°C~+60°C					
Self-consumption at night	<1W					
Topology	Transformerless					
Degree of protection	IP65					
Allowable relative humidity range	0-100%					
Max. operating altitude	2000m					
Cooling	Natural					
Dimension (W*H*D)	303*260.5*118mm			321*260.5*131.5mm		
Weight	5.5kg			6.3kg		
Display	LCD					
Communication	RS485/WiFi					
Standard	IEC/EN 61000-6-1/3, IEC/EN 61000-3-2/3, IEC 62116, IEC 61727, IEC 61683, IEC 60068-1/2/14/50, IEC/EN 62109-1/2, VDE-AR-N 4105, CEI0-21, VDE V 0126-1-1, V 0124-100, C10/11, G98, EN 50549-1					

\*All specifications are subject to change without notice.

# SOFAR 3K~6KTLM-G3

3 / 3.6 / 4 / 4.6 / 5 / 6 kW

## SINGLE-PHASE DUAL MPPT



### Product advantages

- Max. efficiency up to 98.4%
- Compact design, lightweight
- Two MPPTs with 150% DC overload
- Natural cooling, no fans, low noise
- Feed-in limitation function
- RS485/Bluetooth, Optional: WiFi/Ethernet



Model	SOFAR 3KTLM-G3	SOFAR 3.6KTLM-G3-J*	SOFAR 3.6KTLM-G3	SOFAR 4KTLM-G3	SOFAR 4.6KTLM-G3	SOFAR 5KTLM-G3	SOFAR 5KTLM-G3-A	SOFAR 6KTLM-G3
<b>Input (DC)</b>								
Max. input voltage	600V							
Rated input voltage	380V							
Start-up voltage	90V							
MPPT operating voltage range	80V-550V							
Number of MPP trackers	2							
Number of DC inputs	1 for each MPPT							
Max. input MPPT current	15A/15A							
Max. input short circuit current	22.5A/22.5A							
<b>Output (AC)</b>								
Rated output power	3000W	3600W	3680W	4000W	4600W	5000W	5000W	6000W
Max. apparent power	3300VA	3600VA	3680VA	4400VA	4600VA	5500VA	5000VA	6000VA
Max. output current	15A	16A	16A	20A	23A	25A	21.7A	29A
Rated output voltage	L/N/PE 230Vac							
Output voltage range	180Vac-276Vac							
Rated output frequency	50/60Hz							
Output frequency range	45Hz-55Hz/55Hz-65Hz							
Active power adjustable range	0-100%							
THDi	<3%							
Power factor	1 (adjustable +/-0.8)							
<b>Efficiency</b>								
Max. efficiency	98.2%	98.2%	98.2%	98.2%	98.4%	98.4%	98.4%	98.4%
European efficiency	97.3%	97.3%	97.3%	97.3%	97.5%	97.5%	97.5%	97.5%
<b>Protection</b>								
DC reverse polarity protection	Yes							
Anti-islanding protection	Yes							
Leakage current protection	Yes							
Ground fault monitoring	Yes							
PV-array string fault monitoring	Yes							
DC switch	Yes							
SPD	PV: type III, AC: type III							
<b>General Data</b>								
Ambient temperature range	-30°C~+60°C							
Self-consumption at night	<1W							
Topology	Transformerless							
Degree of protection	IP65							
Allowable relative humidity range	0-100%							
Max. operating altitude	4000m							
Cooling	Natural							
Dimension (W*H*D)	349*344*164mm							
Weight	9.2kg				10kg			
Display	LCD & Bluetooth +APP							
Communication	RS485/WiFi							
Standard	IEC/EN 61000-6-2/3, IEC/EN 61000-3-2/3, IEC/EN 61000-3-11/12, IEC 62116, IEC 61727, IEC 61683, IEC 60068-1/2/14/30, IEC/EN 62109-1/2, VDE-AR-N 4105, VDE V 0126-1-1, CEI0-21, C10/11, UNE 217002: 2020, G98/G99, EN 50549-1, ANRE 208							

\*SOFAR 3.6KTLM-G3-J is only for Jordan.  
\*All specifications are subject to change without notice.

# SOFAR 7K-10.5KTLM-G3

7 / 7.7 / 8 / 9 / 10 / 10.5 kW

## SINGLE-PHASE THREE MPPTS



### Product advantages

- Max. efficiency up to 98.1%
- Low start-up voltage, wide MPPT voltage range
- Three MPPTs with 150% DC overload
- Compatible with 500 W+ modules
- I-V curve scanning function
- Natural cooling, no fans, low noise
- Prolonged AC overload compatibility (110%)



Model	SOFAR 7KTLM-G3	SOFAR 7.7KTLM-G3	SOFAR 8KTLM-G3	SOFAR 9KTLM-G3	SOFAR 10KTLM-G3	SOFAR 10.5KTLM-G3
<b>Input (DC)</b>						
Max. input voltage	600V					
Rated input voltage	360V					
Start-up voltage	90V					
MPPT operating voltage range	80V-550V					
Number of MPP trackers	3					
Number of DC inputs	3					
Max. input MPPT current	20A/16A/16A					
Max. input short circuit current	30A/25A/25A					
<b>Output (AC)</b>						
Rated output power	7000W	7700W	8000W	9000W	10000W	10500W
Max. apparent power	7700VA	7700VA	8800VA	9900VA	10000VA	10500VA
Max. output current	35A	35A	40A	45A	46A	46A
Rated output voltage	L/N/PE.230Vac					
Output voltage range	180Vac-276Vac					
Rated output frequency	50/60Hz					
Output frequency range	45Hz-55Hz/55Hz-65Hz					
Active power adjustable range	0-100%					
THDi	<3%					
Power factor	1 (adjustable +/-0.8)					
<b>Efficiency</b>						
Max. efficiency	98.1%					
European efficiency	97.3%					
<b>Protection</b>						
DC reverse polarity protection	Yes					
Anti-islanding protection	Yes					
Leakage current protection	Yes					
Ground fault monitoring	Yes					
PV-array string fault monitoring	Yes					
DC switch	Yes					
SPD	PV: type II, AC: type III					
<b>General Data</b>						
Ambient temperature range	-30°C~+60°C					
Self-consumption at night	<1W					
Topology	Transformerless					
Degree of protection	IP65					
Allowable relative humidity range	0-100%					
Max. operating altitude	4000m					
Cooling	Natural					
Dimension(W*H*D)	468*380*187 mm					
Weight	17.5kg			18.5kg		
Display	LCD & Bluetooth +APP					
Communication	RS485/WiFi					
Standard	IEC/EN 61000-6-1/3, IEC/EN 61000-3-11/12, IEC 62116, IEC 61727, IEC 61683, IEC 60068-1/2/14/30, IEC/EN 62109-1/2, G99, VDE V 0126-1-1, EN 50549-1, ANRE 208					

\*All specifications are subject to change without notice.



## 02 Three-phase Inverter



# SOFAR 3.3K-12KTLX-G3

3.3 / 4.4 / 5.5 / 6.6 / 8.8 / 11 / 10 / 12 kW

## THREE-PHASE DUAL MPPT



### Product advantages

- Maximum efficiency 98.6%
- Low start-up voltage, wide MPPT voltage
- Maximum DC input voltage 1100 V
- Smart string level monitoring
- Remote firmware upgrade
- Natural cooling, no fans, low noise
- Type II SPD for both DC and AC side



Model	SOFAR 3.3KTLX-G3	SOFAR 4.4KTLX-G3	SOFAR 5.5KTLX-G3	SOFAR 6.6KTLX-G3	SOFAR 8.8KTLX-G3	SOFAR 11KTLX-G3	SOFAR 10KTLX-G3-A	SOFAR 12KTLX-G3
<b>Input (DC)</b>								
Max. input voltage	1100V							
Rated input voltage	650V							
Start-up voltage	160V							
MPPT operating voltage range	140V-1000V							
Number of MPP trackers	2							
Number of DC inputs	1/1				1/2			
Max. input MPPT current	15A/15A				15A/30A			
Max. input short circuit current	22.5A/22.5A				22.5A/45A			
<b>Output (AC)</b>								
Rated output power	3000W	4000W	5000W	6000W	8000W	10000W	10000W	12000W
Max. apparent power	3300VA	4400VA	5500VA	6600VA	8800VA	11000VA	10000VA	13200VA
Max. output current	5A	6.7A	8.3A	10A	13.3A	16.7A	15.2A	20A
Rated output voltage	3/N/PE, 230/400Vac							
Output voltage range	310Vac-480Vac							
Rated output frequency	50/60Hz							
Output frequency range	45Hz-55Hz/55Hz-65Hz							
Active power adjustable range	0-100%							
THDi	<3%							
Power factor	1 (adjustable+/-0.8)							
<b>Efficiency</b>								
Max. efficiency	98.40%	98.40%	98.40%	98.40%	98.50%	98.50%	98.50%	98.50%
European efficiency	97.50%	97.50%	97.50%	97.50%	98.00%	98.00%	98.00%	98.00%
<b>Protection</b>								
DC reverse polarity protection	Yes							
Anti-islanding protection	Yes							
Leakage current protection	Yes							
Ground fault monitoring	Yes							
PV-array string fault monitoring	Yes							
DC switch	Yes							
SPD	PV: type II, AC: type II							
<b>General Data</b>								
Ambient temperature range	-30°C--60°C							
Self-consumption at night	<1W							
Topology	Transformerless							
Degree of protection	IP65							
Allowable relative humidity range	0-100%							
Max. operating altitude	4000m							
Cooling	Natural							
Dimension (W×H×D)	430×385×182mm							
Weight	17kg				18kg			
Display	LCD & Bluetooth +APP							
Communication	RS485/WiFi							
Standard	IEC/EN 61000-6-1/3, IEC/EN 61000-3-2/3, IEC/EN 61000-3-11/12, IEC 62116, IEC 61727, IEC 61683, IEC 60068-1/2/14/30, IEC/EN 62109-1/2, C98/C99, CEI0-21, VDE-AR-N 4105, VDE V 0126-1-1, EN 50549-1, UNE 217002-2020							

\*All specifications are subject to change without notice.

# SOFAR 15K~24KTLX-G3

15 / 17 / 20 / 22 / 24 kW

## THREE-PHASE DUAL MPPT



### Product advantages

- Maximum efficiency 98.6%
- Low start-up voltage, wide MPPT voltage
- Maximum DC input voltage 1100 V
- Smart string level monitoring
- Type II SPD for both DC and AC side
- Remote firmware upgrade
- 110% long-time overload ability



Model	SOFAR 15KTLX-G3	SOFAR 17KTLX-G3	SOFAR 20KTLX-G3	SOFAR 22KTLX-G3	SOFAR 24KTLX-G3
<b>Input (DC)</b>					
Max. input voltage	1100V				
Rated input voltage	650V				
Start-up voltage	160V				
MPPT operating voltage range	140V-1000V				
Number of MPP trackers	2				
Number of DC inputs	2/2				
Max. input MPPT current	26A/26A	26A/26A	26A/26A	26A/26A	26A/26A
Max. input short circuit current	36A/36A	36A/36A	36A/36A	36A/36A	36A/36A
<b>Output (AC)</b>					
Rated output power	15000W	17000W	20000W	22000W	24000W
Max. apparent power	16500VA	18700VA	22000VA	24200VA	26400VA
Max. output current	23.9A	27.1A	31.9A	35.1A	38.3A
Rated output voltage	3/N/PE, 230V/400Vac				
Output voltage range	310Vac-480Vac				
Rated output frequency	50/60Hz				
Output frequency range	45Hz-55Hz/55Hz-65Hz				
Active power adjustable range	0-100%				
THDi	<3%				
Power factor	1 (adjustable +/-0.8)				
<b>Efficiency</b>					
Max. efficiency	98.6%	98.6%	98.6%	98.6%	98.6%
European efficiency	98.2%	98.2%	98.2%	98.2%	98.2%
<b>Protection</b>					
DC reverse polarity protection	Yes				
Anti-islanding protection	Yes				
Leakage current protection	Yes				
Ground fault monitoring	Yes				
PV-array string fault monitoring	Yes				
DC switch	Yes				
SPD	PV: type II, AC: type II				
<b>General Data</b>					
Ambient temperature range	-30°C~+60°C				
Self-consumption at night	<1W				
Topology	Transformerless				
Degree of protection	IP65				
Allowable relative humidity range	0-100%				
Max. operating altitude	4000m				
Cooling	Smart air cooling				
Dimension (W×H×D)	520×430×189mm				
Weight	20kg	22kg	22kg	23kg	23kg
Display	LCD & Bluetooth + APP				
Communication	RS485/WiFi				
Standard	IEC/EN 61000-6-1/3, IEC/EN 61000-3-11/12, IEC 62116, IEC 61727, IEC 61683, IEC 60068-1/2/14/30, IEC/EN 62109-1/2, G99, VDE-AR-N 4105, VDE V 0126-1-1, CEI0-21, EN 50549-1, NRS 097-2-1				

\*All specifications are subject to change without notice.

# SOFAR 25K~50KTLX-G3

25 / 30 / 33 / 36 / 40 / 45 / 50 kW

## THREE-PHASE THREE TO FOUR MPPTS



### Product advantages

- Max. efficiency up to 98.80%
- Up to 4 MPPTs with DC overload capability (up to 150%)
- Type II SPD for both DC and AC side
- Prolonged AC overload capability (110%)
- Low start-up voltage, wide MPPT voltage range
- Compatible with 500 W+ modules
- I-V curve scanning function



Model	SOFAR 25KTLX-G3	SOFAR 30KTLX-G3	SOFAR 33KTLX-G3	SOFAR 36KTLX-G3	SOFAR 40KTLX-G3	SOFAR 45KTLX-G3	SOFAR 50KTLX-G3
<b>Input (DC)</b>							
Max. input voltage	1100V						
Rated input voltage	620V						
Start-up voltage	200V						
MPPT operating voltage range	180V-1000V						
Number of MPP trackers	3			4			
Number of DC inputs	2 for each MPPT						
Max. input MPPT current	3*40A	3*40A	3*40A	3*40A	4*40A	4*40A	4*40A
Max. input short circuit current	3*50A	3*50A	3*50A	3*50A	4*50A	4*50A	4*50A
<b>Output (AC)</b>							
Rated output power	25000W	30000W	33000W	36000W	40000W	45000W	50000W
Max. apparent power	28000VA	34000VA	37000VA	40000VA	44000VA	50000VA	55000VA
Max. output current	42.4A	51.5A	56A	60.6A	66.7A	75.8A	83.3A
Rated output voltage	3/N/PE. 230/400Vac						
Output voltage range	310Vac-480Vac						
Rated output frequency	50/60Hz						
Output frequency range	45Hz-55Hz/55Hz-65Hz						
Active power adjustable range	0-100%						
THDi	<3%						
Power factor	1 (adjustable +/-0.8)						
<b>Efficiency</b>							
Max. efficiency	98.6%	98.6%	98.6%	98.6%	98.8%	98.8%	98.8%
European efficiency	98.2%	98.2%	98.2%	98.2%	98.2%	98.2%	98.2%
<b>Protection</b>							
DC reverse polarity protection	Yes						
Anti-islanding protection	Yes						
Leakage current protection	Yes						
Ground fault monitoring	Yes						
PV-array string fault monitoring	Yes						
DC switch	Yes						
SPD	PV: type II, AC: type II						
<b>General Data</b>							
Ambient temperature range	-30°C~+60°C						
Self-consumption at night	<3W						
Topology	Transformerless						
Degree of protection	IP65						
Allowable relative humidity range	0-100%						
Max. operating altitude	4000m						
Cooling	Smart air cooling						
Dimension (W*H*D)	585*480*220mm						
Weight	36kg			37kg			
Display	LCD & Bluetooth +APP						
Communication	RS485/WiFi						
Standard	IEC/EN 61000-6-1/2/3/4, IEC 62116, IEC 61727, IEC 61683, IEC 60068-1/2/14/30, IEC/EN 62109-1/2, G99, VDE-AR-N 4105, VDE V 0126-1-1, CEI0-21, EN 50549-1, NRS 097-2-1, UNE 217002-2020						

\*All specifications are subject to change without notice.

# SOFAR 60K~80KTLX-G3

60 / 80 kW

## THREE-PHASE SIX MPPTS



### Product advantages

- Max. efficiency up to 98.7%
- Longtime 110% AC overload ability
- Type II SPD for both DC and AC side
- 6 MPPTs with 1.5 times DC overload
- Low start-up voltage, wide MPPT voltage range
- Compatible with 500 W+ PV modules
- I-V curve scanning function



Model	SOFAR 60KTLX2-G3	SOFAR 80KTLX-G3
<b>Input (DC)</b>		
Max. input voltage	1100V	
Rated input voltage	620V	
Start-up voltage	200V	
MPPT operating voltage range	180V-1000V	
Number of MPP trackers	6	
Number of DC inputs	2 for each MPPT	
Max. input MPPT current	6'40A	
Max. input short circuit current	6'60A	
<b>Output (AC)</b>		
Rated output power	60000W	80000W
Max. apparent power	66000VA	88000VA
Max. output current	100A	133.3A
Rated output voltage	3/N/PE, 230/400Vac	
Output voltage range	310Vac-480Vac	
Rated output frequency	50/60Hz	
Output frequency range	45Hz-55Hz/55Hz-65Hz	
Active power adjustable range	0-100%	
THDi	<3%	
Power factor	1 (adjustable +/-0.8)	
<b>Efficiency</b>		
Max. efficiency	98.7%	
European efficiency	98.2%	
<b>Protection</b>		
DC reverse polarity protection	Yes	
Anti-islanding protection	Yes	
Leakage current protection	Yes	
Ground fault monitoring	Yes	
PV-array string fault monitoring	Yes	
DC switch	Yes	
SPD	PV: type II, AC: type II	
<b>General Data</b>		
Ambient temperature range	-30°C~+60°C	
Self-consumption at night	<2W	
Topology	Transformerless	
Degree of protection	IP66	
Allowable relative humidity range	0-100%	
Max. operating altitude	4000m (>3000m derating)	
Cooling	Smart air cooling	
Dimension (W*H*D)	687*561*275mm	
Weight	50kg	
Display	LCD & Bluetooth +APP	
Communication	RS485/WiFi	
Standard	IEC/EN 61000-6-2/4, IEC 61000-3-4/5, IEC 62116, IEC 61727, IEC 61683, IEC 60068-1/2/14/30, IEC/EN 62109-1/2, G99, VDE-AR-N 4105, VDE V 0126-1-1, CEI0-21, EN 50549-1, UNE 217002-2020	

\*All specifications are subject to change without notice.

# SOFAR 100K~125KTLX-G4

100 / 110 / 125 kW

## THREE-PHASE TEN MPPTS



### Product advantages

- Max. efficiency up to 98.6%
- IP66 design for outdoor
- Maximum 10 MPPTs with 150%+ DC overload
- Type II SPD for both DC and AC side
- AC/DC dual power supply redundant design, 24- hour status monitoring
- I-V curve scanning function
- Supports Modbus Communication, external WiFi



Model	SOFAR 100KTLX-G4	SOFAR 110KTLX-G4	SOFAR 125KTLX-G4
<b>Input (DC)</b>			
Max. input voltage	1100V		
Rated input voltage	625V		
Start-up voltage	200V		
MPPT operating voltage range	180V-1000V		
Number of MPP trackers	10		
Number of DC inputs	20		
Max. input MPPT current	10*40A		
Max. input short circuit current	10*50A		
<b>Output (AC)</b>			
Rated output power	100kW	100kW	110kW
Max. apparent power	100kVA@45°C / 90kVA@50°C	110kVA@45°C / 100kVA@50°C	125kVA@45°C / 110kVA@50°C
Max. output current	152A@380V / 145A@400V / 139.2A@415V	167.2A@380V / 159.5A@400V / 153.1A@415V	190A@380V / 181.2A@400V / 174A@415V
Rated output voltage	3/N/PE, 380V / 400V / 415V		
Output voltage range	310-480V		
Rated output frequency	50/60Hz		
Output frequency range	45-55Hz/55-65Hz		
Active power adjustable range	0-100%		
THDi	<1%(@100%P)		
Power factor	1 (+/-0.8 adjustable)		
<b>Efficiency</b>			
Max. efficiency	98.6%		
European efficiency	98.3%		
<b>Protection</b>			
DC reverse polarity protection	Yes		
Anti-islanding protection	Yes		
Leakage current protection	Yes		
Ground fault monitoring	Yes		
PV-array string fault monitoring	Yes		
DC switch	Yes		
AFCI	Yes		
SPD	PV: type II, AC: type II		
<b>General Data</b>			
Ambient temperature range	-30°C~+60°C		
Topology	Transformerless		
Degree of protection	IP66		
Allowable relative humidity range	0-100%		
Max. operating altitude	4000m (>3000m derating)		
Cooling	Smart air cooling		
Dimension (W*H*D)	970*695*325mm		
Weight	75kg		
Display	LCD & Bluetooth +APP		
Communication	RS485/ WiFi		
Standard	EN/IEC 62109-1/2, EN/IEC 61000-6-2/-4, IEC 61000-3-4/-5, EN 50530, EN 50549, IEC62116, IEC 61727, IEC 61683, IEC 60068-2-1/2/14/30, VDE V 0126-1-1, UTE C15-712-1, VDE-AR-N 4105/4110, CEI 0-21/16, NTS 631, UNE 217001, UNE 217002, G99, C10/11		

\*All specifications are subject to change without notice.

# SOFAR 255KTL-HV

255 kW

## THREE-PHASE TWELVE MPPTS



### Product advantages

- 12 MPPTs with max. efficiency up to 99.02%
- IP66&C5 protection design for outdoor
- PID recovery
- Compatible with Al and Cu AC cables
- Type II SPD for both DC and AC side
- AC/DC dual power supply redundant design, 24-hour status monitoring
- I-V curve scanning function



Model	SOFAR 255KTL-HV
<b>Input (DC)</b>	
Max. input voltage	1500V
Rated input voltage	1160V
Start-up voltage	550V
MPPT operating voltage range	500V-1500V
Number of MPP trackers	12
Number of DC inputs	24
Max. input MPPT current	12*30A
Max. input short circuit current	12*50A
<b>Output (AC)</b>	
AC output power	255kW@35°C / 230kW@45°C / 220kW@50°C
Max. output current	184A
Rated output voltage	3/PE, 800V
Output voltage range	640-920V
Rated output frequency	50Hz/60Hz
Output frequency range	45-55Hz/55- 65Hz
Active power adjustable range	0-100%
THDi	<3%
Power factor	1 (+/-0.8 adjustable)
<b>Efficiency</b>	
Max. efficiency	99.02%
European efficiency	98.70%
<b>Protection</b>	
DC reverse polarity protection	Yes
Anti-islanding protection	Yes
Leakage current protection	Yes
Ground fault monitoring	Yes
PV-array string fault monitoring	Yes
DC switch	Yes
PID recovery	Yes
SPD	PV: type II, AC: type II
<b>General Data</b>	
Ambient temperature range	-30°C~+60°C
Topology	Transformerless
Degree of protection	IP66
Allowable relative humidity range	0-100%
Max. operating altitude	5000m (> 4000m derating)
Cooling	Smart air cooling
Dimension (W*H*D)	1100.5*713.5*368mm
Weight	99kg
Display	LCD & Bluetooth +APP
Communication	RS485 / PBUS
Standard	EN/IEC 62109-1/2, EN/IEC 61000, IEC 62116, IEC 61727, IEC 61683, IEC 60068-2-1/2/14/30, EN 50530, VDE V 0126-1-1, VDE-AR-N 4110/4120, EN 50549, IEC 62910

\*All specifications are subject to change without notice.

# SOFAR 350KTLX0

350 kW

## THREE-PHASE EIGHT MPPTS



### Product advantages

- Max. efficiency up to 99.05%
- High current input, compatible with 600Wp+ module
- Prolonged AC overload capacity (110%)
- IP66 & C5 protection design for outdoor
- Intelligent string breaking protection for high safety
- I-V curve scanning function



Model	SOFAR 350KTLX0
<b>Input (DC)</b>	
Max. input voltage	1500V
Rated input voltage	1160V
Start-up voltage	550V
MPPT operating voltage range	500V-1500V
Number of MPPTs	8
Number of DC inputs	32
Max. input MPPT current	8*60A
Max. input short circuit current	8*100A
<b>Output(AC)</b>	
Rated output power	352kW
Max. apparent power	352kVA
Max. output current	254.1A
Rated output voltage	3/PE, 800V
Output voltage range	640-920V
Rated output frequency	50/60Hz
Output frequency range	45-55Hz/55-65Hz
Active power adjustable range	0-100%
THDi	<3%
Power factor	1 (+/-0.8 adjustable)
<b>Efficiency</b>	
Max. efficiency	99.05%
European efficiency	98.80%
<b>Protection</b>	
DC reverse polarity protection	Yes
Anti-islanding protection	Yes
Leakage current protection	Yes
Ground fault monitoring	Yes
PV-array string fault monitoring	Yes
DC switch	Yes
SPD	PV: type II, AC: type II
<b>General Data</b>	
Ambient temperature range	-30°C~+60°C
Topology	Transformerless
Degree of protection	IP66
Allowable relative humidity range	0-100%
Max. operating altitude	5000m(>4000m derating)
Cooling	Smart air cooling
Dimension(W*H*D)	1159*828*366mm
Weight	113kg
Display	LED, Bluetooth +APP
Communication	RS485 / PBUS

\*All specifications are subject to change without notice.



## 03 Energy Storage System



# ME 3000SP

3000 W

## AC-COUPLED ENERGY STORAGE INVERTER



### Product advantages

- Various operational modes available
- Smart fanless cooling design
- Flexible configuration, allowing both lead-acid and lithium batteries
- LCD+LED - user friendly interface
- Smart battery energy management system.
- Compatible with other brands of inverter
- IP65 design for outdoor



Model	ME 3000SP
<b>Battery parameters</b>	
Battery type <sup>[1]</sup>	Lithium-ion, Lead-acid
Rated battery voltage	48V
Battery voltage range	42-58V
Max. charging current	65A
Max. charging current range	0-65A(programmable)
Charging curve (Lithium-ion)	Self-adaption to BMS
Max. discharging current	70A
Electronic protection	OCP OTP OVP
Short circuit protection	Fuse (100A)
<b>AC output (on-grid)</b>	
Rated power	3000W
Max. output power	3000VA
Rated output current	13A
Max. output current	13A
AC voltage range	180-270V
Grid frequency range	44-55 Hz/55-65Hz
Output THDi	<3%
Power factor	1 default (+/-0.8 adjustable)
Connection phase	Single
Inrush current	0.8A/1μs
Max. output fault current	100A/1μs
Max. output overcurrent protection	13A
<b>System parameters</b>	
Max. charging/discharging efficiency	>95%
Standby losses	< 5W
Topology	High frequency isolated transformer
Degree of protection	IP65
Safety protection	Anti-islanding, RCMU, ground fault monitoring
Communication	RS485/CAN/WiFi Optional: Ethernet/4G
Surge protection	AC: Type III
<b>Environmental</b>	
Ambient temperature range	-25°C~+60°C (above 45°C derating)
Allowable relative humidity range	0-100%
Max. operating altitude	2000 m
Current sensor connection	External
<b>AC output (off-grid)</b>	
Rated power	3000VA
Rated voltage, frequency	230V, 50/60Hz
Rated current	13A
Output THDv (@Linear load)	< 3%
Switch time	< 3s
<b>General parameters</b>	
Weight	16kg
Cooling	Natural
Dimension	358*543.2*171.7mm
Display	LCD
Standard	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, IEC 62109-1/2, IEC62040-1, VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21, EN 50549, G83/C98, UTE C15-712-1

[1] Please refer to document "SOFAR Inverter Model compatible battery list"  
\*All specifications are subject to change without notice.

# ME 5K~20KTL-3PH

5 / 6 / 8 / 10 / 15 / 20 kW

## AC-COUPLED ENERGY STORAGE INVERTER



### Product advantages

- Max. battery charge / discharge efficiency up to 97.8%
- Off-grid and on-grid output can be connected to unbalanced load
- Wide battery voltage range (180-800 V)
- Flexible switching between grid-tied mode and energy storage mode
- Compact design with functional LCD



Model	ME 5KTL-3PH	ME 6KTL-3PH	ME 8KTL-3PH	ME 10KTL-3PH	ME 15KTL-3PH	ME 20KTL-3PH
<b>AC output (on-grid )</b>						
Rated output power	5000W	6000W	8000W	10000W	15000W	20000W
Rated output current	7.2A	8.7A	11.6A	14.5A	21.7A	29.0A
Rated grid voltage	3/N/PE, 230/400Vac					
Rated grid frequency	50/60Hz					
Max. output apparent power	5500VA	6600VA	8800VA	11000VA	16500VA	22000VA
Max. output current	8A	10A	13A	16A	24A	32A
THDI	<3%					
Power factor	1 default (+/-0.8 adjustable)					
<b>Battery parameters</b>						
Battery type <sup>[1]</sup>	Lithium-ion& Lead-acid					
Battery voltage range	180V-800V					
Number of battery input channels	1	1	1	2	2	2
Max. charge/discharge power	5000W	6000W	8000W	10000W	15000W	20000W
Max. charge/discharge current	25A	25A	25A	50A(25A/25A)	50A(25A/25A)	50A(25A/25A)
BMS communication mode	CAN, RS485					
<b>AC output (off-grid)</b>						
Rated output power	5000W	6000W	8000W	10000W	15000W	20000W
Rated output current	7.2A	8.7A	11.6A	14.5A	21.7A	29.0A
Rated output voltage	3/N/PE, 230/400Vac					
Rated output frequency	50/60Hz					
Max. output apparent power	5500VA	6600VA	8800VA	11000VA	16500VA	22000VA
Peak output apparent power, time	7500VA, 60s	9000VA, 60s	12000VA, 60s	15000VA, 60s	22500VA, 60s	26000VA, 60s
Max. output current	8A	10A	13A	16A	24A	32A
THDv (@ linear load)	<3%					
Switching time	<10ms					
<b>Efficiency</b>						
Max. efficiency of charging <sup>[1]</sup>	97.6%	97.6%	97.6%	97.8%	97.8%	97.8%
Max. efficiency of discharging	97.6%	97.6%	97.6%	97.8%	97.8%	97.8%
<b>Protection</b>						
DC switch	Yes					
PV reverse connection protection	Yes					
Battery reverse connection protection	Yes					
Output short circuit protection	Yes					
Output overcurrent protection	Yes					
Output overvoltage protection	Yes					
Insulation impedance detection	Yes					
Residual current detection	Yes					
Anti-island protection	Yes					
Surge protection	AC: Type II					
<b>General parameters</b>						
Operating temperature range	-30°C-60°C					
Relative humidity range	5%-95%					
Max. operating altitude	<4000m					
Standby self-consumption <sup>[2]</sup>	<20W					
Topology	Transformerless					
Installation method	Wall-mounted					
Degree of protection	IP65					
Dimensions (W*H*D)	586.6*515*261.2mm					
Cooling mode	Natural	Natural	Natural	Forced airflow	Forced airflow	Forced airflow
Weight	30kg	30kg	30kg	34kg	34kg	34kg
Communication	RS485/CAN/WiFi, Optional: Ethernet/4G					
Display	LCD & Bluetooth+APP					
Standard	EN61000-6-2, EN61000-6-3, EN61000-3-2, EN61000-3-3, EN61000-3-11, EN61000-3-12, IEC62109-1, IEC62109-2, EN62040-1, AS/NZS 4777, VDE V 0124-100, V0126-1-1, VDE-AR-N 4105, CEI 0-21/CEI 0-16, EN50438/EN50549, G83/G59/G98/G99, UNE206 007-1					

[1] Battery-AC maximum efficiency of battery charge and discharge [2] Standby loss at rated input voltage [3] Please refer to document "SOFAR inverter Model compatible battery list"  
 \* All specifications are subject to change without notice.

# HYD 3000~6000-EP

3000 / 3680 / 4000 / 4600 / 5000 / 5500 / 6000 W

## SINGLE-PHASE ENERGY STORAGE INTEGRATED INVERTER



### Product advantages

- Various operational modes available
- Smart fanless cooling design
- Flexible configuration, allowing both lead-acid and lithium batteries
- EPS function (switchover time less than 10 ms)
- Feed-in limitation function
- Supports both on- and off-grid operation
- IP65 design for outdoor



Model	HYD 3000-EP	HYD 3680-EP	HYD 4000-EP	HYD 4600-EP	HYD 5000-EP	HYD 5500-EP	HYD 6000-EP
<b>PV Input</b>							
Recommended Max. PV Input Power	4500Wp	5400Wp	6000Wp	6900Wp	7500Wp	7500Wp	9000Wp
Max. Input Voltage	550 Vd.c.						
Start-up Voltage	100 Vd.c.						
Rated Input Voltage	360 Vd.c.						
MPPT Voltage Range	85-520 Vd.c.						
Number of MPPT Trackers	1/1						
Max. Input Current	13/13 A						
Max. Isc	18/18 A						
<b>Battery</b>							
Voltage Range	42-58 Vd.c.						
Number of Battery Input Channels	1						
Max. Charging Power	3.75 kW	4 kW	4.25 kW	5 kW	5 kW	5 kW	5 kW
Max. Discharging Power	3.75 kW	4 kW	4.25 kW	5 kW	5 kW	5 kW	5 kW
Max. Charging Current	75 A	80 A	85 A	100 A	100 A	100 A	100 A
Max. Discharging Current	75 A	80 A	85 A	100 A	100 A	100 A	100 A
Battery Type [1]	Lithium-ion & Lead-acid						
BMS Communication	CAN/RS485						
<b>AC Input(Grid)</b>							
Rated Input Voltage	L+N-PE.230 V.a.c.						
Rated Input Frequency	50/60 Hz						
Max. Input Current	29.3 A	33.4 A	35.9 A	41.7 A	43.5 A	43.5 A	43.5 A
<b>AC Output(Backup)</b>							
Rated Output Voltage	L+N-PE.230 V.a.c.						
Rated Output Frequency	50/60 Hz						
Rated Output Power	3 kW	3.68 kW	4 kW	4.6 kW	5 kW	5 kW	5 kW
Rated Output Current	13.0 A	16.0 A	17.4 A	20.0 A	21.7 A	21.7 A	21.7 A
Rated Apparent Power	3 kVA	3.68 kVA	4 kVA	4.6 kVA	5 kVA	5 kVA	5 kVA
Max. Apparent Power	3 kVA	3.68 kVA	4 kVA	4.6 kVA	5 kVA	5 kVA	5 kVA
Max. Output Current	13.0 A	16.0 A	17.4 A	20.0 A	21.7 A	21.7 A	21.7 A
Peak Output Apparent Power	4500VA, 30s	4800VA, 30s	5100VA, 30s	6000VA, 30s	6000VA, 30s	6000VA, 30s	6000VA, 30s
THDv(@ linear load)	<3%						
Switching Time	10ms default						
<b>AC Output(Grid)</b>							
Rated Output Voltage	L+N-PE.230 V.a.c.						
Rated Output Frequency	50/60 Hz						
Rated Output Power	3 kW	3.68 kW	4 kW	4.6 kW	5 kW	5 kW	6 kW
Rated Output Current	13.0 A	16.0 A	17.4 A	20.0 A	21.7 A	21.7 A	26.1 A
Max. Apparent Power	3.3 kVA	3.68 kVA	4.4 kVA	4.6 kVA	5 kVA	5.5 kVA	6 kVA
Max. Output Current	14.3 A	16.0 A	19.1 A	20.0 A	21.7 A	23.9 A	26.1 A
THDI	<3%						
Power Factor Range	0.8 lagging-0.8 leading						
<b>Efficiency</b>							
Max. MPPT Efficiency	99.9%						
Max. Efficiency	97.6%	97.6%	97.6%	97.8%	97.8%	97.8%	98.0%
European Efficiency	97.2%	97.2%	97.2%	97.3%	97.3%	97.3%	97.5%
Max. efficiency of Charging/Discharging [2]	94.6%						
<b>Protection</b>							
DC Switch	Yes						
PV Reverse Connection Protection	Yes						
Output Short Circuit Protection	Yes						
Output Overcurrent Protection	Yes						
Output Overvoltage Protection	Yes						
Insulation Impedance Detection	Yes						
Residual Current Detection	Yes						
Anti-island Protection	Yes						
Surge protection	PV: Type III, AC: Type III						
<b>General Parameter</b>							
Inverter Topology	High-frequency Isolation (For Battery)						
Protective class	Class I						
IP Rating	IP65						
Overvoltage Category	AC III, DC II						
Operating Temperature Range	-30°C~+60°C (derating above +45°C)						
Relative Humidity Range	5%-95%						
Max. Operating Altitude	4000m (derating above 2000m)						
Standby Self-consumption [3]	<10W						
Installation Method	Wall Mounted						
Dimensions (W*H*D)	482*503*183mm						
Cooling Mode	Natural						
Weight	21.5kg						
Communication	CAN/RS485/WIFI, Optional: 4G/LAN						
Display	LCD & APP						

[1] Please refer to document "SOFAR inverter Model compatible battery list"

[2] Battery-AC maximum efficiency of battery charge and discharge

[3] Standby loss at rated input voltage

\*All specifications are subject to change without notice.

# HYD 5~20KTL-3PH

5 / 6 / 8 / 10 / 10 / 15 / 20 kW

## THREE-PHASE ENERGY STORAGE INTEGRATED INVERTER



### Product advantages

- Various operational modes for optimal performance
- Off-grid output can be connected to unbalanced load, three-phase separate output is supported
- Up to 2 MPPTs, allowing a flexible configuration
- Multiple parallel systems, more flexible system solutions
- Maximum two battery inputs
- Fully digital operation, enabling higher control accuracy



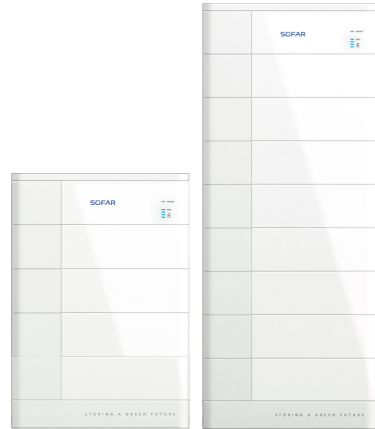
Model	HYD 5KTL-3PH	HYD 6KTL-3PH	HYD 8KTL-3PH	HYD 10KTL-3PH	HYD 10KTL-3PH-A	HYD 15KTL-3PH	HYD 20KTL-3PH
<b>PV Input</b>							
Recommended Max. PV Power	7500Wp	9000Wp	12000Wp	15000Wp	15000Wp	22500Wp	30000Wp
Max. Input Voltage				1000 Vd.c.			
Start-up Voltage				200 Vd.c.			
Rated Input Voltage				600 Vd.c.			
MPPT Voltage Range				180-960 Vd.c.			
Number of MPPT Trackers	1/1			2/2			
Max. Input Current	12.5/12.5 A			25/25 A			
Max. Isc	15/15 A			30/30 A			
<b>Battery</b>							
Voltage Range				180-800 Vd.c.			
Number of Battery Input Channels	1			2			
Max. Charging Power	5 kW	6 kW	8 kW	10/10 kW	10/10 kW	15/15 kW	20/20 kW
Max. Discharging Power	5 kW	6 kW	8 kW	10/10 kW	10/10 kW	15/15 kW	20/20 kW
Max. Charging Current	25 A	25 A	25 A	25/25 A	25/25 A	25/25 A	25/25 A
Max. Discharging Current	25 A	25 A	25 A	25/25 A	25/25 A	25/25 A	25/25 A
Battery Type [1]	Lithium-ion & Lead-acid						
BMS Communication	CAN/RS485						
<b>AC Input(Grid)</b>							
Rated Input Voltage	3(N)-PE.380/400/415 V.a.c.						
Rated Input Frequency	50/60 Hz						
Max. Input Current	15.2/14.5/13.9 A	18.2/17.4/16.7 A	24.2/23.2/22.2 A	30.3/29.0/27.8 A	30.3/29.0/27.8 A	45.5/43.5/41.7 A	60.6/58.0/55.6 A
<b>AC Output(Backup)</b>							
Rated Output Voltage	3N-PE.380/400/415 V.a.c.						
Rated Output Frequency	50/60 Hz						
Rated Output Power	5 kW	6 kW	8 kW	10 kW	10 kW	15 kW	20 kW
Rated Output Current	7.6/7.2/6.9 A	9.1/8.7/8.3 A	12.1/11.6/11.1 A	15.2/14.5/13.9 A	15.2/14.5/13.9 A	22.7/21.7/20.8 A	30.3/29.0/27.8 A
Rated Apparent Power	5 kVA	6 kVA	8 kVA	10 kVA	10 kVA	15 kVA	20 kVA
Max. Apparent Power	5.5 kVA	6.6 kVA	8.8 kVA	11 kVA	11 kVA	16.5 kVA	22 kVA
Max. Output Current	8.3/8.0/7.6 A	10.0/9.6/9.2 A	13.3/12.8/12.2 A	16.7/15.9/15.3 A	16.7/15.9/15.3 A	25.0/23.9/22.9 A	33.3/31.9/30.6 A
Peak Output Apparent Power	7500VA, 60s	9000VA, 60s	12000VA, 60s	15000VA, 60s	15000VA, 60s	22500VA, 60s	26000VA, 60s
THDv(@ linear load)	<3%						
Switching Time	10ms default						
<b>AC Output(Grid)</b>							
Rated Output Voltage	3(N)-PE.380/400/415 V.a.c.						
Rated Output Frequency	50/60 Hz						
Rated Output Power	5 kW	6 kW	8 kW	10 kW	10 kW	15 kW	20 kW
Rated Output Current	7.6/7.2/6.9 A	9.1/8.7/8.3 A	12.1/11.6/11.1 A	15.2/14.5/13.9 A	15.2/14.5/13.9 A	22.7/21.7/20.8 A	30.3/29.0/27.8 A
Max. Apparent Power	5.5 kVA	6.6 kVA	8.8 kVA	11 kVA	10 kVA	16.5 kVA	22 kVA
Max. Output Current	8.3/8.0/7.6 A	10.0/9.6/9.2 A	13.3/12.8/12.2 A	16.7/15.9/15.3 A	15.2/14.5/13.9 A	25.0/23.9/22.9 A	33.3/31.9/30.6 A
THDI	<3%						
Power Factor Range	0.8 lagging-0.8 leading						
<b>Efficiency</b>							
Max. MPPT Efficiency	99.9%						
Max. Efficiency	98.0%	98.0%	98.0%	98.2%	98.2%	98.2%	98.2%
European Efficiency	97.5%	97.5%	97.5%	97.7%	97.7%	97.7%	97.7%
Max. efficiency of Charging/Discharging [2]	97.6%	97.6%	97.6%	97.8%	97.8%	97.8%	97.8%
<b>Protection</b>							
DC Switch	Yes						
PV Reverse Connection Protection	Yes						
Battery Reverse Connection Protection	Yes						
Output Short Circuit Protection	Yes						
Output Overcurrent Protection	Yes						
Output Overvoltage Protection	Yes						
Insulation Impedance Detection	Yes						
Residual Current Detection	Yes						
Anti-island Protection	Yes						
Surge protection	PV: Type II, AC: Type II						
<b>General Parameter</b>							
Inverter Topology	Non-Isolation						
Protective class	Class I						
IP Rating	IP65						
Overvoltage Category	AC III, DC II						
Operating Temperature Range	-30°C~+60°C (derating above +45°C)						
Relative Humidity Range	5%-95%						
Max. Operating Altitude	4000m (derating above 2000m)						
Standby Self-consumption [3]	<25W						
Installation Method	Wall Mounted						
Dimensions (W*H*D)	587*515*261mm						
Cooling Mode	Natural			Forced airflow			
Weight	33kg	33kg	33kg	37kg	37kg	37kg	37kg
Communication	CAN/RS485/WIFI, Optional: 4G/LAN						
Display	LCD & APP						

[1] Please refer to document "SOFAR inverter Model compatible battery list" [2] Battery-AC maximum efficiency of battery charge and discharge [3] Standby loss at rated input voltage  
\*All specifications are subject to change without notice.

# GTX3000-H4~H10

10 / 12.5 / 15 / 17.5 / 20 / 22.5 / 25 kWh

## HV ENERGY STORAGE



### Product advantages

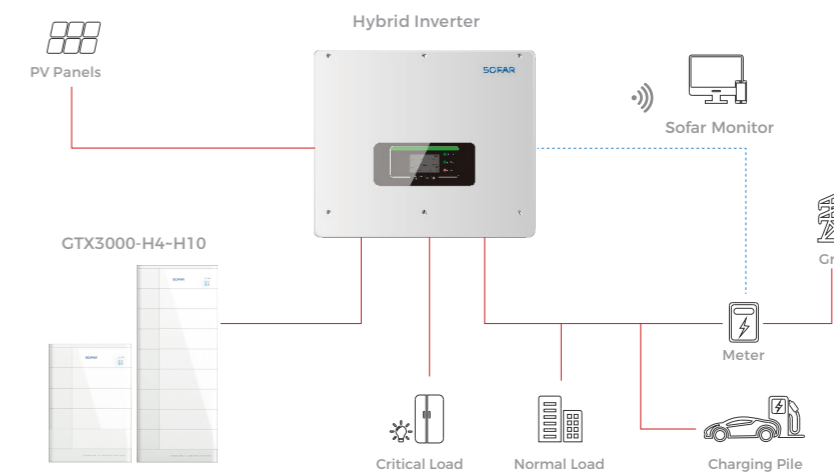
- User-friendly one-button operation, automatic module ID assignment process
- Supports parallel operation (up to 4 units)
- Supports soft startup
- Remote diagnosis and real-time data monitoring
- Simple stack design, saving time and costs
- Efficient automated production line, achieving optimum production quality



Model	GTX 3000-H4	GTX 3000-H5	GTX 3000-H6	GTX 3000-H7	GTX 3000-H8	GTX 3000-H9	GTX 3000-H10
<b>System Parameters</b>							
System schematic							
Battery module	GTX3000: 51.2V, 2.56kWh						
No. of battery modules	4	5	6	7	8	9	10
Rated voltage	204.8V	256V	307.2V	358.4V	409.6V	460.8V	512V
Operating voltage range	182.4V-224.64V	228V-280.8V	273.6V-336.96V	319.2V-393.12V	364.8V-449.28V	410.4V-505.44V	456V-561.6V
Total energy	10kWh	12.5kWh	15kWh	17.5kWh	20kWh	22.5kWh	25kWh
Usable energy	9kWh	11.25kWh	13.5kWh	15.75kWh	18kWh	20.25kWh	22.5kWh
Rated charging/discharging current	25A						
Max. charging/discharging current	30A						
Rated charging/discharging power	5.12kW	6.4kW	7.68kW	8.96kW	10.24kW	11.52kW	12.8kW
Max. units in parallel	4 groups						
<b>General Parameters</b>							
Communication	CAN/RS485/RS232						
Dimension (W*H*D)	515*770*480mm	515*895*480mm	515*1020*480mm	515*1145*480mm	515*1270*480mm	515*1395*480mm	515*1520*480mm
Weight	138kg	168kg	198kg	228kg	258kg	288kg	318kg
Protection rating	IP65						
Cooling	Natural						
Operating temperature	Charge: 0°C - +55°C / Discharge: -20°C - +60°C						
Humidity	5-95%						
Installation	Floor Stand						
Max. operating altitude	2000 m						
<b>Battery Module</b>							
Battery type	LFP						
Rated voltage	51.2V						
Rated capacity	50Ah						
Weight	30kg						
Dimension (W*H*D)	515*125*478.8mm						
Protection rating	IP65						
Standard	UN38.3, IEC62619, IEC62040-1, etc.						

\*All specifications are subject to change without notice.

### Hybrid Solar System



# GTX5000-PRO

5.1 kWh

## LV ENERGY STORAGE



### Product advantages

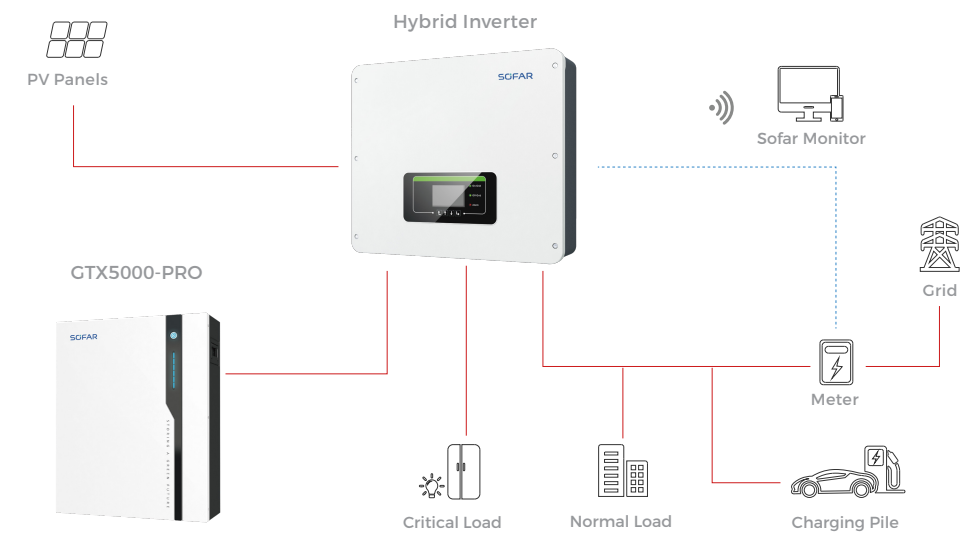
- User-friendly one-button operation, automatic module ID assignment process
- Supports parallel operation (up to 4 units)
- Wall- or floor-mounted installation, saving time and costs
- Remote diagnosis and real-time data monitoring
- Efficient automated production line, achieving optimum production quality

Model	GTX 5000-PRO
<b>System Parameters</b>	
Battery type	LFP
Total energy	5120Wh
Usable energy	4600Wh
Rated voltage	51.2V
Operating voltage range	45.6V-56.16V
Rated charging/discharging power	2560W
Rated charging/discharging current	50A
Max. charging/discharging current	100A
Max. units in parallel	4
<b>General Parameters</b>	
Communication	CAN/RS485/RS232
Dimension (W*H*D)	480*606*171.5mm
Weight	47 kg
Protection rating	IP20
Cooling	Natural
Operating temperature	Charge: 0°C - +55°C / Discharge: -20°C - +60°C
Humidity	5%-95%
Installation	Wall-mounted / Floor stand
Max. operating altitude	2000 m
Standard	UN38.3, IEC62619, IEC62040-1, etc

\*All specifications are subject to change without notice.  
Note: Operating current derating according to cell voltage and battery



### Hybrid Solar System



# BTS E5~E20-DS5

5 / 10 / 15 / 20 kWh

## INTELLIGENT ENERGY STORAGE



### Product advantages

- Modular and integrated design for easy transportation and installation
- Maximal battery energy with pack optimization
- Flexible battery capacity expansion
- Extremely low battery self-consumption in sleep mode
- User-friendly one-button battery operation
- Energy storage specially for ME/HYD 5K~20KTL-3PH inverters



Model	BTS E5-DS5	BTS E10-DS5	BTS E15-DS5	BTS E20-DS5
<b>System Parameters</b>				
System schematic				
Battery type <sup>[1]</sup>	LFP			
Battery distribution unit	BTS 5K-BDU			
Qty.of battery distribution unit	1			
Battery module	BTS 5K			
Qty.of battery modules	1	2	3	4
Battery total energy <sup>[2]</sup>	5.12kWh	10.24kWh	15.36kWh	20.48kWh
Rated capacity	100AH	200Ah	300Ah	400Ah
Rated power	2.5kW	5kW	7.5kW	10kW
Nominal voltage	400V			
Operating voltage range	350-435V			
Max. charging current	6A	12A	18A	24A
Max. discharging current	7.5A	15A	22.5A	30A
<b>General Parameters</b>				
Display	LED indicators			
Communication	CAN			
Dimension(W*H*D)	708*680*170mm	708*1100*170mm	708*1520*170mm	708*1940*170mm
Weight	59kg	110kg	161kg	212kg
Protection rating	IP65			
Cooling	Natural			
Operating temperature <sup>[3]</sup>	Charge: 0°C - +50°C / Discharge: -10°C - +50°C			
Humidity	5-95%			
Installation	Floor Stand			
Max. operating altitude <sup>[4]</sup>	4000m			
<b>Battery Module<sup>[5]</sup></b>				
Model	BTS 5K			
Battery module energy	5.12kWh			
Nominal voltage	400V			
Rated power	2500W			
Dimension(W*H*D)	708*420*170mm			
Weight	50kg			
<b>Battery Distribution Unit</b>				
Model	BTS 5K-BDU			
Max. charging/discharging current	30A			
Dimension(W*H*D)	708*200*170mm			
Weight	7.5kg			
<b>Standard</b>				
	UN38.3,IEC62619, IEC62040-1, etc.			
<b>Ordering and Deliverable Part</b>				
Product ordering model <sup>[6]</sup>	BTS 5K, BTS 5K-BDU			

[1] Rechargeable Li-ion Battery system. [2] Test conditions:0.2C charging/discharging at 25°C,100%DOD. [3] Refer to the temperature derating curve.

[4] If the altitude is >2000m, derating operation is required, refer to the derating curve. [5] The internal battery pack is 51.2V, 100Ah.

[6] Storage system is ordered and delivered in the form of power module and battery module separately with corresponding quantity.

\*All specifications are subject to change without notice.

# SOFAR POWERALL

3 / 3.68 / 4 / 4.6 / 5 / 6 KW  
5 / 10 / 15 / 20 / 25 / 30 kWh

SINGLE-PHASE DUAL MPPT



## Product advantages

- Stacking integrated design, easy installation
- Supports mixing old and new batteries, simple maintenance
- Built-in PCU, battery available energy increased by 6%
- Maximum 16A PV input current, compatible with high-current/ bifacial modules
- Battery with physical and electrical isolation, safer system



Model	ESI 3-6K-S1-HA1	ESI 3-6K-S1-HA2	ESI 3-6K-S1-HA3	ESI 3-6K-S1-HA4	ESI 3-6K-S1-HA5	ESI 3-6K-S1-HA6	
<b>System Parameters</b>							
System Schematic							
Inverter Module	ESI 3-6K-S1						
Qty.of Inverter Modules	1						
Battery Module	BTS 5K						
Qty.of Battery Modules	1	2	3	4	5	6	
Battery total energy <sup>[1]</sup>	5.12kWh	10.24kWh	15.36kWh	20.48kWh	25.6kWh	30.72kWh	
IP Rating	IP65						
Ambient temperature range <sup>[2]</sup>	-10°C~+50°C						
Allowable relative humidity range	5%-95%						
Max. operating altitude <sup>[3]</sup>	4000 m						
Weight	74.5kg	125.5kg	176.5kg	228.5kg	279.5kg	330.5kg	
Dimension (W*H*D)	708*890*170mm	708*1310*170mm	708*1730*170mm	708*1310*170mm 708*900*170mm	708*1310*170mm 708*1320*170mm	708*1730*170mm 708*1320*170mm	
Display	LCD & APP						
Communication	RS485/CAN/WiFi, Optional: Ethernet/4G						
Product ordering model	[ESI 3-6K-S1 Inverter Module] + N * [BTS 5K Battery Module]						
<b>Inverter Module</b>	ESI 3K-S1	ESI 3.68K-S1	ESI 4K-S1	ESI 4.6K-S1	ESI 5K-S1	ESI 5K-S1-A*	ESI 6K-S1
<b>PV Input</b>							
Recommended Max. PV Input Power	4500Wp	5400Wp	6000Wp	6900Wp	7500Wp	7500Wp	9000Wp
Max. Input Voltage	550 Vd.c.						
Start-up Voltage	100 Vd.c.						
Rated Input Voltage	360 Vd.c.						
MPPT Voltage Range	85-520 Vd.c.						
Number of MPPT Trackers	1/1						
Max. Input Current	16/16 A						
Max. Isc	22.5/22.5 A						
<b>Battery</b>							
Rated Voltage Range	400 Vd.c.						
Max. charging/discharging current	20 A						
<b>AC Input(Grid)</b>							
Rated Input Voltage	L+N+PE,230 Va.c.						
Rated Input Frequency	50/60 Hz						
Max. Input Current	26.1 A	32.0 A	34.8 A	40.0 A	43.5 A	43.5 A	52.2 A
<b>AC Output(Backup)</b>							
Rated Output Voltage	L+N+PE,230 Va.c.						
Rated Output Frequency	50/60 Hz						
Rated Output Power	3 kW	3.68 kW	4 kW	4.6 kW	5 kW	5 kW	6 kW
Max. Apparent Power	3 kVA	3.68 kVA	4 kVA	4.6 kVA	5 kVA	5 kVA	6 kVA
Peak Output Apparent Power <sup>[4]</sup>	4500VA, 60s	5520VA, 60s	6000VA, 60s	6900VA, 60s	7500VA, 60s	7500VA, 60s	9000VA, 60s
Switching time	10ms, default						
Dimension (W*H*D)	708*410*170mm						
Weight	22.5kg						
<b>Battery Module</b>							
Battery Module	BTS 5K						
Battery Type	LFP						
Battery module energy	5.12kWh						
Rated Power	2500W						
Topology	Transformer isolation						
Dimension (W*H*D)	708*420*170mm						
Weight	50kg						

[1] Test conditions:0.2C charging/discharging at 25°C,100%DOD. [2] Please refer to the temperature derating curve.  
[3] If the altitude is >2000 m, derating is required. Please refer to the derating curve. [4] In a system with sufficient PV and battery power  
\* All specifications are subject to change without notice.



# GTX5000S

5.1 kWh

## LV ENERGY STORAGE



### Product advantages

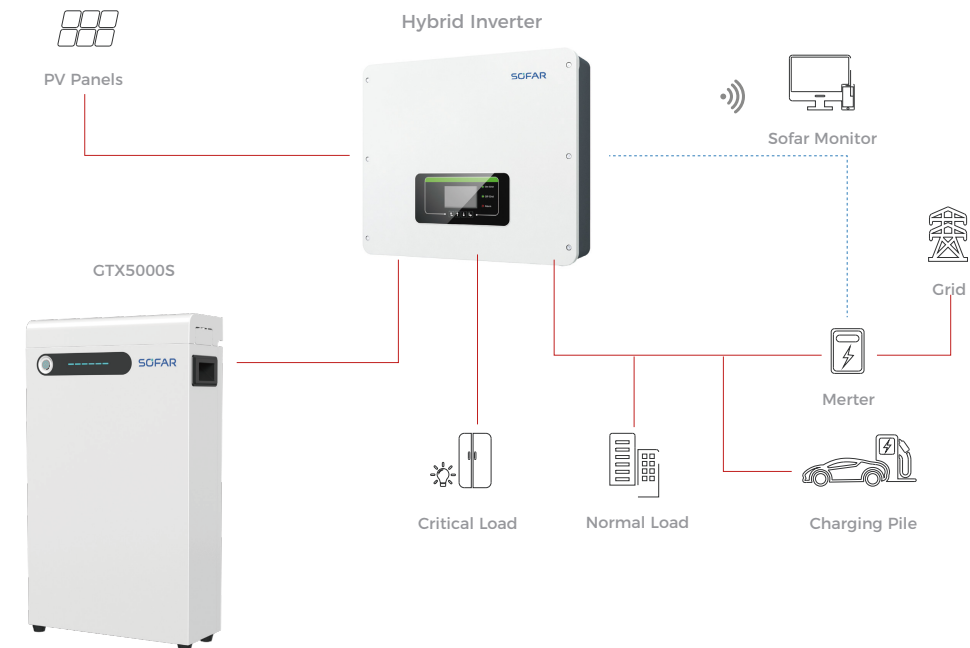
- Safe And Reliable LEP Battery
- Expansion of holding and parallel operation, and maximum holding and parallel operation of 4 units
- Automatic allocation of parallel ID, simple and convenient operation
- Wall mounted or floor mounted, saving installation time and cost
- Remote monitoring of data and software upgrades
- IP65 protection for outdoor installation safety

Model	GTX 5000S
<b>System Parameters</b>	
Battery type	LFP
Total energy	5120Wh
Usable energy	4608Wh
Rated voltage	51.2V
Operating voltage range	45.6V-56.16V
Rated charging/discharging power	2560W
Rated charging/discharging current	50A
Max. charging/discharging current	50A
Max.Parallel Quantity	4pcs
<b>General Parameters</b>	
Communication	CAN/RS232
Dimension (W*H*D)	396*681*154.5mm
Weight	45 kg
Protection rating	IP65
Cooling	Natural
Operating temperature	Charge: 0°C - +55°C / Discharge: -20°C - +60°C
Humidity	5%-95%
Installation	Wall-mounted / Floor stand
Max. operating altitude	2000 m
Standard	UN38.3, IEC62619, IEC62040-1, etc

\*All specifications are subject to change without notice.



### Hybrid Solar System

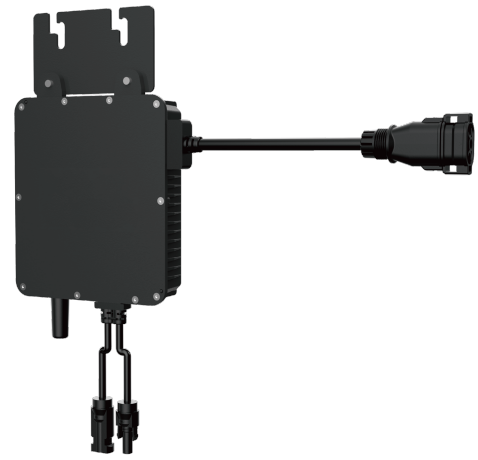




## **04** Micro Inverter Energy Storage Solution

# MR500

## MICRO INVERTER



### Product advantages

- Easy to install and maintain with small size, light weight
- Up to 20A DC input current to be compatible with the high power PV module
- Low start up voltage and wide MPPT voltage range
- Safer with Rapid Shutdown function and isolated HF transformer
- Electrolytic-free capacitor for long life
- Sub 1G/Wi-Fi wireless communication
- IP67 protection grade, more reliable

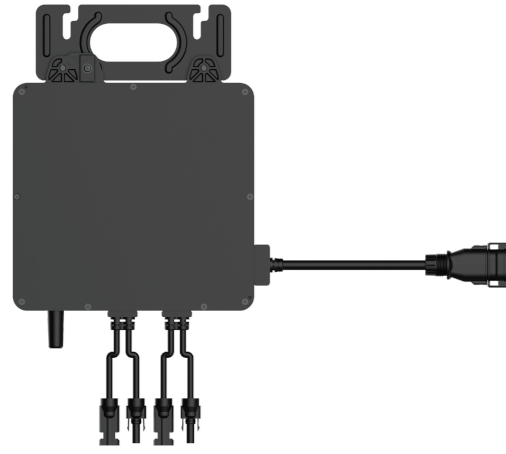


Model	MR500
<b>DC input</b>	
Recommended PV Module Power (STC) Range	200Wp to 670Wp+
Voltage range	22-58V
MPPT operating voltage range	26-55V
Number of MPPT	1
Max. number of input strings per MPPT	1
Max. input current per MPPT	20A
Max. short-circuit current per MPPT	25A
<b>AC Output</b>	
Rated output power	500W
Max. output power	600VA
Rated output current	2.3/2.2/2.1A
Rated grid voltage <sup>[1]</sup>	220/230/240V
Grid Voltage Range <sup>[2]</sup>	176-276V
Rated grid frequency	50/60Hz
Grid frequency range	45-66Hz
THDi	≤3%
Power factor	0.8 leading-0.8 lagging
Maximum units per branch <sup>[3]</sup>	6
<b>Efficiency</b>	
Max. MPPT efficiency	99.5%
Peak Efficiency	97.5%
<b>General Datas</b>	
Operating temperature range <sup>[4]</sup>	-40~+65°C
Relative humidity range	5%-95% (non-condensing)
Max. operating altitude <sup>[5]</sup>	<4000m
Topology	Galvanically Isolated
Degree of protection	IP67
Dimensions (W*H*D)	145*165*43mm
Cooling	Natural Cooling
Weight	2.2kg
Communication	Sub-1G/ Wi-Fi
Standard	IEC/EN 61000-6-1/-3, IEC62109-1/-2, VDE4105, EN50549-1, EN50549-1 (NFC) typeA, ABNT NBR 16149/50

[1], [2] According to local utility requirements. [3] Refer to the local requirements for qty. of microinverter per branch. [4] Refer to the temperature derating curve. [5] Refer to the derating curve.  
 \* All specifications are subject to change without notice.

# MR600 / 800 / 1000

## MICRO INVERTER



### Product advantages

- Easy to install and maintain with small size, light weight
- Up to 20A DC input current to be compatible with the high power PV module
- Low start up voltage and wide MPPT voltage range
- Safer with Rapid Shutdown function and isolated HF transformer
- Electrolytic-free capacitor for long life
- Sub 1G/Wi-Fi wireless communication
- IP67 protection grade, more reliable

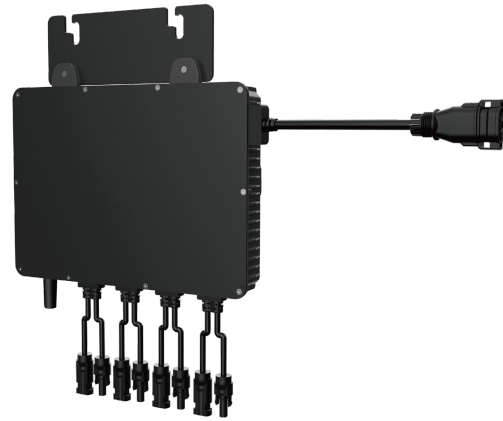


Model	MR600	MR800	MR1000
<b>DC input</b>			
Recommended PV Module Power (STC) Range	200Wp to 670Wp+	200Wp to 670Wp+	200Wp to 670Wp+
Voltage range	22-58V	22-58V	22-58V
MPPT operating voltage range	26-55V	26-55V	26-55V
Number of MPPT	2	2	2
Max. number of input strings per MPPT	1	1	1
Max. input current per MPPT	20A	20A	20A
Max. short-circuit current per MPPT	25A	25A	25A
<b>AC Output</b>			
Rated output power	600W	800W	1000W
Max. output power	660VA	880VA	1100VA
Rated output current	2.72/2.61/2.5A	3.64/3.48/3.33A	4.5/4.3/4.2A
Rated grid voltage <sup>[1]</sup>	220/230/240V	220/230/240V	220/230/240V
Grid Voltage Range <sup>[2]</sup>	176-276V	176-276V	176-276V
Rated grid frequency	50/60Hz	50/60Hz	50/60Hz
Grid frequency range	45-66Hz	45-66Hz	45-66Hz
THDi	≤3%	≤3%	≤3%
Power factor	0.8 leading-0.8 lagging	0.8 leading-0.8 lagging	0.8 leading-0.8 lagging
Maximum units per branch <sup>[3]</sup>	6	6	6
<b>Efficiency</b>			
Max. MPPT efficiency	99.5%	99.5%	99.5%
Peak Efficiency	97.5%	97.5%	97.5%
<b>General Datas</b>			
Operating temperature range <sup>[4]</sup>	-40~+65°C	-40~+65°C	-40~+65°C
Relative humidity range	5%-95% (non-condensing)	5%-95% (non-condensing)	5%-95% (non-condensing)
Max. operating altitude <sup>[5]</sup>	<4000m	<4000m	<4000m
Topology	Galvanically Isolated	Galvanically Isolated	Galvanically Isolated
Degree of protection	IP67	IP67	IP67
Dimensions (W*H*D)	225*210*43mm	225*210*43mm	225*210*43mm
Cooling	Natural Cooling	Natural Cooling	Natural Cooling
Weight	4.2kg	4.2kg	4.2kg
Communication	Sub-1G/Wi-Fi	Sub-1G/Wi-Fi	Sub-1G/Wi-Fi
Standard	IEC/EN 61000-6-1/-3, IEC62109-1/-2, VDE4105, EN50549-1, EN50549-1 (NFC) typeA, ABNT NBR 16149/50		

[1],[2] According to local utility requirements. [3] Refer to the local requirements for qty. of microinverter per branch. [4] Refer to the temperature derating curve. [5] Refer to the derating curve.  
 \* All specifications are subject to change without notice.

# MR1600 / 2000 / 2400

## MICRO INVERTER



### Product advantages

- Easy to install and maintain with small size, light weight
- Up to 20A DC input current to be compatible with the high power PV module
- Low start up voltage and wide MPPT voltage range
- Safer with Rapid Shutdown function and isolated HF transformer
- Electrolytic-free capacitor for long life
- Sub 1G/Wi-Fi wireless communication
- IP67 protection grade, more reliable



Model	MR1600	MR2000	MR2400
<b>DC input</b>			
Recommended PV Module Power (STC) Range	200Wp to 670Wp+	200Wp to 670Wp+	200Wp to 670Wp+
Voltage range	22-58V	22-58V	22-58V
MPPT operating voltage range	26-55V	26-55V	26-55V
Number of MPPT	4	4	4
Max. number of input strings per MPPT	1	1	1
Max. input current per MPPT	20A	20A	20A
Max. short-circuit current per MPPT	25A	25A	25A
<b>AC Output</b>			
Rated output power	1600W	2000W	2400W
Max. output power	1760VA	2200VA	2640VA
Rated output current	7.3/7.0/6.7A	9.1/8.7/8.3A	10.9/10.4/10A
Rated grid voltage <sup>[1]</sup>	220/230/240V	220/230/240V	220/230/240V
Grid Voltage Range <sup>[2]</sup>	176-276V	176-276V	176-276V
Rated grid frequency	50/60Hz	50/60Hz	50/60Hz
Grid frequency range	45-66Hz	45-66Hz	45-66Hz
THDi	≤3%	≤3%	≤3%
Power factor	0.8 leading-0.8 lagging	0.8 leading-0.8 lagging	0.8 leading-0.8 lagging
Maximum units per branch <sup>[3]</sup>	4	4	4
<b>Efficiency</b>			
Max. MPPT efficiency	99.5%	99.5%	99.5%
Peak Efficiency	97.5%	97.5%	97.5%
<b>General Datas</b>			
Operating temperature range <sup>[4]</sup>	-40~+65°C	-40~+65°C	-40~+65°C
Relative humidity range	5%-95% (non-condensing)	5%-95% (non-condensing)	5%-95% (non-condensing)
Max. operating altitude <sup>[5]</sup>	<4000m	<4000m	<4000m
Topology	Galvanically Isolated	Galvanically Isolated	Galvanically Isolated
Degree of protection	IP67	IP67	IP67
Dimensions (W*H*D)	295*210*43mm	295*210*43mm	295*210*43mm
Cooling	Natural Cooling	Natural Cooling	Natural Cooling
Weight	5.5kg	5.5kg	5.5kg
Communication	Sub-1G/Wi-Fi	Sub-1G/Wi-Fi	Sub-1G/Wi-Fi
Standard	IEC/EN 61000-6-1/-3, IEC62109-1/-2, VDE4105, EN50549-1, EN50549-1 (NFC) typeA, ABNT NBR 16149/50		

[1], [2] According to local utility requirements. [3] Refer to the local requirements for qty. of microinverter per branch. [4] Refer to the temperature derating curve. [5] Refer to the derating curve.

\* All specifications are subject to change without notice.

# HU80

## HUB



### Product advantages

- Support whole home load and partial load backup applications
- Export limitation function supported
- Built-in EMS function, remote monitoring and management of microinverters and batteries
- Safe and reliable, with the system EPO function
- Multiple wireless communication interfaces



Model	HU80
<b>Input From Grid</b>	
Rated Voltage	220/230/240V
Voltage Range	176-276V
Rated Frequency	50/60Hz
Frequency Range	45-55/55-65Hz
Max. Input Current	80A
Circuit breakers (as needed) <sup>[1]</sup>	Not included, must order separately
<b>Output to distribution panel</b>	
Number for AC outputs	1
Rated Voltage	220/230/240V
Voltage Range	176-276V
Rated Frequency	50/60Hz
Frequency Range	45-55/55-65Hz
Max. output Current	80A
Circuit breakers (as needed) <sup>[2]</sup>	Not included, must order separately
<b>Input from inverter/AC battery</b>	
Number for AC outputs	4
Max. output Current	80A
Rated Voltage	220/230/240A
Voltage Range	176-276V
Rated Frequency	50/60Hz
Frequency Range	45-55/55-65Hz
Circuit breakers <sup>[3]</sup>	32A
<b>Generator</b>	
Number for AC outputs	1
Max.Input Power	12kW
Max.Input Current	52A
Dry Contact	Yes
<b>Smart Load</b>	
Number for AC outputs	1
Max.Output Power	6kW
Max.Output Current	30A
RS485 Communication	Yes
<b>General Datas</b>	
Operating temperature range	-30--50°C
Relative humidity range	5%-95% (non-condensing)
Max. operating altitude	<4000m
Degree of protection	IP65
Display	LED
Cooling	Natural Cooling
Communication	Wi-Fi, Ethernet, RS485, Sub-1G, Optional: 4G
EPO	Yes
Switch Time	< 40ms
SPD	II
Dimensions (W*H*D)	450 x 650*175mm
Weight (kg)	20kg
Installation method	Wall Mounted
Standard	IEC61000-6-1, IEC61000-6-3, IEC61439, RED

[1],[2] Refer to the Sofar recommendation list, otherwise the product is not within the warranty. [3] The default circuit breaker rating is 32A.

\* All specifications are subject to change without notice.

# BT5000A

## AC BATTERY



### Product advantages

- Wi-Fi wireless communication
- Integrated battery and PCS, compact installation
- Flexible expansion, up to 8 units in parallel
- Wall or floor mounted installation, saving time and cost
- User-friendly one-button battery operation



Model	BT5000A
<b>AC Output(On Grid)</b>	
Rated Power	2500W
Rated Apparent Power	2750VA
Rated Current	11.4/10.9/10.4A
Max. Current	12.5/12/11.5A
Rated AC Voltage	220/230/240V
Grid Voltage Range	176-276V
Rated Grid Frequency	50/60Hz
Grid Frequency Range	45-66Hz
THDI	<3%
PF	0.8 leading-0.8 lagging
<b>AC Output(Off Grid)</b>	
Rated Power	2500W
Peak output Power	3500W,10s
Rated Current	11.4/10.9/10.4A
Rated Voltage	220/230/240V
Rated Frequency	50/60Hz
THDV	<3%
<b>Battery Side</b>	
Battery Type <sup>[1]</sup>	LFP
Rated Voltage	51.2V
Battery total Energy <sup>[2]</sup>	5.12kWh
Usable capacity <sup>[3]</sup>	4.6kWh
<b>General Datas</b>	
Operating temperature range <sup>[4]</sup>	Discharge: -10~+50°C Charge: 0~+50°C
Relative humidity range	5%-95% (non-condensing)
Max. operating altitude <sup>[5]</sup>	<4000m
Degree of protection	IP66
Display	LED
Cooling	Natural Cooling
Communication	Wi-Fi, RS485, Optional: 4G, Ethernet
SPD	II
Dimensions (W*H*D)	400*800*175mm
Weight (kg)	50kg
Installation method	Wall Mounted OR Floor Mounted
Standard	IEC62109, IEC62477, IEC62619, IEC 61000, UN38.3, VDE 4105, EN50549-1

[1] Rechargeable li-ion battery system.  
 [2] Test conditions: 0.2C charging/discharging at 25°C, 100%DOD.  
 [3] Usable energy is based on battery cell only.  
 [4] Refer to the temperature derating curve.  
 [5] If the altitude is more than 2000m, derating operation is required. Refer to the derating curve.  
 \*All specifications are subject to change without notice.



## 05 C&I Energy Storage Solution



# SOFAR 100K~125KTLX-G4

100 / 110 / 125 kW

THREE-PHASE TEN MPPTS, ESS READY



## Product advantages

- Max. efficiency up to 98.6%
- IP66 & C5 design for outdoor
- Maximum 10 MPPTs, 40A per MPPT
- Type I + II SPD for DC
- I-V curve scanning function
- Battery connector for ESS, DC coupled



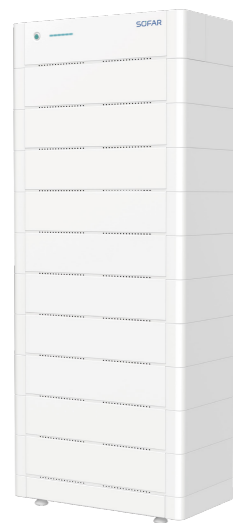
Model	SOFAR 100KTLX-G4	SOFAR 110KTLX-G4	SOFAR 125KTLX-G4
<b>Input (DC)</b>			
Max. input voltage	1100V		
Rated input voltage	625V		
Start-up voltage	200V		
MPPT operating voltage range	180V-1000V		
Number of MPP trackers	10		
Number for DC inputs	20		
Max. input MPPT current	10*40A		
Max. input short circuit current	10*50A		
<b>AC Output(On Grid)</b>			
Rated output power	100kW	100kW	110kW
Max. apparent power	100kVA@45°C / 90kVA@50°C	110kVA@45°C / 100kVA@50°C	125kVA@45°C / 110kVA@50°C
Max. output current	152A@380V / 145A@400V / 139.2A@415V	167.2A@380V / 159.5A@400V / 153.1A@415V	190A@380V / 181.2A@400V / 174A@415V
Rated output voltage	3/N/PE, 380V / 400V / 415V		
Output voltage range	310-480V		
Rated output frequency	50/60Hz		
Output frequency range	45-55Hz/55-65Hz		
Active power adjustable range	0-100%		
THDi	<1%(@100%P)		
Power factor	1 (+/-0.8 adjustable)		
<b>ESS Parameter</b>			
DC voltage range	200-1100V		
Max. charge / discharge current	100A / 100A		
Max. power(charge / discharge)	62.5kW / 62.5kW		
BMS communication	CAN		
<b>AC Output(Off Grid)</b>			
Rated output power	100kW	100kW	110kW
Max. apparent power	100kVA@45°C / 90kVA@50°C	110kVA@45°C / 100kVA@50°C	125kVA@45°C / 110kVA@50°C
Max. output current	152A@380V / 145A@400V / 139.2A@415V	167.2A@380V / 159.5A@400V / 153.1A@415V	190A@380V / 181.2A@400V / 174A@415V
Rated output voltage	3/N/PE, 380V / 400V / 415V		
Rated output frequency	50/60Hz		
THDV	<3%(Linear Load)		
<b>Efficiency (PV)</b>			
Max. efficiency	98.60%		
European efficiency	98.30%		
<b>Protection</b>			
DC reverse polarity protection	Yes		
Anti-islanding protection	Yes		
Leakage current protection	Yes		
Ground fault monitoring	Yes		
PV-array string fault monitoring	Yes		
DC switch	Yes		
AFCI	Yes		
SPD	PV: type I + II , AC: type II		
<b>General Data</b>			
Ambient temperature range	-30°C~+60°C		
Topology	Transformerless		
Degree of protection	IP66		
Allowable relative humidity range	0-100%		
Max. operating altitude	4000m(>3000m derating)		
Cooling	Smart air cooling		
Dimension(W*H*D)	970*695*325mm		
Weight	75kg		
Display	LCD & Bluetooth +APP		
Communication	RS485 / WIFI		
Standard	EN/IEC 62109-1/2, EN/IEC 61000-6-2/-4, IEC 61000-3-4/-5, EN 50530, EN 50549, IEC62116, IEC 61727, IEC 61683, IEC 60068-2-1/2/14/30, VDE V 0126-1-1, UTE C15-712-1, VDE-AR-N 4105/4110, CEI 0-21/16, NTS 631, UNE 217001, UNE 217002		

\*All specifications are subject to change without notice.

# CBS5000-H4~H10

20 / 25 / 30 / 35 / 50 / 45 / 50 kWh

## HV ENERGY STORAGE



### Product advantages

- Active equalization between battery packs, higher usable energy.
- Up to 4 racks in parallel, 20~200kWh wide battery energy range.
- One-button automatic recognition, simple and convenient operation.
- Simple stack design, saving time and costs.
- IP65 protection rating, more reliable and safe.



Model	CBS 5000-H4	CBS 5000-H5	CBS 5000-H6	CBS 5000-H7	CBS 5000-H8	CBS 5000-H9	CBS 5000-H10
<b>System Parameters</b>							
System							
Battery Module	CBS5000 : 51.2V 100Ah						
No.of battery modules	4	5	6	7	8	9	10
Rated voltage	204.8V	256V	307.2V	358.4V	409.6V	460.8V	512V
Operating voltage range	179.2V-233.6V	224V-292V	268.8V-350.4V	313.6V-408.8V	358.4V-467.2V	403.2V-525.6V	448V-584V
Total energy [1]	20.48kWh	25.60kWh	30.72kWh	35.84kWh	40.96kWh	46.08kWh	51.20kWh
Usable energy [2]	18.43kWh	23.04kWh	27.65kWh	32.26kWh	36.86kWh	41.47kWh	46.08kWh
Rated charge power	10.24kW	12.8kW	15.36kW	17.92kW	20.48kW	23.04kW	25.6kW
Rated discharge power	10.24kW	12.8kW	15.36kW	17.92kW	20.48kW	23.04kW	25.6kW
Rated charge/discharge current	50A						
Max. charge current	50A						
Max. discharge current	60A						
Scalability	Up to 4 racks in parallel						
<b>General Parameters</b>							
Communication	CAN						
Dimension(W*H*D)	730*881*420mm	730*1033*420mm	730*1185*420mm	730*1337*420mm	730*1489*420mm	730*1641*420mm	730*1793*420mm
Weight	210kg	257kg	304kg	351kg	398kg	445kg	492kg
Protection rating	IP65						
Cooling	Smart air cooling						
Operating temperature [3]	Charge : 0°C-50°C; Discharge : -10°C-50°C						
Humidity	5%RH-95%RH (non-condensing)						
Altitude [4]	≤4000m						
Equalization method	Active equalization between battery modules						
Installation	Floor stand						
Display	LED						
<b>Battery Module</b>							
Battery type [5]	LFP						
Rated capacity	100Ah						
Rated voltage	51.2V						
Rated charge/discharge current	50A						
Max. charge current	50A						
Max. discharge current	60A						
Dimension(W*H*D)	730*152*420mm						
Weight	47kg						
Protection rating	IP65						
Standard	UN38.3 , IEC 62619 , IEC 61000-6-2/-3 , IEC62040-1						

[1] Test conditions: 0.2C charging/discharging at 25°C, 100%DOD. [2] Usable energy is base on battery cell only.  
 [3] Refer to the temperature derating curve. [4] If the altitude is more than 2000m,derating operation is required.Refer to the derating curve.  
 [5] Rechargeable li-ion battery system.  
 \* All specifications are subject to change without notice.

# CBS5000-BOT

## BATTERY RACK OPTIMIZATION MODULE



### Product advantages

- Small size, light weight, easy to install.
- Up to 4 units in parallel.
- Integrated battery tower management to improve usable energy.
- One-button automatic recognition, simple and convenient operation.
- High efficiency with three-level technology.
- IP65 for outdoor use.



Model	CBS5000-BOT
<b>Battery side</b>	
Rated voltage	512V
Voltage range	179.2-584V
Max.charge current	50A
Max.discharge current	60A
<b>BUS side</b>	
Rated voltage	600V
Voltage range	510-980V
Rated power	25.24kW
Rated current	42A
Max.efficiency	99%
<b>General Parameters</b>	
Overvoltage protection	Yes
Overcurrent protection	Yes
Short circuit protection	Yes
Battery reverse connection protection	Yes
insulation impedance detection	Yes
Cooling	Smart air cooling
Communication	CAN, RS485
Dimension(W*H*D)	500*400*190mm
Weight	16.5kg
Protection rating	IP65
Operating temperature <sup>[1]</sup>	-30-60°C
Humidity	5%RH-95%RH (non-condensing)
Altitude <sup>[2]</sup>	≤4000m
Installation	Wall mounted
Display	LED
SPD	Type II
<b>Standard</b>	IEC 62477-1, IEC 61000-6-2/-4

[1] Refer to the temperature derating curve.  
 [2] If the altitude is more than 2000m,derating operation is required.Refer to the derating curve.  
 \*All specifications are subject to change without notice.



## 06 Utility ESS

# Utility ESS

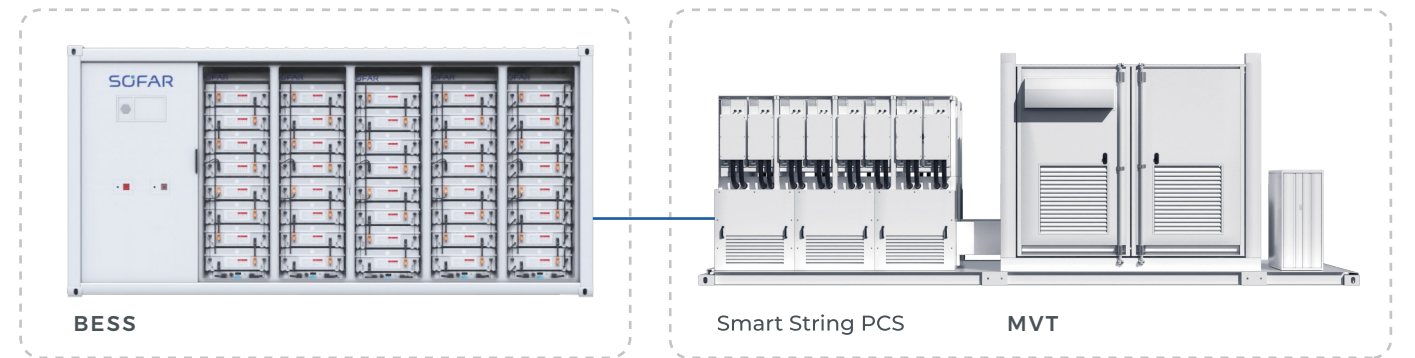
# POWER MASTER



## Utility ESS – PowerMaster

- LESS LCOS
- High Efficiency and Flexibility
- Ultimate Security
- Intelligent Stability

### Utility-Scale Energy Storage System Solution



#### Air-Liquid Mixing

Air-Cooled+Liquid-Cooled  
Intelligent Heat Dissipation



#### Modular Design

Minimal operation and maintenance  
One rack for one management  
Automatic coordination control,  
to ensure full power operation of PCS.

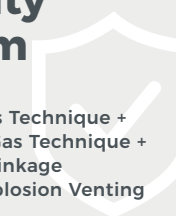


#### Suitable For Large Cells

Higher Energy Density  
**3.93**MWh

#### 3+2 Security System

Cell-Level Fire Extinguishing Gas Technique +  
Cabin-Level Fire Extinguishing Gas Technique +  
Water Firefighting Three-Level Linkage  
Combustible Gas Emission + Explosion Venting  
Design



#### Combined Design

A 40-foot Combined scheme can  
be used to reduce the floor space  
by more than 30%.

#### High conversion efficiency in the full power range

Smart coordination strategy to ensure high efficiency  
performance of PCS full power-range





## Product Advantages

- Uniform Flow Liquid-Cooled + Intelligent Air Cooled
- Better temperature uniformity, the temperature difference of cells in the battery pack is <math><2.5^{\circ}\text{C}</math>
- Anti-Condensation Design
- Combined Design: The 40-foot combination scheme reduces the floor area by more than 30%.
- Three-level linkage of cell-level gas fire protection + cabin-level gas fire protection + water fire protection
- Combustible Gas Emission + Explosion Venting Design
- Prevent secondary re-ignition in the battery compartment
- Ultimate Safety Design

## BESS Specifications

Cell Type	LFP/280Ah	LFP/320Ah
Nominal Capacity (BOL)	3.44MWh	3.93MWh
Working Voltage Range	960 ~ 1401.6V	
Charge and Discharge Rate	≤0.5P	
Operating Ambient Temperature	-30°C ~ 55°C	
Working Environment Relative Humidity	0 ~ 100%(No Condensation)	
Working Altitude	≤4000m	
Cooling Method	Air Cooling + Liquid Cooling	
Fire Fighting Method	Perfluoro Gas Firefighting (Cell Level & Cabin Level) + Backup Water Firefighting + Combustible Gas Emission + Explosion Venting Design	
Communication Interface	Ethernet/CAN/RS485	
Communication Protocol	IEC61850、IEC104/CAN2.0/Modbus	
Degree of Protection	IP55	
Anti-Corrosion Grade	C4	
Dimensions (W*D*H)	6058*2438*2896mm	
Weight	~34T	~35T
Standards & Certifications	GB/T36276/IEC62619/UL1973/UL9540A/UN3536	

## PACK Specifications

Model	S1G-LP430	S1G-LP490
Cell Type	LFP	
Series and Parallel Mode	1P48S	
Nominal Capacity/Energy	280Ah/43kWh	320Ah/49kWh
Rated Voltage	153.6V	
Working Voltage Range	120~175.2V	
Charge and Discharge Rate	≤0.5P	
Working Temperature	-30°C ~ 55°C	
Working Environment Relative Humidity	0 ~ 100%(No Condensation)	
Working Altitude	≤4000m	
Cooling Method	Liquid Cooling	
Fire Fighting Method	Cell-Level Firefighting (Perfluoro)	
Communication Interface	CAN	
Degree of Protection	IP67	
Dimensions (W*D*H)	765*1050*245mm	
Weight	≤310kg	≤322kg
Standards & Certifications	GB/T36276、IEC62619、UL1973、UN38.3	

## Rack Specifications

Nominal Energy	344kWh	393kWh
Configuration	1P384S	
Rated Voltage	1228.8V	
Working Voltage Range	960 ~ 1401.6V	
Charge and Discharge Rate	≤0.5P	
Working Temperature	-30°C ~ 55°C	
Working Environment Relative Humidity	0 ~ 100%(No Condensation)	
Working Altitude	≤4000m	
Cooling Method	Liquid Cooling	
Fire Fighting Method	Perfluoro Gas Firefighting	
Communication Interface	CAN、Dry Contact	
Dimensions (W*D*H)	1050*1105*2400mm	
Weight	≤3.2T	≤3.3T
Standards & Certifications	GB/T36276、IEC62619	

\* All specifications are subject to change without notice.

# Smart String PCS

## Product Advantages



- Support 1500Vdc battery system, higher system efficiency
- Three-level topology, 99% peak efficiency, lower power loss
- Modular design, easy installation, easy maintenance, lower OPEX
- Rack-level management, more available capacity
- Support active and reactive power response, four-quadrant operation
- Support high and low voltage ride through
- Power grid adaptability, support weak grid SCR1.2.
- Strong environmental adaptability : module, IP66 , system, IP55
- Equipped with intelligent control algorithm, can be expanded in parallel



Specification	PCS Module		PCS System	
MODEL	EBI 215K	EBI 250K	EBI 1725K	EBI 2000K
<b>DC Side Parameters</b>				
Maximum DC Voltage	1500 V		1500 V	
DC Voltage Working Range	1000 ~ 1500 V	1180 ~ 1500 V	1000 ~ 1500 V	1180 ~ 1500 V
Maximum DC Current	242 A		968 A *2	
<b>Grid Side Parameters</b>				
Rated AC Power	215 kW	250 kW	1725 kW	2000 kW
Maximum AC Active Power	237 kW	275 kW	1898 kW	2200 kW
Rated AC Current	180 A		1443 A	
Maximum AC Current	198 A		1588 A	
Rated Grid Voltage	690 V	800 V	690 V	800 V
Grid Voltage Range	586.5-759V	680-880V	586.5-759V	680-880V
Rated Grid Frequency	50 / 60 Hz		50 / 60 Hz	
Grid Frequency Range	45-55Hz / 55-65Hz		45-55Hz / 55-65Hz	
Power Factor	-1~1,Adjustable		-1~1,Adjustable	
Current Total Harmonic Distortion (@Rated Power)	<1%		<3%	
<b>System Characteristics</b>				
Working Temperature	-35℃~60℃		-35℃~60℃	
Relative Humidity	0 ~ 100%(No Condensation)		0 ~ 100%(No Condensation)	
Maximum Working Altitude	4000m		4000m	
Ingress Protection	IP66		IP55	
<b>Mechanical Parameters</b>				
Dimensions (W*H*D)	770 x 850 x 310 mm		2790 x 2110 x 980 mm	
Weight	<87 kg		<1500 kg	

\* All specifications are subject to change without notice.



## 07 Smart Energy



# STICK LOGGER

## LSW-3 / LSE-3



### Product advantages

- Independent from inverter to protect parts inside the inverter eliminate potential problems
- Outdoor design,easier to replace faulty equipment
- Plug-and-play for easy installation, no external power supply needed
- IP65 design, adaptable to bad weather condition
- External light indicator, logging status at a glance
- User-friendly App platform to monitor yield performance any time, anywhere

Model	LSW-3	LSE-3
<b>General parameters</b>		
Working voltage	DC 5V	
Working power	1.5W	1W
Local data interface	USB	
LED	3	
<b>Communication parameter</b>		
Remote data interface	Wi-Fi	LAN
Flash memory	8MB	2MB
Connected inverters	1	
<b>Software parameter</b>		
Serial communication rate	Default 9600bps (1200-115200bps adjustable)	
Data acquisition interval	Default 5min (1-15min optional)	
User configuration	AT+ instruction set	
Firmware upgrade	Remote web	
<b>Environmental parameter</b>		
Working temperature	-30~+70°C	
Working humidity	10%-90% (Condensation free)	
Protection grade	IP65	
<b>Other</b>		
	Real-time control, Data resume	

\*All specifications are subject to change without notice.



SOFAR COMMUNICATION MANAGER



**Product advantages**

- RS485, PBUS, Ethernet, Fiber-optic network
- Supports up to 60 inverters
- Supports dual-split, two-winding transformers and can be configured with dual PBUS modules
- Can be connected to a wide range of environmental collectors, electricity meters, box transformer, measurement and control equipment
- Built-in Surge protectors
- IP65 protection for long-term stable outdoor operation
- Supports remote/local batch upgrades and single unit upgrades
- Remote control, giving commands such as power settings



Model		SOFAR COMMUNICATION MANAGER PSC100*
<b>General parameters</b>		
Auxiliary power input	Voltage range 100Vac-240Vac; Frequency range: 50-60Hz	
Communication mode	With inverters: RS485/PBUS	
	With monitoring platforms: SFP/ETH	
Max. number of connected devices	RS485: 60pcs, PBUS: 60pcs	
Max. transmission distance	RS485:1000M, PBUS:1000M	
PBUS (communication) voltage input	Voltage range: 320Vac-920Vac, Frequency range: 50H-60Hz	
Fibre optic ports	Max. transmission distance: 20KM	
	Interface method: LC	
<b>Environmental parameters</b>		
Operating temperature	-30--+60°C	
Storage and transport temperature	-40°C--+85°C	
Operating altitude	<4000m	
Protection level	IP65	
Relative humidity	<95%, Non-condensing	
Surge Protection	AC Type II	
<b>Mechanical parameters</b>		
Cooling methods	Natural cooling	
Dimensions (W x D x H)	760 x 580 x 220mm	
<b>Other</b>		
Installation mode	Wall mounting/Flat mounting	

\* All specifications are subject to change without notice.

# SAR-100

## FEED-IN LIMITATION BOX



### Product advantages

- Local APP configuration, easy to use
- Standard air switch for safe use
- 2.4G / WIFI transmits data
- Real-time monitoring of grid connection
- With multi-machine Anti-reflux function, up to 10 devices can be connected



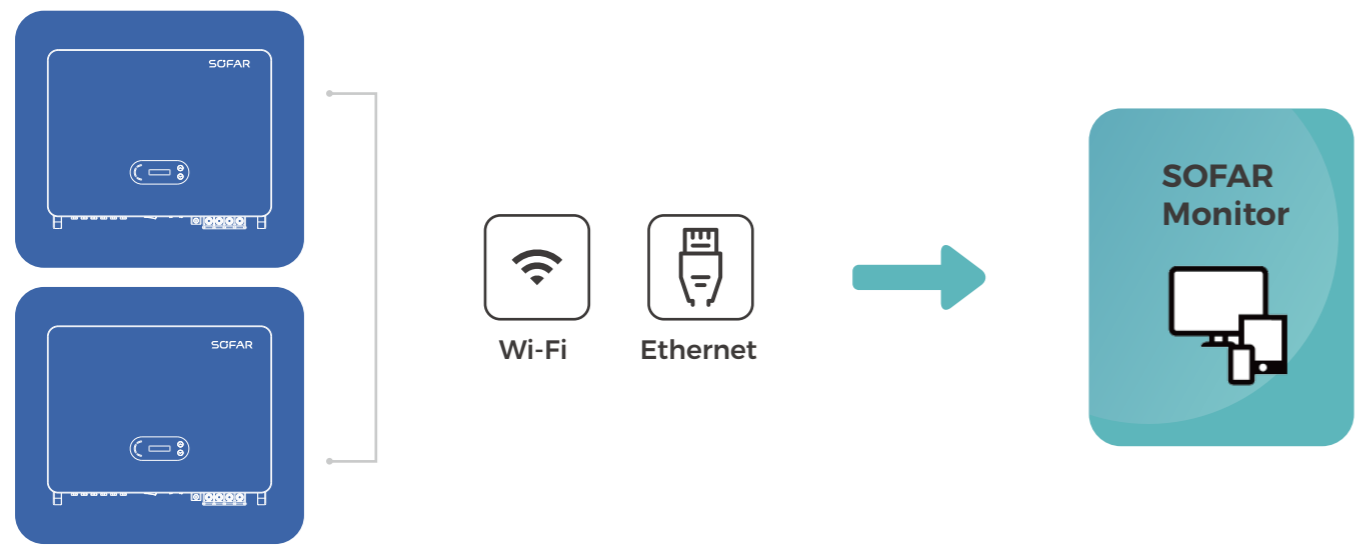
Model	FEED-IN LIMITATION BOX SAR-100
<b>Electrical parameters</b>	
Operating voltage	3x230/400V 50/60Hz
Operating current	3x1.5(6)A
Connection mode	Three-phase four-wire
<b>Communication parameters</b>	
Communication mode	2.4G Wi-Fi+Ethernet
Antenna	External
Local Communication	RS485
Maximum of inverter connection	10
<b>Mechanical parameter</b>	
Size	400 x 300 x 170mm
Weight	3.9kg
<b>User configuration</b>	
Local configuration	Local APP+ web configuration
Remote configuration	Remote web configuration
<b>Environmental parameter</b>	
Operating temperature	-25°C~+60°C
Relative humidity (no condensation)	5%-95%
<b>Other</b>	
IP grade	IP65
Installation mode	Wall-mounting

\* All specifications are subject to change without notice.



# SOFAR MONITOR

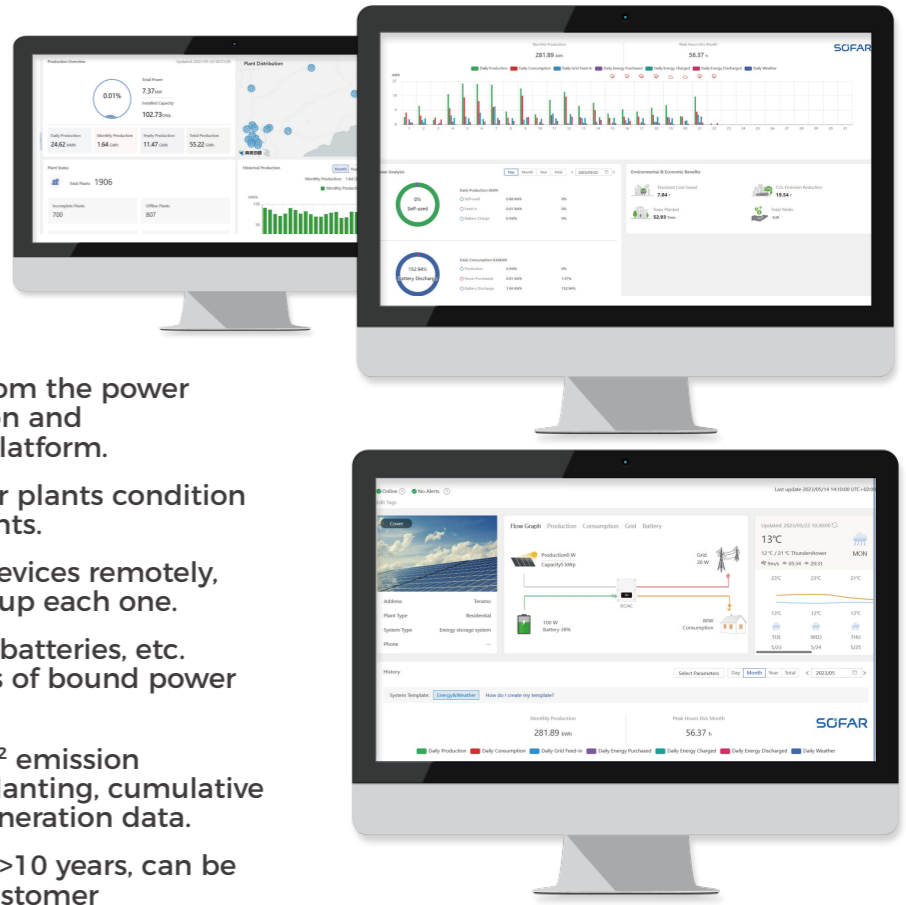
The SOFAR Monitor is aimed at distributors/installers and end-users of Residential PV& Storage System and C&I PV & Storage System. It is a platform system for the whole life cycle management of new energy power plants, which can effectively help customers to grasp the operation status of power plants in real time, achieve fine control, efficient operation and maintenance, transparent operation and maximum profit.



Unlimited no. of inverters

## SOFAR Monitor

### – Web



- Collection of all power data from the power plants during power generation and transmission to the terminal platform.
- Real-time knowledge of power plants condition and devices to prevent accidents.
- Batch upgrade and manage devices remotely, no need to visit the site to set up each one.
- Alerts data covering inverters, batteries, etc. Easy to check the alarm status of bound power plant devices.
- Simulation of coal savings, CO<sup>2</sup> emission reductions, equivalent tree planting, cumulative revenue through electricity generation data.
- General data retention period >10 years, can be extended if required by the customer

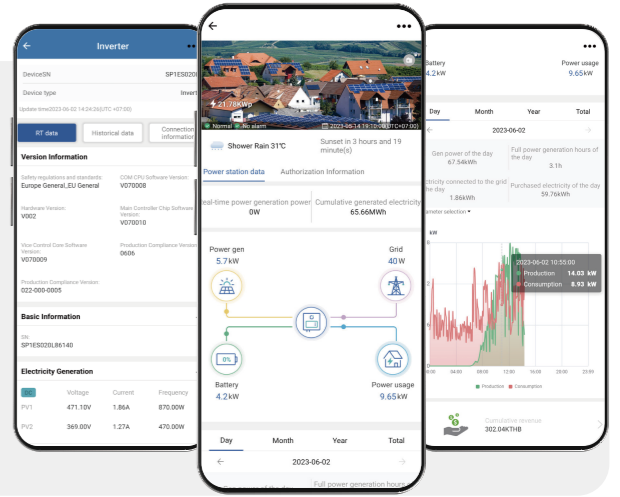
## SOFAR Monitor

### – App



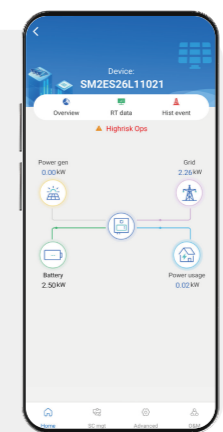
#### Portable management

- Check the status of your power plant anytime, anywhere!
- Flow chart showing current power generation, consumption and grid connection at the plant
- Precise location of the faulty device and the cause of the fault
- Customize your power plant display



#### Local setup of inverters

- Bluetooth connection for inverters, data transfer
- Remote switch on/off, set safety regulations, language, time, etc.
- Historical events, rapid O&M



Download QR Code

