

A large, curved image showing a sunset over a field of tall grasses. The sun is low on the horizon, creating a warm, golden glow. The field is filled with tall, thin stalks of grass, some with small flowers. The sky is a mix of orange, yellow, and light blue.

# ENERGY TO POWER YOUR LIFE

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PRODUCT CATALOGUE

# SOFARSOLAR

## SOFARSOLAR COMPANY PROFILE

Shenzhen SOFARSOLAR Co., Ltd. (hereinafter referred to as "SOFARSOLAR"), founded in 2013, is a high-tech enterprise integrating independent R&D, production, sales and service. The company specialises in power conversion equipment, energy storage systems, and smart energy R&D and management. SOFARSOLAR's core products include a wide range of inverters, including grid-tied inverters (1–255 kW) and hybrid inverters (3–20 kW), as well as batteries, EV charging and green energy application solutions.

Since its establishment, SOFARSOLAR has set up three R&D centers in Shenzhen, Wuhan and Shanghai and two manufacturing bases in Dongguan and Huizhou (under construction), which has contributed to gaining competitive advantages in products, technologies, markets and services across the world. The company's marketing and service strategy is determined by a customer-centric approach, and SOFARSOLAR now has branches both in China (Shenzhen, Shanghai, Wuxi, Dongguan, Huizhou, Wuhan, Hong Kong) and abroad (Germany, Poland, South Korea and Australia). Through this global presence, SOFARSOLAR continues to deliver the best products and services for our partners and customers around the world.

SOFARSOLAR has achieved certifications and network access licenses in the many important PV markets worldwide, and is widely recognized as a reliable, efficient and professional partner. With a firm, long-standing position in China's top 5 string inverter manufacturers, the company has also become the world's leading energy storage solution provider, recognized by users of SOFARSOLAR storage solutions in more than 80 countries worldwide. EuPD has awarded SOFARSOLAR as a "Top Brand PV Inverter" in multiple countries, such as Poland, Brazil, The United Kingdom and India, which illustrates the company's commitment to achieving the most optimal results together with its international partners.

In the future, SOFARSOLAR will continue to create premium quality products which meet the needs of customers all over the world and contribute to the energy transition. By continuously promoting the application and popularization of clean energy worldwide, the company takes a leading position in ensuring a green future.

## WHY CHOOSE SOFARSOLAR?

- Innovative product portfolio to meet the demands of all sizes of PV and energy storage installations, providing solutions for all situations
- Reliable system monitoring solution, with WiFi connection as standard
- Long-term warranty with local service support
- Automated production lines, equipped with state-of-the-art technology for high-quality and reliable products

## INVERTER PORTFOLIO

### Single-phase Inverter

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

### Three-phase Inverter

SOFAR 3.3KTLX-G3 / 4.4KTLX-G3 / 5.5KTLX-G3 / 6.6KTLX-G3 / 8.8KTLX-G3 /  
11KTLX-G3 / 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 60KTLX-G3 / 80KTLX-G3  
SOFAR 100KTL / 110KTL  
SOFAR 255KTL-HV

### Energy Storage System

ME 3000SP  
ME 5KTL-3PH / 6KTL-3PH / 8KTL-3PH / 10KTL-3PH / 15KTL-3PH / 20KTL-3PH  
HYD 3000-ES / 3600-ES / 4000-ES / 4600-ES / 5000-ES / 6000-ES  
HYD 3000-EP / 3680-EP / 4000-EP / 4600-EP / 5000-EP / 5500-EP / 6000-EP  
HYD 5KTL-3PH / 6KTL-3PH / 8KTL-3PH / 10KTL-3PH / 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 / 6K-S1

### Inverter Data Logger

LIG-1 / LIW-1  
LSW-3 / LSE-3

**SOFAR**

# 1100~3300TL-G3

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

## SINGLE-PHASE

- Max. efficiency up to 97.7%
- 140% DC overload
- RS485
- Optional: WiFi/Ethernet

## SINGLE-MPPT

- Lightweight, quick and easy to install
- IP65 design for outdoor
- Built-in zero export function

## Datasheet

SOFAR  
1100TL-G3SOFAR  
1600TL-G3SOFAR  
2200TL-G3SOFAR  
2700TL-G3SOFAR  
3000TL-G3SOFAR  
3300TL-G3

Input (DC)						
Recommended max. PV input power (Wp)	1500	2200	3000	3700 W	4100	4500
Max. input voltage (V)	500			550		
Start-up voltage (V)	70					
Rated input voltage (V)	360					
MPPT operating voltage range (V)	50-500			50-550		
Full power MPPT voltage range (V)	110-450	150-450	200-450	250-500	275-500	300-500
Max. input current MPPT (A)	12					
Max. DC input short circuit current per MPPT (A)	15					
Number of MPPT / string per MPPT	1 / 1					
Input terminal type	MC4					
Output (AC)						
Rated power (W)	1100	1600	2200	2700	3000	3300
Max. AC power (VA)	1100	1600	2200	2700	3000	3300
Max. output current (A)	5.3	7.7	10.6	13	14.5	16
Rated grid voltage	L / N / PE, 230 Vac					
Grid voltage range	180 Vac-276 Vac (according to local standard)					
Rated grid frequency	50 Hz / 60 Hz					
Grid frequency range	45 ~ 55 Hz / 55 ~ 65 Hz (according to local standard)					
THDi	< 3%					
Power factor	1 default (adjustable +/-0.8)					
Efficiency						
Max. efficiency	97.5%			97.7%		
European efficiency	96.9%			97.2%		
Protection						
Anti-islanding protection	Yes					
DC reverse polarity protection	Yes					
DC switch	Optional					
Overtemperature protection	Yes					
Leakage current protection	Yes					
Earth fault protection	Yes					
SPD	MOV: Type III standard					
Communication						
Standard Communication mode	RS485, Optional: WiFi/Ethernet					
General						
Topology	Transformerless					
Ambient temperature range	-30°C~+60°C					
Self-consumption at night (W)	< 1					
Allowable relative humidity range	0~100%					
Noise	< 25 dB					
Cooling	Natural					
Max. operating altitude	2000 m					
Dimension (mm)	303*260.5*118			321*260.5*131.5		
Support bracket	Wall-mounted					
Weight (kg)	5.5			6.3		
Display	LCD+LED					
Degree of protection	IP65					
Standard						
EMC	EN 61000-6-1, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3					
Safety standards	IEC 62116, IEC 61727, IEC 61683, IEC 60068 (1,2,14,30), IEC 62109-1 / 2					
Grid standards	VDE V 0124-100, VDE V 0126-1-1, VDE-AR-N 4105, G83 / 2, C10 / 11, RD 1699					



**SOFAR**

## 3K~6KTLM-G3

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

### SINGLE-PHASE

- Max. efficiency up to 98.4%
- Two MPP trackers with 150% DC overload
- Built-in zero export function

### DUAL-MPPT

- Compact design, lightweight
- Natural cooling, no fans, low noise
- RS485/Bluetooth  
Optional: WiFi/Ethernet

Datasheet	SOFAR 3KTLM-G3	SOFAR 3.6KTLM-G3	SOFAR 4KTLM-G3	SOFAR 4.6KTLM-G3	SOFAR 5KTLM-G3	SOFAR 6KTLM-G3
<b>Input (DC)</b>						
Recommended max. PV input power (Wp)	4500	5400	6000	7000	7500	9000
Max. DC power for single MPPT (W)	3500			3750		4500
Number of MPP trackers				2		
Number of DC inputs				1 for each MPPT		
Max. input voltage (V)				600		
Start-up voltage (V)				90		
Rated input voltage (V)				380		
MPPT operating voltage range (V)				80-550		
Full power MPPT voltage range (V)	200-500			210-500		260-500
Max. input MPPT current (A)				15 / 15		
Max. input short circuit current per MPPT (A)				22.5 / 22.5		
<b>Output (AC)</b>						
Rated power (W)	3000	3680	4000	4600	5000	6000
Max. AC power (VA)	3300	3680	4400	4600	5500	6000
Max. output current (A)	15	16	20	23	25	29
Rated grid voltage	L / N / PE, 230 Vac					
Grid voltage range	180 Vac-276 Vac (according to local standard)					
Rated grid frequency	50 Hz / 60 Hz					
Grid frequency range	45 Hz-55 Hz / 55 Hz-65 Hz (according to local standard)					
Active power adjustable range	0~100%					
THDi	< 3%					
Power factor	1 default (adjustable +/-0.8)					
<b>Performance</b>						
Max. efficiency	98.2%			98.4%		
European efficiency	97.3%			97.5%		
<b>Protection</b>						
DC reverse polarity protection	Yes					
DC switch	Optional					
Safety protection	Anti-islanding, RCMU, Ground fault monitoring					
SPD	MOV: Type III standard					
<b>Communication</b>						
Standard Communication mode	RS485/Bluetooth Optional: WiFi/Ethernet					
<b>Protection</b>						
Ambient temperature range	-30°C~+60°C					
Self-consumption at night (W)	< 1					
Topology	Transformerless					
Degree of protection	IP65					
Allowable relative humidity range	0~100%					
Max. operating altitude	4000 m					
Noise	< 25 dB					
Weight (kg)	9.2			10		
Cooling	Natural					
Dimension (mm)	349*344*164					
Display	LCD, App via Bluetooth					
<b>Standard</b>						
EMC	EN 61000-6-2, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12					
Safety standards	IEC 62109-1 / 2, IEC62116, IEC 61727, IEC 61683, IEC 60068 (1, 2, 14, 30)					
Grid standards	VDE-AR-N 4105, VDE V 0126-1-1, V 0124-100, CEI 0-21, G98 / G99, C10 / 11, EN 50549, RD 1699					

**SOFAR**

# 7K~10.5KTLM-G3

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

## SINGLE-PHASE

- Max. efficiency up to 98.1%
- Three MPP trackers with 150% DC overload
- I-V curve scanning function
- Prolonged AC overload compatibility (110%)

## THREE MPPTS

- Low start-up voltage, wide MPPT voltage range
- Compatible with 500 W+ modules
- Natural cooling, no fans, low noise



Datasheet	SOFAR 7KTLM-G3	SOFAR 7.7KTLM-G3	SOFAR 8KTLM-G3	SOFAR 9KTLM-G3	SOFAR 10KTLM-G3	SOFAR 10.5KTLM-G3
<b>Input (DC)</b>						
Recommended max. PV input power (Wp)	10500	10500	12000	13500	15000	15000
Max. DC power for single MPPT (W)	6250 / 5000 / 5000					
Number of MPP trackers	3					
Number of DC inputs	3					
Max. input voltage (V)	600					
Start-up voltage (V)	90					
Rated input voltage (V)	360					
MPPT operating voltage range (V)	80–550					
Full power MPPT voltage range (V)	200–500		230–500	260–500	280–500	300–500
Max. input MPPT current (A)	20 / 16 / 16					
Max. input short circuit current per MPPT (A)	30 / 25 / 25					
<b>Output (AC)</b>						
Rated power (W)	7000	7700	8000	9000	10000	10500
Max. AC power (VA)	7700	7700	8800	9900	10000	10500
Max. output current (A)	35		40	45		46
Rated grid voltage	L / N / PE, 230 Vac					
Grid voltage range	180 Vac–276 Vac (according to local standard)					
Rated grid frequency	50 Hz / 60 Hz					
Grid frequency range	45 Hz–55 Hz / 55 Hz–65 Hz (according to local standard)					
Active power adjustable range	0–100%					
THDi	< 3%					
Power factor	1 default (adjustable +/-0.8)					
<b>Performance</b>						
Max. efficiency	98.1%					
European efficiency	97.3%					
<b>Protection</b>						
DC reverse polarity protection	Yes					
DC switch	Optional					
Safety protection	Anti-islanding, RCMU, Ground fault monitoring					
SPD	PV: Type II standard, AC: Type III standard					
<b>Communication</b>						
Standard Communication mode	RS485/Bluetooth Optional: WiFi/Ethernet					
<b>Protection</b>						
Ambient temperature range	-30°C~+60°C					
Self-consumption at night (W)	< 1					
Topology	Transformerless					
Degree of protection	IP65					
Allowable relative humidity range	0–100%					
Max. operating altitude	4000 m					
Noise	< 25 dB					
Weight (kg)	17.5			18.5		
Cooling	Natural					
Dimension (mm)	468*380*187					
Display	LCD, App via Bluetooth					
<b>Standard</b>						
EMC	EN 61000-6-1, EN 61000-6-3, EN 61000-3-11, EN 61000-3-12					
Safety standards	IEC 62109-1/2, IEC 62116, IEC 61727, IEC 61683, IEC 60068					
Grid standards	G99					



**SOFAR**

## 3.3K~12KTLX-G3

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

### THREE-PHASE

- Maximum efficiency 98.6%
- Maximum DC input voltage 1100 V
- Remote firmware upgrade
- Type II SPD for both DC and AC side

### DUAL-MPPT

- Low start-up voltage, wide MPPT voltage
- Smart string level monitoring
- Natural cooling, no fans, low noise

Datasheet	SOFAR 3.3KTLX-G3	SOFAR 4.4KTLX-G3	SOFAR 5.5KTLX-G3	SOFAR 6.6KTLX-G3	SOFAR 8.8KTLX-G3	SOFAR 11KTLX-G3	SOFAR 12KTLX-G3
<b>Input (DC)</b>							
Recommended max. PV input power (Wp)	4500	6000	7500	9000	12000	15000	18000
Max. DC power for single MPPT (W)	4500	6000		7500		7500	7500/15000
Number of MPP trackers	2						
Number of DC inputs	1 / 1					1 / 1	1 / 2
Max. input voltage (V)	1100						
Start-up voltage (V)	160						
Rated input voltage (V)	650						
MPPT operating voltage range (V)	140-1000						
Full power MPPT voltage range (V)	160-850	190-850	240-850	290-850	380-850	420-850	460-850
Max. input MPPT current (A)	15 / 15					15 / 15	15 / 30
Max. input short circuit current per MPPT (A)	22.5 / 22.5					22.5 / 22.5	22.5 / 45
<b>Output (AC)</b>							
Rated power (W)	3000	4000	5000	6000	8000	10000	12000
Max. AC power (VA)	3300	4400	5500	6600	8800	11000	13200
Max. output current (A)	5	6.7	8.3	10	13.3	16.7	20
Rated grid voltage	3 / N / PE, 230 / 400 Vac						
Grid voltage range	310 - 480 Vac (according to local standard)						
Rated grid frequency	50 Hz / 60 Hz						
Grid frequency range	45 Hz-55 Hz / 55 Hz-65 Hz (according to local standard)						
Active power adjustable range	0~100%						
THDi	< 3%						
Power factor	1 default (adjustable +/-0.8)						
<b>Performance</b>							
Max. efficiency	98.40%					98.50%	
European efficiency	97.50%					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						
Feed-in limitation function	Yes						
DC switch	Optional						
Input / output SPD	PV: type II standard, AC: type II standard						
<b>Communication</b>							
Standard Communication mode	RS485/Bluetooth Optional: WiFi/Ethernet						
<b>General Data</b>							
Ambient temperature range	-30°C~+60°C						
Self-consumption at night (W)	< 1						
Topology	Transformerless						
Degree of protection	IP65						
Allowable relative humidity range	0~100%						
Max. operating altitude	4000 m						
Noise	< 40 dB						
Weight (kg)	17				18		
Cooling	Natural						
Dimension (mm)	430*385*182						
Display	LCD, App via Bluetooth						
<b>Standard</b>							
EMC	EN 61000-6-1, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12						
Safety standards	IEC 62109-1 / 2, IEC62116, IEC 61727, IEC61683, IEC 60068 (1, 2, 14, 30)						
Grid standards	VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21 / CEI 0-16, UNE 206 007-1, EN 50549, G98 / G99, EN 50530						

**SOFAR**

# 15K~24KTLX-G3

15 / 17 / 20 / 22 / 24 kW

## THREE-PHASE

- Maximum efficiency 98.6%
- Maximum DC input voltage 1100 V
- Type II SPD for both DC and AC side
- 110% long-time overload ability

## DUAL-MPPT

- Low start-up voltage, wide MPPT voltage
- Smart string level monitoring
- Remote firmware upgrade

Datasheet	SOFAR 15KTLX-G3	SOFAR 17KTLX-G3	SOFAR 20KTLX-G3	SOFAR 22KTLX-G3	SOFAR 24KTLX-G3
<b>Input (DC)</b>					
Recommended max. PV input power (Wp)	22500	25500	30000	33000	36000
Max. DC power for single MPPT (W)	15000	15000	15000	16500	18000
Number of MPP trackers	2				
Number of DC inputs	2 / 2				
Max. input voltage (V)	1100				
Start-up voltage (V)	160				
Rated input voltage (V)	650				
MPPT operating voltage range (V)	140-1000				
Full power MPPT voltage range (V)	420-850	450-850	480-850	510-850	540-850
Max. input MPPT current (A)	26 / 26				
Max. input short circuit current per MPPT (A)	36 / 36				
<b>Output (AC)</b>					
Rated power (W)	15000	17000	20000	22000	24000
Max. AC power (VA)	16500	18700	22000	24200	26400
Max. output current (A)	23.9	27.1	31.9	35.1	38.3
Rated grid voltage	3 / N / PE, 230 / 400 Vac				
Grid voltage range	310 - 480 Vac (according to local standard)				
Rated grid frequency	50 Hz / 60 Hz				
Grid frequency range	45 Hz-55 Hz / 55 Hz-65 Hz (according to local standard)				
Active power adjustable range	0~100%				
THDi	< 3%				
Power factor	1 default (adjustable +/-0.8)				
<b>Performance</b>					
Max. efficiency	98.60%				
European efficiency	98.20%				
<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				
Anti reverse power function	Optional				
DC switch	Optional				
Input / output SPD	PV: type II standard, AC: type II standard				
<b>Communication</b>					
Standard Communication mode	RS485/Bluetooth Optional: WiFi/Ethernet				
<b>General Data</b>					
Ambient temperature range	-30°C~+60°C				
Self-consumption at night (W)	< 1				
Topology	Transformerless				
Degree of protection	IP65				
Allowable relative humidity range	0~100%				
Max. operating altitude	4000 m				
Noise	< 40 dB				
Weight (kg)	20	22			23
Cooling	Fan				
Dimension (mm)	520*430*189				
Display	LCD, App via Bluetooth				
<b>Standard</b>					
EMC	EN 61000-6-1, EN 61000-6-3, EN 61000-3-11, EN 61000-3-12				
Safety standards	IEC 62109-1 / 2, IEC62116, IEC 61727, IEC61683, IEC 60068 (1, 2, 14, 30)				
Grid standards	VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21 / CEI 0-16, UNE 206 007-1, EN 50549, G98 / G99, EN 50530,				



**SOFAR**

## 25K~50KTLX-G3

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

### THREE-PHASE

- Up to 4 MPPTs with DC overload capability (up to 150%)
- Type II SPD for both DC and AC side
- Low start-up voltage, wide MPPT voltage range
- I-V curve scanning function

### THREE TO FOUR MPPTS

- Max. efficiency up to 98.90%
- Prolonged AC overload capability (110%)
- Compatible with 500 W+ modules
- Intelligent monitoring, remote operation

Datasheet	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>							
Recommended max. PV input power (Wp)	37500	45000	49500	54000	60000	67500	75000
Max. DC power for single MPPT(W)	25000						
Number of MPP trackers	3			4			
Number of DC inputs	2 for each MPPT						
Max. input voltage (V)	1100						
Start-up voltage (V)	200						
Rated input voltage (V)	620						
MPPT operating voltage range (V)	180-1000						
Full power MPPT voltage range (V)	480-850	510-850	540-850	480-850	510-850	540-850	540-850
Max. input MPPT current (A)	3*40			4*40			
Max. input short circuit current per MPPT (A)	3*50			4*50			
<b>Output (AC)</b>							
Rated power (W)	25000	30000	33000	36000	40000	45000	50000
Max. AC power (VA)	28000	34000	37000	40000	44000	50000	55000
Max. output current (A)	42.4	51.5	56.0	60.6	66.7	75.8	83.3
Rated grid voltage	3 / N / PE, 230 V / 400 Vac						
Grid voltage range	310 - 480 Vac (according to local standard)						
Rated grid frequency	50 Hz / 60 Hz						
Grid frequency range	45 Hz-55 Hz / 55 Hz-65 Hz (according to local standard)						
Active power adjustable range	0-100%						
THDi	< 3%						
Power factor	1 default (adjustable +/-0.8)						
<b>Performance</b>							
Max. efficiency	98.60%				98.80%		
European efficiency	98.20%						
<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						
Feed-in limitation function	Yes						
DC switch	Optional						
Input / output SPD	PV: type II standard, AC: type II standard						
<b>Communication</b>							
Standard Communication mode	RS485/Bluetooth Optional: WiFi/Ethernet						
<b>General Data</b>							
Ambient temperature range	-30°C--+60°C						
Self-consumption at night (W)	<3						
Topology	Transformerless						
Degree of protection	IP65						
Allowable relative humidity range	0-100%						
Max. operating altitude	4000 m						
Noise	< 60 dB						
Weight (kg)	36			37			
Cooling	Fan						
Dimension (mm)	585*480*220						
Display	LCD, App via Bluetooth						
<b>Standard</b>							
EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4						
Safety standards	IEC 62109-1/2, IEC 62116, IEC 61727, IEC 61683, IEC 60068(1,2,14,30), IEC 60255						
Grid standards	VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21/CEI 0-16, UNE 206 007-1, EN 50549, G98/G99, EN 50530						



SOFAR

# 60K~80KTLX-G3

60 / 80 kW

## THREE-PHASE

- Max. efficiency up to 98.7%
- Compatible with 500 W+ PV modules
- Type II SPD for both DC and AC side
- Supports Modbus Communication, external WiFi
- Low start-up voltage, wide MPPT voltage range

## SIX MPPTS

- Remote firmware upgrade
- I-V curve scanning function
- 6 MPP trackers with 1.5 times DC over load
- Longtime 110% AC overload ability



## Datasheet

SOFAR  
60KTLX-G3SOFAR  
80KTLX-G3

Input (DC)		
Recommended max. input power (Wp)	90000	120000
Number of MPPT trackers	6	
Number of DC inputs	2 per MPPT	
Max. input voltage (V)	1100	
Start-up voltage (V)	200	
Rated input voltage (V)	620	
MPPT operating voltage range (V)	180-1000	
Full power MPPT voltage range (V)	550-800	
Max. input MPPT current (A)	6*32	6*40
Max. input short circuit current (A)	6*50	6*60
Output (AC)		
Rated power (W)	60000	80000
Max. AC power (VA)	66000	88000
Max. output current (A)	100	133.3
Rated grid voltage	3 / N / PE, 230 / 400 Vac	
Grid voltage range	310 - 480 Vac (according to local standard)	
Rated grid frequency	50 / 60 Hz	
Grid frequency range	45 Hz-55 Hz / 55 Hz-65 Hz (according to local standard)	
Active power adjustable range	0~100%	
THDi	< 3%	
Power factor	1 default (adjustable +/-0.8)	
Performance		
Max. efficiency	98.70%	
European efficiency	98.20%	
Protection		
DC reverse polarity protection	Yes	
Anti-islanding protection	Yes	
Leakage current protection	Yes	
Ground fault monitoring	Yes	
PV-array string fault monitoring	Yes	
Anti reverse power function	Yes	
DC switch	Optional	
Input / output SPD	PV: type II standard, optional: type I. AC: type II standard	
Communication		
Communication	RS485/Bluetooth Optional: WiFi/Ethernet	
General Data		
Ambient temperature range	-30°C~+60°C	
Self-consumption at night (W)	< 2	
Topology	Transformerless	
Degree of protection	IP66	
Allowable relative humidity range	0~100%	
Max. operating altitude	4000 m	
Weight (kg)	50	
Cooling	Fan	
Dimension (mm)	687*561*275	
Display	LCD, App via Bluetooth	
Standard		
EMC	EN 61000-6-2, EN 61000-6-3, EN 61000-3-11, EN 61000-3-12	
Safety standards	IEC 62109-1/2, IEC 62116, IEC 61727, IEC 61683, IEC 60068 (1,2,14,30), IEC 60255	
Grid standards	VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21 / CEI 0-16, UNE 206 007-1, EN 50549, G99, EN 50530	



**SOFAR**

# 100K~110KTL

100 / 110 kW

## THREE-PHASE

- Max. efficiency up to 98.75%
- IP66 design for outdoor
- Type II SPD for both DC and AC side
- Supports Modbus Communication, external WiFi

## TEN TO TWELVE MPPTS

- Remote firmware upgrade
- I-V curve scanning function
- Maximum 12 MPP trackers with 1.5 times DC overload
- AC / DC dual power supply redundant design, 24-hour status monitoring

Datasheet	SOFAR 100KTL	SOFAR 110KTL
<b>Input (DC)</b>		
Max. input voltage (V)	1100	
Rated input voltage (V)	625	
Start-up voltage (V)	200	
MPPT operating voltage range (V)	180-1000	
Full power MPPT voltage range (V)	500-850	
Number of MPP trackers	10	
Number for DC inputs	20	
Max. input current per MPPT (A)	26	
Max. input short circuit current per MPPT (A)	40	
<b>Output (AC)</b>		
Rated power (kW)	100	110
Max. AC power (kVA)	110	121
Max. output current (A)	160	175
Rated grid voltage	3 / N / PE, 230 / 400 Vac	
Grid voltage range	310 - 480 Vac	
Rated grid frequency	50 / 60 Hz	
Grid frequency range	45 Hz-55 Hz / 55 Hz-65 Hz (according to local standard)	
Active power adjustable range	0-100%	
THDi	< 3%	
Power factor	1 default (adjustable +/-0.8)	
<b>Performance</b>		
Max. efficiency	98.70%	98.75%
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	
Zero voltage ride through	Yes	
DC switch	Optional	
Anti-PID protection	Optional	
Input / output SPD	PV: type II standard, AC: type II standard	
<b>Communication</b>		
Communication	RS485/Bluetooth, Optional: WiFi/Ethernet	
<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	4000 m	
Weight (kg)	90	
Cooling	Smart forced air cooling	
Dimension (mm)	995.5*663.5*368	
Display	LCD, App via Bluetooth	
<b>Standard</b>		
EMC	EN 61000-6-2, EN 61000-6-4, EN 61000-3-11, EN 61000-3-12	
Safety standards	IEC 62109-1 / 2, IEC62116, IEC 61727, IEC 61683, IEC 60068 (1, 2, 14, 30)	
Grid standards	VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21 / CEI 0-16, UNE 206 007-1, EN 50549, G99, EN 50530	



**SOFAR**

# 255KTL-HV

255 kW

## THREE-PHASE

- 12 MPPTs with max. efficiency up to 99.02%
- Built-in Anti-PID
- Type II SPD for both DC and AC
- AC / DC dual power supply redundant design, 24-hour status monitoring

## TWELVE MPPTS

- I-V curve scanning function
- IP66 and C5 protection design for outdoor
- Compatible with Al and Cu AC cables
- Touch free commissioning and remote firmware upgrade

## Datasheet

SOFAR  
255KTL-HV

Input (DC)	
Max. input voltage (V)	1500
Rated input voltage (V)	1160
Start-up voltage (V)	550
MPPT operating voltage range (V)	500-1500
Full power MPPT voltage range (V)	800-1300
Number of MPP trackers	12
Number for DC inputs	24
Max. input MPPT current (A)	30*12
Max. input short circuit current (A)	50*12
Output (AC)	
Rated output power (kW)	255
Max. Output current (A)	184
Rated grid voltage	3 / PE, 800 Vac
Grid voltage range	640 Vac-920 Vac
Rated grid frequency	50 / 60 Hz
Grid frequency range	45-55 Hz / 55-65 Hz (according to local standard)
Active power adjustable range	0-100%
THDi	< 3%
Power factor	1 default (adjustable +/-0.8)
Performance	
Max. efficiency	99.02%
European efficiency	98.70%
Protection	
DC reverse polarity protection	Yes
Anti-islanding protection	Yes
Leakage current protection	Yes
Ground fault monitoring	Yes
PV-array string fault monitoring	Yes
Zero voltage ride through	Yes
DC switch	Optional
Anti-PID function	Yes
Input / output SPD	PV: type II standard, AC: type II standard
Communication	
Communication	RS485/Bluetooth Optional: WiFi/Ethernet
General Data	
Ambient temperature range	-30°C~+60°C
Self-consumption at night (W)	< 2
Topology	Transformerless
Degree of protection	IP66
Allowable relative humidity range	0-100%
Max. operating altitude	5000 m (>4000 m derating)
Weight (kg)	99
Cooling	Smart forced air cooling
Dimension (mm)	1100.5*713.5*368
Display	LCD, App via Bluetooth
Standard	
EMC	EN 61000-6-2, EN 61000-6-4, EN 61000-3-11, EN 61000-3-12
Safety standards	IEC 62109-1 / 2, IEC62116, IEC 61727, IEC 61683, IEC 60068 (1, 2, 14, 30)
Grid standards	AS/NZS 4777, VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21/CEI 0-16, UNE 206 007-1, EN50549, G99, EN50530



**ME**

# 3000SP

3000 W

## AC-COUPLED ENERGY STORAGE INVERTER

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

## Datasheet

## ME 3000SP

Battery Parameters	
Battery type	Lithium-ion, Lead-acid
Nominal battery voltage (V)	48
Battery voltage range (V)	42-58
Recommended battery capacity (Ah)	200 (100-500 optional)
Recommended storage capacity (kWh)	9.6
Max. charging current (A)	60
Charging current range (A)	0-60 (programmable)
Charging curve	3-Stage adaptive with maintenance
Max. discharging current (A)	60
Electronic protection	OCP OTP OVP
Short circuit protection	Fuse (100 A)
Discharge times (hour)	Po=1 kVA 9.6 H, Po=3 kVA 3.2h
Depth of discharge	Lithium-ion: 0-85% DOD adjustable, Lead-acid: 0-90% DOD adjustable
AC Parameters	
Rated power	3000
Max.output power (VA)	3000
Rated output current (A)	13
Max.output current (A)	13
AC voltage range (V)	180-270
Grid frequency range	44~55 Hz / 55~65 Hz
THD	< 3%
Power factor	1 default (+/-0.8 adjustable)
Connection phase	Single
Current (inrush) (A)	0.8 / 1us
Max. output fault current (A)	100 / 1us
Max. output over current protection (A)	13
System Parameters	
Max. charging efficiency	>95%
Max. discharging efficiency	>95%
Standby losses (W)	< 5
Topology	High frequency isolated transformer
Degree of protection	IP65
Safety protection	Anti-islanding, RCMU, ground fault monitoring
Communication	RS485 ,WiFi / Ethernet,CAN2.0
SPD protection	III
Environmental	
Ambient temperature range	-25°C~+60°C (above 45°C derating)
Allowable relative humidity range	0~100%
Protective class	Class I
Max. operating altitude	2000 m
Current sensor connection	External
Emergency Power Supply	
EPS rated power (VA)	3000
EPS rated voltage (V), frequency	230, 50 / 60 Hz
EPS rated current (A)	13
Total harmonic distortion	< 3%
Switch time	< 3s
General Data	
Noise	< 25 dB
Weight (kg)	16
Cooling	Natural
Dimension (mm)	358*543.2*171.7
Display	LCD
Standard	
EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Safety standards	IEC 62109-1 / 2, IEC62040-1
Grid standards	AS / NZS 62040, VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21, EN 50549, G83 / G98, UTE C15-712-1



ME

## 5K~20KTL-3PH

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

### AC-COUPLED ENERGY STORAGE INVERTER

- Max. battery charge / discharge efficiency up to 97.8%
- Wide battery voltage range (180-800 V)
- Up to 2 battery inputs with max. 50 A charge / discharge current
- Off-grid and on-grid output can be connected to unbalanced load
- Flexible switching between grid-tied mode and energy storage mode
- Compact design with functional LCD



Datasheet	ME 5KTL-3PH	ME 6KTL-3PH	ME 8KTL-3PH	ME 10KTL-3PH	ME 15KTL-3PH	ME 20KTL-3PH
<b>Battery Input Data</b>						
Battery type	Lithium-ion, Lead-acid					
No. of battery input	1			2		
Battery voltage range (V)	180-800					
Battery voltage range for full load (V)	200-800	240-800	320-800	200-800	300-800	400-800
Nominal charging / discharging power (W)	5000	6000	8000	10000(5000/5000)	15000(7500/7500)	20000(10000/10000)
Max. charging / discharging current (A)	25			50 (25 / 25)		
Peak charging / discharging current, duration (A, s)	40, 60			70 (35 / 35), 60		
Charging strategy for battery	Self-adaption to BMS					
Communication interfaces	CAN (RS485)					
<b>AC Output Data (On-grid)</b>						
Nominal AC power (W)	5000	6000	8000	10000	15000	20000
Max. AC power output to utility grid (VA)	5500	6600	8800	11000	16500	22000
Max. AC power from utility grid (VA)	10000	12000	16000	20000	30000	40000
Rated output current (A)	7.2	8.7	11.6	14.5	21.7	29
Max. AC current output to utility grid (A)	8	10	13	16	24	32
Max. AC current from utility grid (A)	15	17	24	29	44	58
Nominal grid voltage	3 / N / PE, 230 / 400 Vac					
Grid voltage range	184 Vac-276 Vac					
Nominal grid frequency	50 / 60 Hz					
Grid frequency range	45 Hz-55 Hz / 55 Hz-65 Hz					
Output power factor	1 default (+/-0.8 adjustable)					
Output THDi (@Nominal output)	< 3%					
<b>AC Output Data (Back-up)</b>						
Nominal output power (W)	5000	6000	8000	10000	15000	20000
Max. output power (VA)	5500	6600	8800	11000	16500	22000
Peak output power, duration (VA, s)	10000, 60	12000, 60	16000, 60	20000, 60	22000, 60	
Rated output current (A)	7.2	8.7	11.6	14.5	21.7	29
Max. output current (A)	8	10	13	16	24	32
Peak output current, duration (A, s)	15, 60	18, 60	24, 60	30, 60	32, 60	
Nominal output voltage	3 / N / PE, 230 / 400 Vac					
Nominal output frequency	50 / 60 Hz					
Output THDv (@ Symmetrical load)	< 3%					
Switch time	< 10 ms					
<b>Efficiency</b>						
Max. discharge efficiency	97.6%			97.8%		
Max. charge efficiency	97.6%			97.8%		
<b>Protection</b>						
Output overcurrent protection	Yes					
Output overvoltage protection	Yes					
Anti-islanding protection	Yes					
Residual current detection	Yes					
Surge protection level	AC: Type II, DC: Type III					
Battery reverse protection	Yes					
<b>Features</b>						
DC terminal	MC4					
Grid AC terminal	5P Connector					
Back-up AC terminal	5P Connector					
Display	LCD					
Monitoring interfaces	Bluetooth / RS485 / WiFi					
Parallel operation	Yes					
<b>General Data</b>						
Dimension (mm)	586.6*515*261.2					
Weight (kg)	30			34		
Inverter topology	Transformerless					
Standby self consumption (W)	< 15					
Operating temperature range	-30°C-60°C					
Relative humidity	0-100%					
Noise	< 45 dB					
Operating altitude	< 4000 m					
Cooling	Natural			Forced airflow		
Protection degree	IP65					
<b>Certifications &amp; Standards</b>						
EMC	EN61000-3-2, EN61000-3-3, EN61000-3-11, EN61000-3-12, EN61000-6-2, EN61000-6-3					
Safety	IEC62109-1, IEC62109-2, IEC62040-1					
Grid	VDE V 0124-100, V0126-1-1, VDE-AR-N 4105, CEI 0-21 / CEI 0-16, EN50438 / EN 50549, G83 / G59 / G98 / G99, UTE C15-712-1, UNE206 007-1					



HYD

## 3000~6000-ES

3000 / 3600 / 4000 / 4600 / 5000 / 6000 W

### SINGLE-PHASE ENERGY STORAGE INTEGRATED INVERTER

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

Datasheet	HYD 3000-ES	HYD 3600-ES	HYD 4000-ES	HYD 4600-ES	HYD 5000-ES	HYD 6000-ES
<b>Battery Input Data</b>						
Battery type	Lithium-ion, Lead-acid					
Nominal battery voltage (V)	48					
Battery voltage range (V)	42-58					
Battery capacity (Ah)	50-2000					
Max. charging / discharging power (W)	3000					
Max. charging current (A)	65 (programmable)					
Max. discharging current (A)	70 (programmable)					
Charging curve (Lithium-ion)	BMS					
Charging curve (Lead-acid)	3-Stage adaptive with maintenance					
Depth of discharge	Lithium-ion: 0-90% DOD adjustable, Lead-acid: 0-50% DOD adjustable					
<b>Input DC (PV side)</b>						
Recommended max. PV input power (Wp)	3990	4790	5320	6120	6650	7980
Max. DC power for single MPPT (W)	2000	2400	2600	2800	3000	3500
Max. input voltage (V)	600					
Start-up voltage (V)	120					
Nominal DC voltage (V)	360					
MPPT operating voltage range (V)	90-550					
Full power MPPT voltage range (V)	160-500	180-500	200-500	230-500	250-500	300-500
MPPT number	2					
Max. DC input current (A)	12 / 12					
Max. DC input short current (A)	15 / 15					
<b>Output AC (Grid side)</b>						
Max. output power (W)	3000	3680	4000	4600	5000	6000
Max. output current (A)	13.7	16	18.2	21.0	22.8	27.3
Nominal grid voltage	L / N / PE, 230 Vac					
Operation phase	Single (L-N-PE)					
AC voltage range (V)	180-276 (according to local standard)					
Grid frequency range	44-55 Hz / 55-65 Hz (according to local standard)					
THD	< 3%					
Power factor	1 default (+/-0.8 adjustable)					
<b>Output AC (Emergency Power Supply)</b>						
EPS rated power (VA)	3000					
Operation phase	Single (L-N-PE)					
EPS rated voltage, frequency	230 V, 50 / 60 Hz					
EPS rated current (A)	13.2					
Peak output apparent power (VA, s)	4000, 10					
THD	< 3%					
Switch time	10 ms default					
<b>Efficiency</b>						
MPPT efficiency	99.9%					
Max efficiency of solar inverter	97.6%		97.8%		98.0%	
European efficiency of solar inverter	97.2%		97.3%		97.5%	
Max. charging efficiency of battery	94.6%					
Max. discharging efficiency of battery	94.6%					
<b>Protection</b>						
PV reverse polarity protection	Yes					
PV insulation detection	Yes					
Ground fault monitoring	Yes					
Overcurrent protection	Yes					
Overvoltage protection	Yes					
Battery soft start protection	Yes					
SPD protection	III					
<b>General Data</b>						
Ambient temperature range	-25°C~+60°C (above 45°C derating)					
Standby losses (W)	< 10					
Topology	High frequency insulation (for battery)					
DC-Switch	Optional					
Degree of protection	IP65					
Allowable relative humidity range	0-100%					
Communication	RS485, Wifi/Ethernet, SD, CAN2.0					
Protective class	Class I					
Max. operating altitude	2000 m					
Current sensor connection	External					
Noise	< 25 dB					
Weight (kg)	20.5					
Cooling	Natural					
Dimension (mm)	566*394*173					
Display	LCD					
<b>Certifications &amp; Standards</b>						
EMC	EN 61000-6-2, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12					
Safety	IEC 62109-1 / 2, IEC62040-1, IEC62116, IEC 61727, IEC 61683, IEC 60068 (1, 2, 14, 30)					
Grid	VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21, EN 50549, G83 / G59 / G98 / G99, UTE C15-712-1, UNE 206 007-1					



**HYD**

## 3000~6000-EP

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

### SINGLE-PHASE ENERGY STORAGE INTEGRATED INVERTER

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

Datasheet	HYD 3000-EP	HYD 3680-EP	HYD 4000-EP	HYD 4600-EP	HYD 5000-EP*	HYD 5500-EP	HYD 6000-EP
<b>Battery Parameters</b>							
Battery type	Lithium-ion, Lead-acid						
Nominal battery voltage (V)	48						
Battery voltage range (V)	42-58						
Battery capacity (Ah)	50-2000						
Max. charging / discharging power (W)	3750	4000	4250		5000		
Max. charging current (A)	75	80	85		100		
Max. discharging current (A)	75	80	85		100		
Charging curve (Lithium-ion)	BMS						
Charging curve (Lead-acid)	3-Stage adaptive with maintenance						
Depth of discharge	Lithium-ion: 0-90% DOD adjustable, Lead-acid: 0-50% DOD adjustable						
<b>Input DC (PV side)</b>							
Recommended max. PV input power (Wp)	4500	5400	6000	6900	7500		9000
Max. DC power for single MPPT (W)	3500				3750		
Max. input voltage (V)	600						
Start-up voltage (V)	100						
Rated input voltage (V)	360						
MPPT operating voltage range (V)	90-550						
Full power MPPT voltage range (V)	160-500	180-500	200-500	230-500	250-500		300-500
Number of MPP trackers	2						
Max. input current per MPPT (A)	13 / 13						
Max. input short circuit current per MPPT (A)	18 / 18						
<b>Output / Input AC (Grid side)</b>							
Nominal AC power (W)	3000	3680	4000	4600	5000		6000
Max. AC power output to utility grid (VA)	3300	3680	4400	4600	5000	5500	6000
Max. AC power from utility grid (VA)	6000	7360	8000	9200	10000		12000
Max. AC current output to utility grid (A)	15	16	20	20.9	21.7	25	27.3
Max. AC current from utility grid (A)	27.3	32	36.4	41.8	43.4		54.6
Nominal grid voltage	L / N / PE, 230 Vac						
Grid voltage range	180 Vac-276 Vac (according to local standard)						
Nominal frequency	50 Hz / 60 Hz						
Output THDi (@ Nominal output)	< 3%						
Power factor	1 default (+/-0.8 adjustable)						
<b>Output AC (Emergency Power Supply)</b>							
Max. apparent power (VA)	3000	3680	4000	4600	5000		
Peak output power, duration (VA, s)	3600, 60	4400, 60	4800, 60	5520, 60	6000, 60		
Max. output current (A)	13.6	16	18.2	20.9	22.7		
Nominal voltage, frequency	220 V / 230 V, 50 / 60 Hz						
THDv (@ Symmetrical load)	< 3%						
Switch time	10 ms default						
<b>Efficiency</b>							
MPPT efficiency	99.9%						
Max. efficiency of solar inverter	97.6%			97.8%		98.0%	
European efficiency of solar inverter	97.2%			97.3%		97.5%	
Max. charging efficiency of battery	94.6%						
Max. discharging efficiency of battery	94.6%						
<b>Protection</b>							
PV reverse polarity protection	Yes						
PV insulation detection	Yes						
Ground fault monitoring	Yes						
Overcurrent protection	Yes						
Overvoltage protection	Yes						
DC switch	Optional						
Firm frequency response function	Optional						
SPD protection	MOV: Type III standard						
<b>General Data</b>							
Ambient temperature range	-30°C~+60°C (above 45°C derating)						
Standby self-consumption (W)	< 10						
Topology	High frequency insulation (for battery)						
Degree of protection	IP65						
Allowable relative humidity range	0~100%						
Communication	RS485/Bluetooth/CAN2.0/ Ethernet, Optional: WiFi						
Protective class	Class I						
Max. operating altitude	4000 m						
Current sensor connection	External						
Noise	< 25 dB						
Weight (kg)	21.5						
Cooling	Natural						
Dimension (mm)	482*503*183						
Display	LCD						
<b>Certifications &amp; Standards</b>							
EMC	EN 61000-6-2, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12						
Safety standards	IEC 62109-1 / 2, IEC62040-1, IEC62116, IEC 61727, IEC 61683, IEC 60068 (1, 2, 14, 30)						
Grid standards	VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21, EN 50549, G83 / G59 / G98 / G99, UTE C15-712-1, UNE 206007-1						

The models marked with \*\*\*\* should be available only for some designated countries.

HYD 3000 / 3680 / 4000 / 4600 / 5000 / 5500 / 6000-EP\_EN\_202206



HYD

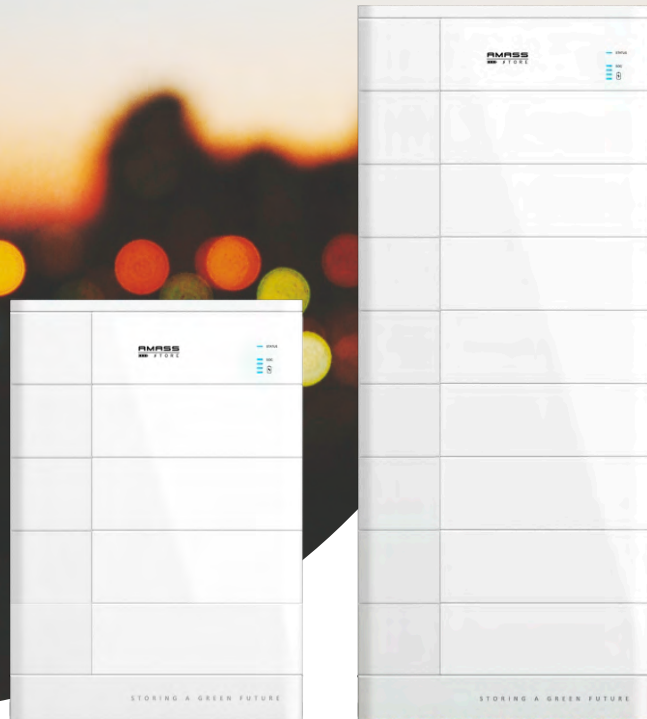
## 5K~20KTL-3PH

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

### THREE-PHASE ENERGY STORAGE INTEGRATED INVERTER

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

Datasheet	HYD 5KTL-3PH	HYD 6KTL-3PH	HYD 8KTL-3PH	HYD 10KTL-3PH	HYD 15KTL-3PH	HYD 20KTL-3PH
<b>Battery Input Data</b>						
Battery type	Lithium-ion, Lead-acid					
No. of battery input	1			2		
Battery voltage range (V)	180-800					
Battery voltage range for full load (V)	200-800	240-800	320-800	200-800	300-800	400-800
Nominal charging / discharging power (W)	5000	6000	8000	10000(5000/5000)	15000(7500/7500)	20000(10000/10000)
Max. charging / discharging current (A)	25			50 (25 / 25)		
Peak charging / discharging current, duration (A, s)	40, 60			70 (35 / 35), 60		
Charging strategy for battery	Self-adaption to BMS					
Communication interfaces	CAN (RS485)					
<b>PV String Input Data</b>						
Recommended max. PV input power (Wp)	7500 (6000 / 6000)	9000 (6600 / 6600)	12000 (6600 / 6600)	15000 (7500 / 7500)	22500 (11250 / 11250)	30000 (15000 / 15000)
Max. DC voltage (V)	1000					
Start-up operating voltage (V)	200					
MPPT voltage range (V)	180-960					
Nominal DC voltage (V)	600					
Full power MPPT voltage range (V)	250-850	320-850	360-850	220-850	350-850	450-850
Max. input current (A)	12.5 / 12.5			25 / 25		
Max. short current (A)	15 / 15			30 / 30		
No. of MPP trackers	2					
No. of strings per MPP tracker	1			2		
<b>AC Output Data (On-grid)</b>						
Nominal AC power (W)	5000	6000	8000	10000	15000	20000
Max. AC power output to utility grid (VA)	5500	6600	8800	11000	16500	22000
Max. AC power from utility grid (VA)	10000	12000	16000	20000	30000	40000
Max. AC current output to utility grid (A)	8	10	13	16	24	32
Max. AC current from utility grid (A)	15	17	24	29	44	58
Nominal grid voltage	3 / N / PE, 230 / 400 Vac					
Grid voltage range	184 Vac~276 Vac					
Nominal grid frequency	50 / 60 Hz					
Grid frequency range	45 Hz~55 Hz / 55 Hz~65 Hz					
Output power factor	1 default (+/-0.8 adjustable)					
Output THDi (@ Nominal output)	< 3%					
<b>AC Output Data (Back-up)</b>						
Nominal output power (W)	5000	6000	8000	10000	15000	20000
Max. output power (VA)	5500	6600	8800	11000	16500	22000
Peak output power, duration (VA, s)	10000, 60	12000, 60	16000, 60	20000, 60	22000, 60	
Rated output current (A)	7.2	8.7	11.6	14.5	21.7	29
Max. output current (A)	8	10	13	16	24	32
Peak output current, duration (A, s)	15, 60	18, 60	24, 60	30, 60	32, 60	
Nominal output voltage	3 / N / PE, 230 / 400 Vac					
Nominal output frequency	50 / 60 Hz					
Output THDv (@ symmetrical load)	< 3%					
Switch time	< 10 ms					
<b>Efficiency</b>						
MPPT efficiency	99.9%					
Euro efficiency	97.5%			97.7%		
Max. efficiency	98.0%			98.2%		
Max. battery charge / discharge efficiency	97.6%			97.8%		
<b>Protection</b>						
DC switch	Optional					
PV reverse polarity protection	Yes					
Output overcurrent protection	Yes					
Output overvoltage protection	Yes					
Anti-islanding protection	Yes					
Residual current detection	Yes					
Insulation resistor detection	Yes					
Surge protection level	PV: type II standard, AC: type II standard					
Battery reverse protection	Yes					
<b>General Data</b>						
Dimension(mm)	571.4*515*264.1					
Weight (kg)	33			37		
Inverter topology	Transformerless					
Standby self-consumption (W)	< 15					
Operating temperature range	-30°C~+60°C					
Relative humidity	0~100%					
Noise	< 45 dB					
Operating altitude	< 4000 m					
Cooling	Natural			Forced airflow		
Protection degree	IP65					
<b>Feature</b>						
DC terminal	MC4					
Grid AC terminal	5P Connector					
Back-up AC terminal	5P Connector					
Display	LCD					
Monitoring interfaces	RS485/Bluetooth/CAN2.0/ Ethernet, Optional: WiFi					
Parallel operation	Yes					
<b>Certifications &amp; Standards</b>						
EMC	EN 61000-6-1, EN61000-6-3					
Safety	IEC 62109-1, IEC 62109-2, IEC 62040-1					
Grid	VDE V 0124-100, V0126-1-1, VDE-AR-N 4105, CEI 0-16 / CEI 0-21, EN 50549, G98 / G99, UTE C15-712-1					



## HV ENERGY STORAGE

# GTX3000-H4~H10

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

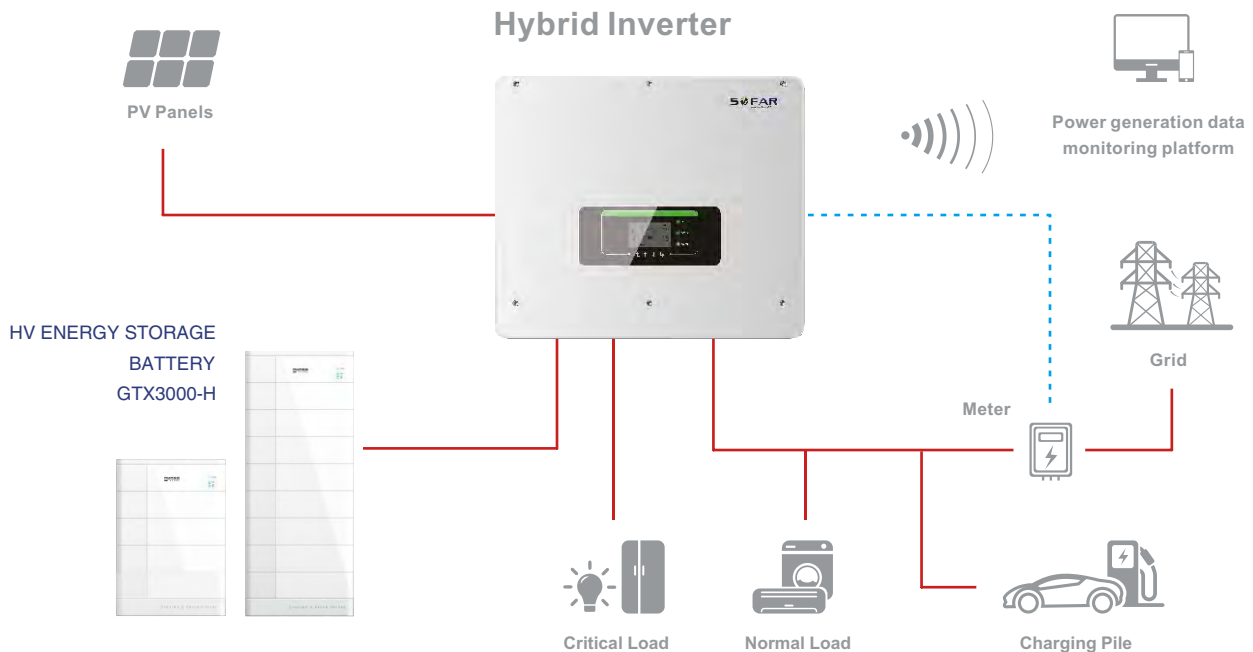
- Extensive cycle life (6000 cycles)
- Supports parallel operation (up to 4 units)
- Supports soft startup
- Supports charging activation from AC
- Efficient automated production line, achieving optimum production quality
- User-friendly one-button operation, automatic module ID assignment process
- Extensive range of certifications, including IEC62619, UN38.3, IEC62040-1, SAA, etc.
- Remote diagnosis and real-time data monitoring
- Simple stack design, saving time and costs



Datasheet	GTX3000-H4	GTX3000-H5	GTX3000-H6	GTX3000-H7	GTX3000-H8	GTX3000-H9	GTX3000-H10
<b>Parameters</b>							
Battery module quantity	4	5	6	7	8	9	10
Nominal voltage (V)	204.8	256	307.2	358.4	409.6	460.8	512
Max. charge voltage (V)	230.4	288	345.6	403.2	460.8	518.4	576
Min. discharge voltage (V)	182.4	228	273.6	319.2	364.8	410.4	456
Nominal energy (kWh)	10	12.5	15	17.5	20	22.5	25
Available energy (90% DOD) (kWh)	9	11.25	13.5	15.75	18	20.25	22.5
Dimension (mm)	515*480*770	515*480*895	515*480*1020	515*480*1145	515*480*1270	515*480*1395	515*480*1520
Weight (kg)	138	168	198	228	258	288	318
Protection class	IP65						
Cooling	Natural						
Nominal charging current (A)	25						
Max. continuous charging current (A)	30						
Nominal discharge current (A)	25						
Max. continuous discharge current (A)	30						
Rated charge/discharge power (KW)	5.12	6.4	7.68	8.96	10.24	11.52	12.8
Working temperature	-20°C~60°C (power derating below 8°C and above 40°C)						
Storage temperature	≤ 25°C: 12 months , ≤ 35°C: 6 months, ≤ 45°C: 3 months						
Environmental humidity	≤ 95%RH (no condensation)						
Operating altitude	≤ 2000 m						
Scale	Suggest no more than 4 parallel						
Certificates	UN38.3, IEC62619, IEC62040-1, SAA, etc.						
Cycle life	6000 @ 80% DOD / 25°C / 0.5C / 60% EOL						
<b>Battery Module Parameters</b>							
Battery type	LFP						
Nominal voltage (V)	51.2						
Nominal capacity (Ah)	50						
Weight (kg)	30						
Dimension (mm)	515*478.8*125						
Protection	IP65						

GTX3000-H4 / 3000-H5 / 3000-H6 / 3000-H7 / 3000-H8 / 3000-H9 / 3000-H10\_EN\_202206

# Hybrid Solar System





## LV ENERGY STORAGE

# GTX5000-PRO

5.1 kWh

- CATL battery cells, extensive cycle life (6000 cycles)
- Supports parallel operation (up to 4 units)
- Efficient automated production line, achieving optimum production quality
- Wall-or floor-mounted installation, saving time and costs
- User-friendly one-button operation, automatic module ID assignment process
- Extensive range of certifications, including IEC62619, UN38.3, IEC62040-1, SAA, etc.
- Remote diagnosis and real-time data monitoring
- Compatible with multiple hybrid inverter brands

Datasheet

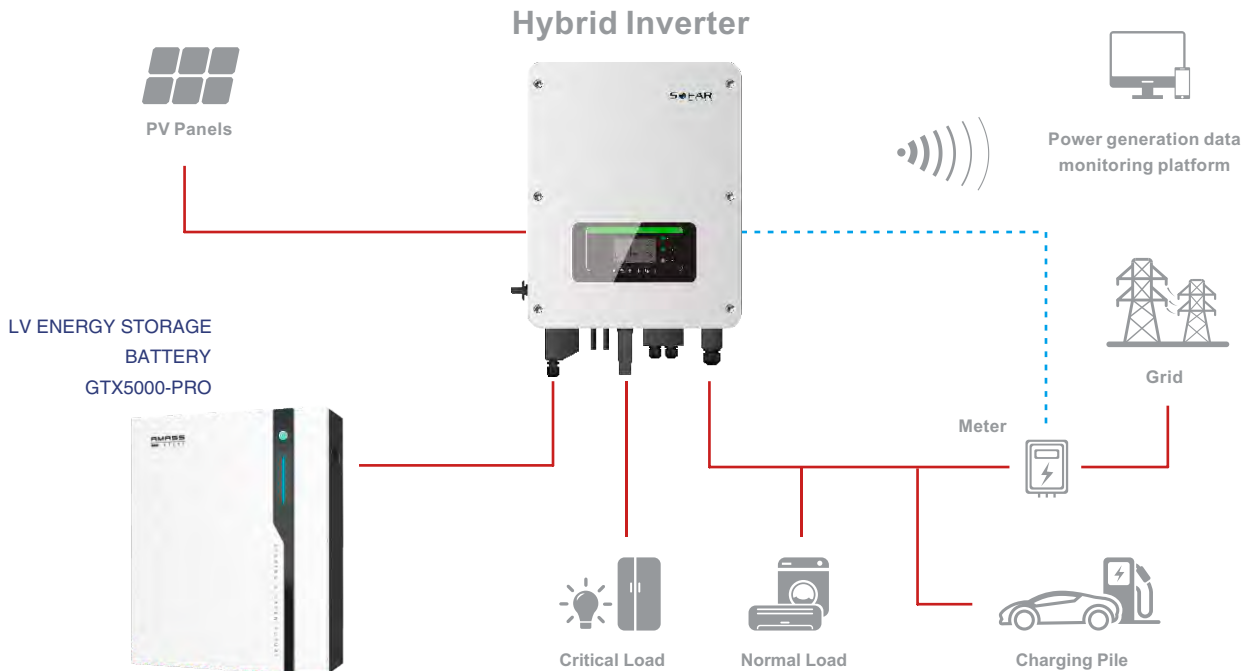
GTX5000-PRO

Basic Parameters	
Battery type	LFP
Nominal capacity (Ah)	100
Nominal voltage (Vdc)	51.2
Total energy (Wh)	5120
Usable energy (90% DOD) (Wh)	4600
Charge voltage (Vdc)	55.68-56.16
Discharge voltage (Vdc)	45.6-56.16
Nominal charge current (A)	50
Nominal charge power (W)	2560
Max. charge current (A)	100
Max. charge power (W)	5000
Nominal discharge current (A)	50
Nominal discharge power (W)	2560
Max. discharge current (A)	100
Max. discharge power (W)	5000
Short current (A)	350
Communication	RS232, RS485, CAN
Working temperature	0 °C~55°C
Storage temperature	≤ 25°C: 12 months, ≤ 35°C: 6 months, ≤ 45°C: 3 months
Operating humidity	< 95% RH
Storage humidity	< 95% RH
Max. operating altitude	≤ 2000 m
Scalable	Suggest up to 4
Enclosure protection rating	IP20
Net Weight (kg)	47
Dimension (mm)	480*171.5*606
Certification	IEC62619, UN38.3, IEC62040-1, SAA etc
Cycle life	6000 Cycles @ 80% DOD / 25°C / 0.5C, 60% EOL

Note: Operating current derating according to cell voltage and battery temperature.

GTX5000-PRO\_EN\_202204

# Hybrid Solar System






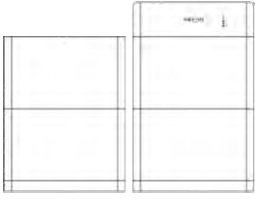


## INTELLIGENT ENERGY STORAGE

# BTS E5~E20-DS5

5 / 10 / 15 / 20 kWh

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

Datasheet	BTS E5-DS5	BTS E10-DS5	BTS E15-DS5	BTS E20-DS5
<b>System Parameters</b>				
System				
Battery type	LFP			
Battery distribution unit	BTS 5K-BDU			
Number of battery distribution units	1			
Battery module	BTS 5K			
Number of battery modules	1	2	3	4
Battery total energy (kWh) <sup>1</sup>	5.12	10.24	15.36	20.48
Usable energy (kWh) <sup>2</sup>	4.75	9.5	14.25	19
Rated power (kW)	2.5	5	7.5	10
Rated voltage (V)	400			
Voltage range for full load (V)	350-425			
Rated charge/discharge current (A)	7	14	21	28
Degree of protection	IP65			
Ambient temperature range <sup>3</sup>	-10°C ~ 50°C			
Allowable relative humidity range	5~95%			
Max. operating altitude <sup>4</sup>	4000 m			
Weight (kg)	59	110	161	212
Dimension (mm)	708*170*680	708*170*1100	708*170*1520	708*170*900 708*170*1100
Installation	Floor stand			
Cooling	Natural			
Display	LED indicators			
Communication	CAN			
Compatible inverters	Please refer to the BTS E5~20-DS5 configuration list			
<b>Battery Module</b>				
Model	BTS 5K			
Battery module energy (kWh) <sup>1</sup>	5.12			
Depth of discharge	90.0%			
Rated power (W)	2500			
Dimension (mm)	708*170*420			
Weight (kg)	50			
<b>Battery Distribution Unit</b>				
Model	BTS 5K-BDU			
Max. charge/discharge current (A)	35			
Dimension (mm)	708*170*200			
Weight (kg)	7.5			
<b>Standard</b>				
Certificates	UN38.3, IEC62619, IEC62040-1, SAA, etc.			

<sup>1</sup> Test conditions: 0.2C charge/discharge at 25°C, 100% DoD.

<sup>2</sup> Based on the battery cell.

<sup>3</sup> Refer to the temperature derating curve.

<sup>4</sup> If the altitude is >2000 m, derating is required. Please refer to the derating curve.



**SOFAR**

# PowerAll

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

5 / 10 / 15 / 20 / 25 / 30 kWh

## SINGLE-PHASE

- Modular and integrated DC-coupled energy storage
- Flexible battery capacity expansion
- User-friendly one-button battery operation
- Compatible with high current PV panels

## TWO MPPTS

- Maximal battery energy with pack optimization
- Extremely low battery self-consumption in sleep mode
- Switchover time to critical loads less than 10 ms

## Datasheet

System Parameters						
System schematic						
Rated output power (W)	3000-6000					
Number of batteries (n)	1	2	3	4	5	6
Battery capacity (kWh) <sup>1</sup>	5.12	10.24	15.36	20.48	25.6	30.27
Usable energy (kWh) <sup>2</sup>	4.75	9.5	14.25	19	23.75	28.5
Degree of protection	IP65					
Ambient temperature range <sup>3</sup>	-10°C ~ 50°C					
Allowable relative humidity range	5-95%					
Max. operating altitude <sup>4</sup>	4000 m					
Weight (kg)	74.5	125.5	176.5	228.5	279.5	330.5
Dimension (mm)	708*170*890	708*170*1310	708*170*1730	708*170*1310 708*170*900	708*170*1310 708*170*1320	708*170*1730 708*170*1320
Display	LCD					
Communication	RS485 / Bluetooth / Ethernet / WiFi, optional: 4G					
Product ordering model	[ESI 3-6K-S1 Inverter Module] + n * [BTS 5K Battery Module]					
Inverter Module						
Module	ESI 3K-S1	ESI 3.68K-S1	ESI 4K-S1	ESI 4.6K-S1	ESI 5K-S1	ESI 6K-S1
Rated battery voltage (V)	400					
Max. charge/discharge current (A)	20					
Recommended max. PV input power (Wp)	4500	5400	6000	6900	7500	9000
Max. input voltage (V)	550					
Rated input voltage (V)	360					
MPPT operating voltage range (V)	85-520					
Number of MPPTs	2					
Max. input current per MPPT (A)	16/16					
Rated grid voltage	L/N/PE, 230 V, 50 Hz / 60 Hz					
Grid voltage range	180 Vac-276 Vac (according to local standard)					
Rated AC power (W)	3000	3680	4000	4600	5000	6000
Max. AC power output to utility grid (VA)	3300	3680	4400	4600	5500	6600
Rated voltage, frequency (off-grid)	220/230 V, 50/60 Hz					
Max. apparent power (off-grid) (VA)	3000	3680	4000	4600	5000	6000
Peak output power, duration (off-grid) (VA) <sup>5</sup>	4500, 10 s	5520, 10 s	6000, 10 s	6900, 10 s	7500, 10 s	9000, 10 s
Switchover time	<10 ms					
Topology	Transformerless					
Dimension (mm)	708*170*410					
Weight (kg)	22.5					
Efficiency						
Max. efficiency	97.7%			97.8%		
European efficiency	97.0%			97.1%		
Battery Module						
Model	BTS 5K					
Battery type	LFP					
Battery module energy (kWh) <sup>1</sup>	5.12					
Depth of discharge	0-90% adjustable					
Nominal power (W)	2500					
Power control unit	Transformer isolation					
Dimension (mm)	708*170*420					
Weight (kg)	50					
Standards						
EMC	EN 61000-6-2, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12					
Safety standards	IEC 62109-1/2, IEC 62040-1, IEC 62116, IEC 61727, IEC 61683, IEC 60068 (1,2,14,30), UN38.3, IEC62619, SAA					
Grid standards	VDE-AR-N 4105, VDE V 0126-1-1, CEI 0-21, G98/G99, TR321, TR322, EN 50438/EN 50549 UTE C15-712-1, NRS 097-2-1, UNE 206 007-1					

<sup>1</sup> Test conditions: 0.2C charge/discharge at 25°C, 100% DoD.<sup>2</sup> Based on the battery cell.<sup>3</sup> Please refer to the temperature derating curve.<sup>4</sup> If the altitude is >2000 m, derating is required. Please refer to the derating curve.<sup>5</sup> In a system with sufficient PV and battery power.



## INVERTER

# LOGGER

WiFi & Ethernet

- High network coverage around the world
- Suitable for rural areas where no network connection is available
- Plug-and-play for a quick installation and easy operation
- Real-time alerts for immediate and quick troubleshooting
- Check the system status anytime and anywhere via online portal or app, no additional software required
- Remote firmware update and error analysis



**GLOBAL DATA SERVICE**

SofarSolar provides global data service for users around the world. For project sites in rural areas or places without Internet access, the inverter logger ensures stable data transmission to a remote server via mobile network, enabling remote monitoring anytime, anywhere.



Data plans for different users



Wide network coverage for most countries



Pay-as-you-go service & online top up

**Datasheet**

**LIG-1**

**LIW-1**

<b>General Parameters</b>		
Number of connections	Basic Version: 1-4, Advanced Version: 1-10	Basic Version: 1-4, Advanced Version: 1-10
Inverter Communication interface	One-way RS485 / 422	
Remote Communication interface	GSM	WiFi (802.11b / g / n) / Ethernet
Serial Communication rate	1200-57600bps (configurable)	1200-19200bps (configurable)
Working frequency	850 / 900 / 1800 / 1900 mHz	2.4GHz
Communication range	-	400 m (open space)
Transmitting power	2W(max.) / 1W(min.)	802.11b / g / n: +20 dBm / +18 dBm / 15 dBm (max.)
Data collection interval	Default: 5 mins (1-15 mins configurable)	
Parameter setting	Serial port AT instruction	Web server / serial port AT instruction
Data access	RS485 / 422, remote server	Serial port / WiFi point to point / remote server
Status	LED x4	
<b>Electrical Parameters</b>		
Input voltage (V)	5 (+/-5%)	5
Static power consumption (W)	< 2	< 1.6
Max. instantaneous power consumption (W)	3	< 2.5
<b>Environmental Parameters</b>		
Working temperature	-25°C~+65°C	-10°C~+65°C
Working humidity	10%~90% (no condensation)	
Storage temperature	-25°C~+65°C	-10°C~+65°C
Storage humidity	< 40%	
Protection class	IP21	
<b>Physical Parameters</b>		
Dimension (mm)	110*80*24	110*80*26
<b>Others</b>		
Installation	Wall-hanging / flatwise	



## STICK

# LOGGER

WiFi / Ethernet

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

Datasheet

LSW-3


LSE-3

General Parameters		
Remote Communication interface	WiFi	LAN
Working frequency	2.142GHz~ 2.484GHz	Adaptive network 10 m / 100 m
Antenna	External WiFi, stick antenna	-
Data interface	RS232	
Working voltage (V)	4.7 -15	
Working power (W)	1.5	1
Mermory	2M Flash (2M-16M optional)	
Working temperature	-40°C~+85°C	
Working humidity	< 90% (no condensing)	
Number of connections	One	
Serial Communication rate	bps (1200-115200bps configurable)	
Data acquisition interval	Default 5min (1-15min configurable)	
Use configuration	AT+instruction set, remote server APP / web	Web
Firmware upgrade	Remote upgrade	
Others	Real-time control, data resuming	

LSW-3 / LSE-3\_EN\_202206



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