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# YOUR TRUSTWORTHY SOLAR INVERTER AND STORAGE ODM PARTNER



# COMPANY MILESTONES

Parent Company

**APD** *A Leader in Power Electronics and Renewable Energy Technology*

For over two decades, APD Group has been cultivating its business in the power industry, upholding core values of R&D innovation and expanding its business horizon with the goal of becoming a leader in power electronics and renewable energy.

APD has two business groups: Power Systems and Renewable Energy, focusing on power supply and PV inverter products respectively.

Subsidiary

**Senergy** *A Leading ODM Service Supplier of PV Inverters and Energy Storage Solutions*

Shenzhen Senergy Technology Co., Ltd., a wholly-owned subsidiary of Asian Power Devices Inc. (APD), is a leading high-tech solar energy company, specializing in ODM service for PV grid-tied and hybrid inverters. Empowered by the parent company's 35 years of expertise in electronic power industry, Senergy has garnered 20 years of dedicated experience in inverter R&D and manufacturing. Its products find a wide range of applications across residential, industrial & commercial, large-scale ground stations and energy storage power stations worldwide. With an expanded manufacturing capacity reaching 10GW, Senergy is equipped with enhanced R&D and manufacturing capabilities, ensuring the delivery of cutting-edge inverter products and solutions to meet the dynamic needs of the evolving energy landscape.

## 2023

- ▶ Continuous investment: Bao'an R&D Center tripled in size
- ▶ PrimeVOLT shipments ranked first in Taiwan for 3 consecutive years

## 2022

- ▶ U.S. model product launched
- ▶ New Pingshan factory established with 10GW manufacturing capacity

## 2021

Manufacturing capacity expanded to 3GW in Shenzhen and Taipei

## 2020

- ▶ Energy storage system launched
- ▶ 1GW inverters delivered annually

## 2017

- ▶ Obtained CMMI 2 Product Engineering Management Certification
- ▶ Certified as China's "National High-Tech Enterprise"

## 2016

New generation of grid-tied PV inverters launched

## 2015

- ▶ Senergy Technology founded
- ▶ Certified as CQC type A enterprise

## 2011

2<sup>nd</sup> plant (DK) established in Shenzhen

## 2010

Renewable Energy Business set up

## 1997

1<sup>st</sup> plant (YM) established in Shenzhen

## 1994

APD Group founded in Taipei



# OUR COMPETITIVE ADVANTAGES



## R&D

- ▶ Pioneers and experts of Chinese string inverter technology
- ▶ Dual research centers in Taipei and Shenzhen
- ▶ Integrated Product Development (IPD) process
- ▶ DFMEA & PFMEA-guaranteed product reliability



## Quality Control

- ▶ Comprehensive QC and GP systems throughout product development and production processes
- ▶ Certified by reputable international organizations



## Manufacturing

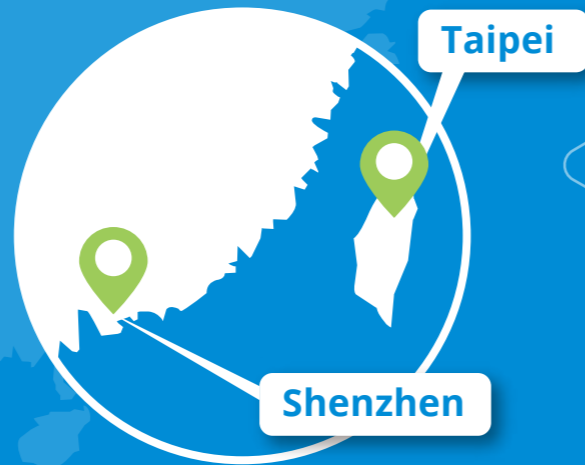
- ▶ Dual manufacturing bases in Taipei and Shenzhen
- ▶ Full industry process ranging from PCBA manufacturing to burn-in tests
- ▶ Highly-automated production equipment and flexible production line

**10GW**  
Manufacturing Capacity

**110+**  
Patents

**3**  
Factories (Shenzhen & Taipei)

**3**  
R&D Centers



# YOUR TRUSTWORTHY ODM PARTNER



35 Years of ODM Expertise in Power Electronic Products



Rapid Customization Management System



Flexible and Diverse ODM Cooperation Process



Customized Product Design and Accessories

# QUALITY CONTROL IN MANUFACTURING PROCESS

- 01** 3D Solder Paste Thickness Testing
  - 02** 1<sup>st</sup> Auto-Optical Detection for SMD
  - 03** 2<sup>nd</sup> Optical Detection for PCBA
  - 04** Functional Circuit Test
  - 05** Conformal Coating
  - 06** Hi-Pot Testing & ATE Testing before Burn-In
  - 07** Automatic Burn-In
  - 08** ATE Test after BI
  - 09** Tightness Test
- SHIPMENT



# PRODUCT LINE PLATFORM

## Microinverter Residential Use

## Grid-Tied Inverter Residential Use

## Grid-Tied Inverter Small-Medium C&I Use

## Energy Storage Inverter Residential Use



## Grid-Tied Inverter Medium-Large C&I Use

## Energy Storage Inverter Residential Use & Small-Medium C&I Use



# SINGLE PHASE & MULTIPLE MPPT

## SE 2KMI-Q14

Application: Residential Use



### FEATURES

- High efficiency for various environment
- Safety & no risk of high voltage
- Real-time Smart Module-level monitoring
- High quality & long lifetime
- Complies with IP67 protection
- Easy installation
- Flexible for system expansion
- Small size & lightweight
- Match with high power PV modules
- Convenient Wifi inside
- Fanless design & zero noise

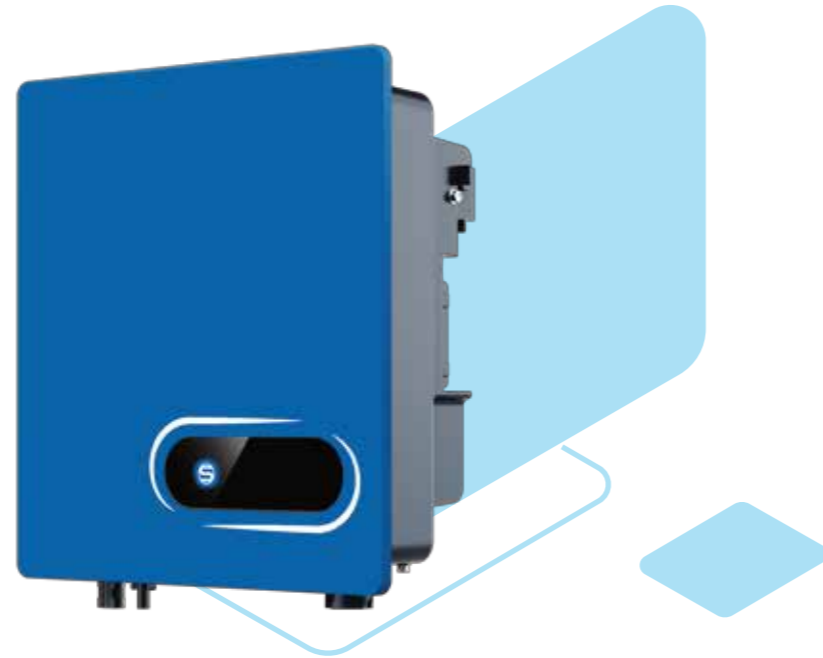
Model	SE 2KMI-Q14
<b>Input (PV)</b>	
Module Compatibility	54-cell/108 half-cell, 60-cell/120 half-cell, 66-cell/132 half-cell and 72-cell/144 half-cell
Commonly Used Module Pairings	200W~670W+
Input Channels	4
No. of MPPTs	4
MPPT Voltage Range	28V~55V
Operating Range	16V~60V
Max Input DC Voltage	60V
Max Input DC Current	15A
Maximum Input Short Circuit Current	4*19.9A
<b>Output (Grid)</b>	
Peak Output Power	2200VA
Nominal Output Power	2000VA
Rated Voltage	208V/220V/230V/240V
Rated Voltage Range	176V~276V
Rated Frequency	50Hz/60Hz
Rated Frequency Range	45~55Hz/55~65Hz
THDV	5%
Power Factor Setting	1
Single/Three Phase	Single Phase
<b>Efficiency</b>	
Peak Efficiency	97.0%
MPPT Efficiency	99.5%
CEC Weighted Efficiency	96.0%
<b>General</b>	
Ambient Temperature Range	-40°C to +65°C
Cooling	Natural Convection
Humidity	0~100%
IP Rating	IP67
Night-Time Power Consumption	30mW
Dimensions (W*H*D)	303mm*259mm*50mm
Weight	5.7Kg
<b>HMI &amp; COM</b>	
Communication	WiFi inside
<b>Compliance</b>	
Safety	ORDINANCE No. 140 2022
Warranty	12 Years Standard, 25 Years Optional

Note: Frequency and voltage range follow related grid-connection regulations

# SINGLE PHASE & SINGLE MPPT

## SE 2/3/3.6KTL-S1/G2P

Application: Residential Use



### SUPERIOR PERFORMANCE

- Maximum efficiency of 97.8%
- Large string current, compatible with large PV modules
- Wide voltage range, compatible with various power grids



### HIGH RELIABILITY

- IP65 protection level for outdoor installation
- Optional: DC/AC Type II SPD
- Optional: AFCI function



### INTELLIGENT MAINTENANCE

- Power consumption monitoring
- Remote configuration and upgrade
- Quick commissioning via mobile app

Model	SE 2KTL-S1/G2P	SE 3KTL-S1/G2P	SE 3K6TL-S1/G2P
<b>Efficiency</b>			
Max. Efficiency		97.8%	
European Efficiency	96.5%	96.8%	96.8%
<b>Input (PV)</b>			
Max. Input Voltage		500V	
Max. PV Configuration (STC)		150%	
Rated Input Voltage		360V	
Max. Input Current		15A	
Max.Short Circuit Current		20A	
Start Input Voltage		70V	
MPPT Operating Voltage Range		50V-490V	
Max. Number of PV Strings		1	
No. of MPPTs		1	
<b>Output (Grid)</b>			
Rated AC Active Power	2,000W	3,000W	3,600W
Max. AC Apparent Power	2,200VA	3,300VA	3,600VA
Max. AC Output Current	10A	15A	16A
Rated AC Voltage	220V/230V/240V, L+N+PE		
AC Voltage Range①	160V-300V (Adjustable)		
Rated Grid Frequency	50Hz / 60Hz		
Grid Frequency Range②	45Hz-55Hz / 55Hz-65Hz (Adjustable)		
THDI	<3% (Rated Power)		
DC Current Injection	<0.5%In		
Power Factor	>0.99 Rated Power (Adjustable 0.8 LD - 0.8 LG)		
<b>Protection</b>			
DC Switch	Yes		
Anti-Islanding Protection	Yes		
AC Overcurrent Protection	Yes		
AC Short Circuit Protection	Yes		
DC Reverse Protection	Yes		
Surge Arrester	DC Type III (Type II optional) / AC Type III (Type II optional)		
Insulation Detection	Yes		
Leakage Current Protection	Yes		
<b>General</b>			
Topology	Transformerless		
IP Rating	IP65		
Night Self Consumption	<1W (Standard)		
Cooling	Natural Cooling		
Operating Temperature Range	-25 C -60 C		
Relative Humidity Range	0-100%		
Max. Operating Altitude	4000m		
Dimensions (W*H*D)	320mm*344mm*137mm		
Weight	6.5Kg		
<b>HMI &amp; COM</b>			
Display	Wireless & APP+LED, LCD (Optional)		
Communication	Optional: WiFi / GPRS / RS485 / LAN		
<b>Certification</b>			
Safety	IEC62109-1, IEC62109-2		
Grid Code	DE-AR-N 4105, EN 50549-1, CEI 0-21, UNE 206001/206002-1, IEC 61727/62116, ORDINANCE n°140 2022, IEEE 1547, UL 1741, AS 4777, VDE 0126-1		
Warranty	5 Years		

Remarks: · ①②The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.

# SINGLE PHASE & SINGLE MPPT

## VP 2/3/3.6KTL-S1/G2R

Application: Residential Use



### SUPERIOR PERFORMANCE

- Maximum efficiency of 97.8%
- Max. string current up to 20A
- Compact size & high power density



### HIGH RELIABILITY

- IP65 protection level for outdoor installation
- Optional: DC/AC Type II SPD
- Optional: AFCI function



### INTELLIGENT MAINTENANCE

- Power consumption monitoring
- Remote configuration and upgrade
- Quick commissioning via mobile app

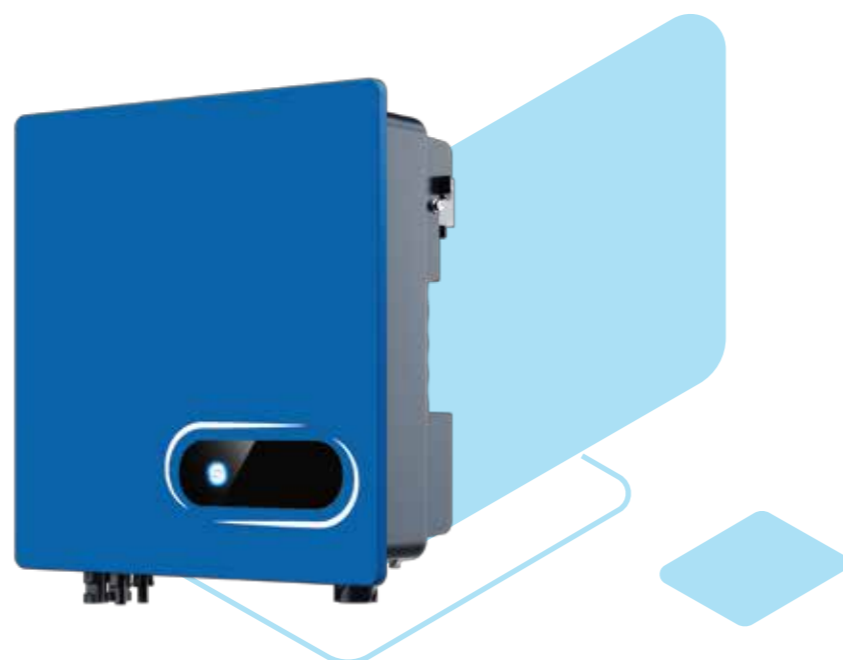
Model	VP 2KTL-S1/G2R	VP 3KTL-S1/G2R	VP 3K6TL-S1/G2R
<b>Efficiency</b>			
Max. Efficiency		97.8%	
European Efficiency	96.5%	96.8%	96.8%
<b>Input (PV)</b>			
Max. Input Voltage		500V	
Max. PV configuration (STC)		150%	
Rated Input Voltage		360V	
Max. Input Current		20A	
Max. Short Circuit Current		30A	
Start Input Voltage		70V	
MPPT Operating Voltage Range		50V-490V	
Max. Number of PV Strings		1	
No. of MPPTs		1	
<b>Output (Grid)</b>			
Rated AC Active Power	2,000W	3,000W	3,600W
Max. AC Apparent Power	2,200VA	3,300VA	3,600VA
Max. AC Output Current	10A	15A	16A
Rated AC Voltage	220V/230V/240V, L+N+PE		
AC Voltage Range <sup>①</sup>	160V-300V (Adjustable)		
Rated Grid Frequency	50Hz/60Hz		
Grid Frequency Range <sup>②</sup>	45Hz-55Hz/55Hz-65Hz (Adjustable)		
THDI	<3% (Rated Power)		
DC Current Injection	<0.5%In		
Power Factor	> 0.99 Rated power (Adjustable 0.8 LD - 0.8 LG)		
<b>Protection</b>			
DC Switch	Yes		
Anti-islanding Protection	Yes		
AC Overcurrent Protection	Yes		
AC Short Circuit Protection	Yes		
DC Reverse Connection	Yes		
Surge Arrester	DC Type III (Type II optional) / AC Type III (Type II optional)		
Insulation Detection	Yes		
Leakage Current Protection	Yes		
<b>General</b>			
Topology	Transformerless		
IP Rating	IP65		
Night Self Consumption	<1W (Standard)		
Cooling	Natural cooling		
Operating Temperature Range	-25 C -60 C		
Relative Humidity Range	0-100%		
Max. Operating Altitude	4000m		
Dimensions (W*H*D)	277mm*243mm*130mm		
Weight	5Kg		
<b>HMI &amp; COM</b>			
Display	Wireless & APP+LED, LCD (Optional)		
Communication	Optional: WiFi/GPRS/RS485/LAN		
<b>Certification</b>			
Safety	IEC 62109-1, IEC 62109-2		
Grid Code	IEC 61727/62116, IEC 61683, IEC60068		
Warranty	5 Years		

Remarks: · <sup>①②</sup>The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.

# SINGLE PHASE & DUAL MPPT

## SE 4/5/6KTL-D1/G2P

Application: Residential Use



### SUPERIOR PERFORMANCE

- Maximum efficiency of 98.2%
- Large string current, compatible with large PV modules
- Wide voltage range, compatible with various power grids



### HIGH RELIABILITY

- IP65 protection level for outdoor installation
- Optional: DC/AC Type II SPD
- Optional: AFCI function



### INTELLIGENT MAINTENANCE

- Power consumption monitoring
- Remote configuration and upgrade
- Quick commissioning via mobile app

Model	SE 4KTL-D1/G2P	SE 5KTL-D1/G2P	SE 6KTL-D1/G2P
<b>Efficiency</b>			
Max. Efficiency		98.2%	
European Efficiency	97.0%	97.3%	97.4%
<b>Input (PV)</b>			
Max. Input Voltage		550V	
Max. PV Configuration (STC)		150%	
Rated Input Voltage		360V	
Max. Input Current		15A/15A	
Max.Short Circuit Current		20A/20A	
Start Input Voltage		90V	
MPPT Operating Voltage Range		70V-540V	
Max. Number of PV Strings		1/1	
No. of MPPTs		2	
<b>Output (Grid)</b>			
Rated AC Active Power	4,000W	5,000W	6,000W
Max. AC Apparent Power	4,400VA	5,500VA	6,000VA
Max. AC Output Current	20A	25A	27.3A
Rated AC Voltage	220V/230V/240V, L+N+PE		
AC Voltage Range①	160V-300V (Adjustable)		
Rated Grid Frequency	50Hz / 60Hz		
Grid Frequency Range②	45Hz-55Hz / 55Hz-65Hz (Adjustable)		
THDI	<3% (Rated Power)		
DC Current Injection	<0.5%In		
Power Factor	>0.99 Rated power (Adjustable 0.8 LD - 0.8 LG)		
<b>Protection</b>			
DC Switch	Yes		
Anti-Islanding Protection	Yes		
AC Overcurrent Protection	Yes		
AC Short Circuit Protection	Yes		
DC Reverse Protection	Yes		
Surge Arrester	DC Type III(Type II optional) / AC Type III(Type II optional)		
Insulation Detection	Yes		
Leakage Current Protection	Yes		
<b>General</b>			
Topology	Transformerless		
IP Rating	IP65		
Night Self Consumption	< 1W (Standard)		
Cooling	Natural cooling		
Operating Temperature Range	-25 C -60 C		
Relative Humidity Range	0-100%		
Max. Operating Altitude	4000m		
Dimensions (W*H*D)	350mm*347mm*137mm		
Weight	8.5Kg		
<b>HMI &amp; COM</b>			
Display	Wireless & APP+LED, LCD (Optional)		
Communication	Optional: WiFi / GPRS / RS485 / LAN		
<b>Certification</b>			
Safety	IEC62109-1, IEC62109-2		
Grid Code	DE-AR-N 4105, EN 50549-1, CEI 0-21, UNE 206001/206002-1, IEC 61727/62116, ORDINANCE n°140 2022, IEEE 1547, UL 1741, AS 4777, VDE 0126-1		
Warranty	5 Years		

Remarks: · ①②The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.



# SINGLE PHASE & SINGLE/DUAL MPPT

## SE 4/5/6KTL-S1/G2R, SE 4/5/6KTL-D1/G2R

Application: Residential Use



### SUPERIOR PERFORMANCE

- Maximum efficiency of 98.2%
- Max. string current up to 20A
- 1MPPT or 2MPPT, compatible with various application scenarios



### HIGH RELIABILITY

- IP65 protection level for outdoor installation
- Optional: DC/AC Type II SPD
- Optional: AFCI function



### INTELLIGENT MAINTENANCE

- Power consumption monitoring
- Remote configuration and upgrade
- Quick commissioning via mobile app

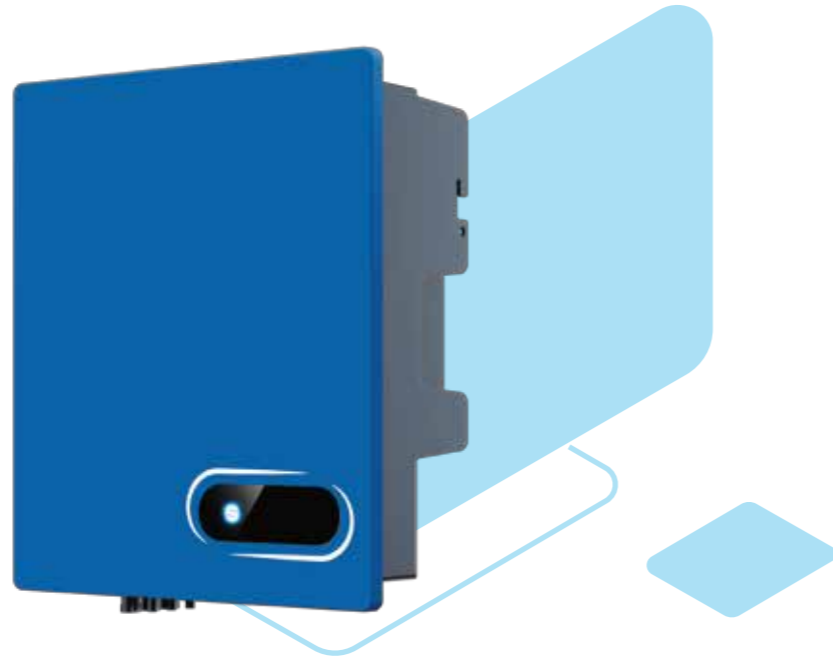
Model	SE 4KTL-S1/G2R	SE 5KTL-S1/G2R	SE 6KTL-S1/G2R	SE 4KTL-D1/G2R	SE 5KTL-D1/G2R	SE 6KTL-D1/G2R
<b>Efficiency</b>						
Max. Efficiency	98.2%					
European Efficiency	97.0%	97.3%	97.4%	97.0%	97.3%	97.4%
<b>Input (PV)</b>						
Max. Input Voltage	600V					
Max. PV configuration (STC)	150%					
Rated Input Voltage	360V					
Max. Input Current	20A			20A/20A		
Max. Short Circuit Current	30A			30A/30A		
Start Input Voltage	90V					
MPPT Operating Voltage Range	70V-550V					
Max. Number of PV Strings	1			2		
No. of MPPTs	1			2		
<b>Output (Grid)</b>						
Rated AC Active Power	4,000W	5,000W	6,000W	4,000W	5,000W	6,000W
Max. AC Apparent Power	4,400VA	5,500VA	6,000VA	4,400VA	5,500VA	6,000VA
Max. AC Output Current	20A	25A	27.3A	20A	25A	27.3A
Rated AC Voltage	220V/230V/240V, L+N+PE					
AC Voltage Range <sup>①</sup>	160V-300V (Adjustable)					
Rated Grid Frequency	50Hz/60Hz					
Grid Frequency Range <sup>②</sup>	45Hz-55Hz/55Hz-65Hz (Adjustable)					
THDI	<3% (Rated Power)					
DC Current Injection	<0.5%In					
Power Factor	> 0.99 Rated power (Adjustable 0.8 LD - 0.8 LG)					
<b>Protection</b>						
DC Switch	Yes					
Anti-islanding Protection	Yes					
AC Overcurrent Protection	Yes					
AC Short Circuit Protection	Yes					
DC Reverse Connection	Yes					
Surge Arrester	DC Type III (Type II optional) / AC Type III (Type II optional)					
Insulation Detection	Yes					
Leakage Current Protection	Yes					
<b>General</b>						
Topology	Transformerless					
IP Rating	IP65					
Night Self Consumption	<1W (Standard)					
Cooling	Natural cooling					
Operating Temperature Range	-25 °C -60 °C					
Relative Humidity Range	0-100%					
Max. Operating Altitude	4000m					
Dimensions (W*H*D)	350mm*347mm*137mm					
Weight	9Kg					
<b>HMI &amp; COM</b>						
Display	Wireless & APP+LED, LCD (Optional)					
Communication	Optional: WiFi/GPRS/RS485/LAN					
<b>Certification</b>						
Safety	IEC 62109-1, IEC 62109-2					
Grid Code	IEC 61727/62116, IEC 61683, IEC60068					
Warranty	5 Years					

Remarks: · <sup>①②</sup>The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.

# SINGLE PHASE & DUAL MPPT

## SE 7/8/10KTL-D1P

Application: Residential Use



### SUPERIOR PERFORMANCE

- Maximum efficiency of 98.2%
- Large string current, compatible with large PV modules
- Wide voltage range, compatible with various power grids



### HIGH RELIABILITY

- IP65 protection level for outdoor installation
- Optional: DC/AC Type II SPD
- Optional: AFCI function



### INTELLIGENT MAINTENANCE

- Power consumption monitoring
- Remote configuration and upgrade
- Quick commissioning via mobile app
- Multiple I/O and communication configurations

Model	SE 7KTL-D1P	SE 8KTL-D1P	SE 10KTL-D1P
<b>Efficiency</b>			
Max. Efficiency	98.2%		
European Efficiency	97.5%		
<b>Input (PV)</b>			
Max. Input Voltage	550V		
Max. PV Configuration (STC)	150%		
Rated Input Voltage	360V		
Max. Input Current	20A/20A	20A/30A	
Max.Short Circuit Current	26A/26A	26A/40A	
Start Input Voltage	90V		
MPPT Operating Voltage Range	60V-540V		
Max. Number of PV Strings	1/1	1/2	
No. of MPPTs	2		
<b>Output (Grid)</b>			
Rated AC Active Power	7,000W	8,000W	10,000W
Max. AC Apparent Power	7,700VA	8,800VA	10,000VA
Max. AC Output Current	35A	40A	45.5A
Rated AC Voltage	220V/230V/240V, L+N+PE		
AC Voltage Range①	160V-300V (Adjustable)		
Rated Grid Frequency	50Hz / 60Hz		
Grid Frequency Range②	45Hz-55Hz / 55Hz-65Hz (Adjustable)		
THDI	<3% (Rated Power)		
DC Current Injection	<0.5%In		
Power Factor	>0.99 Rated power (Adjustable 0.8 LD - 0.8 LG)		
<b>Protection</b>			
DC Switch	Yes		
Anti-Islanding Protection	Yes		
AC Overcurrent Protection	Yes		
AC Short Circuit Protection	Yes		
DC Reverse Protection	Yes		
Surge Arrester	DC Type III(Type II optional) / AC Type III(Type II optional)		
Insulation Detection	Yes		
Leakage Current Protection	Yes		
<b>General</b>			
Topology	Transformerless		
IP Rating	IP65		
Night Self Consumption	< 1W (Standard)		
Cooling	Natural cooling		
Operating Temperature Range	-25 C -60 C		
Relative Humidity Range	0-100%		
Max. Operating Altitude	4000m		
Dimensions (W*H*D)	400mm*450mm*170mm		
Weight	16Kg		
<b>HMI &amp; COM</b>			
Display	Wireless & APP+LED, LCD (Optional)		
Communication	Optional: WiFi / GPRS / RS485 / LAN		
<b>Certification</b>			
Safety	IEC62109-1, IEC62109-2		
Grid Code	DE-AR-N 4105, EN 50549-1, CEI 0-21, UNE 206001/206002-1, IEC 61727/62116, ORDINANCE n°140 2022, IEEE 1547, UL 1741, AS 4777, VDE 0126-1		
Warranty	5 Years		

Remarks: · ①②The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.

# THREE PHASE & DUAL MPPT

## SE 5/6/8/10/12/15KTL-D3/G2

Application: Residential & Small C&I Use



### SUPERIOR PERFORMANCE

- Maximum efficiency of 98.3%
- Large string current, compatible with large PV modules
- Wide voltage range, compatible with various power grids
- Compact for easy installation



### HIGH RELIABILITY

- IP66 protection level for outdoor installation
- Optional: DC/AC Type II SPD
- Optional: AFCI function



### INTELLIGENT MAINTENANCE

- Power consumption monitoring
- Remote configuration and upgrade
- Quick commissioning via mobile app
- Multiple I/O and communication configurations

Model	SE 5KTL-D3/G2	SE 6KTL-D3/G2	SE 8KTL-D3/G2	SE 10KTL-D3/G2	SE 12KTL-D3/G2	SE 15KTL-D3/G2
<b>Efficiency</b>						
Max. Efficiency	98.2%			97.8%		98.3%
European Efficiency	97.8%					
<b>Input (PV)</b>						
Max. Input Voltage	1100V					
Max. PV Configuration (STC)	150%					
Rated Input Voltage	620V					
Max. Input Current	15A/15A			15A/30A		15A/30A
Max.Short Circuit Current	20A/20A			20A/40A		20A/40A
Start Input Voltage	180V					
MPPT Operating Voltage Range	160V-1000V					
Max. Number of PV Strings	1/1			1/2		1/2
No. of MPPTs	2					
<b>Output (Grid)</b>						
Rated AC Active Power	5,000W	6,000W	8,000W	10,000W	12,000W	15,000W
Max. AC Apparent Power	5,500VA	6,600VA	8,800VA	11,200VA	13,200VA	16,700VA
Max. AC Output Current	3*8.4A	3*10.1A	3*13.4A	3*17A	3*20.2A	3*25.3A
Rated AC Voltage	380V / 400V / 415V, 3W+N+PE					
AC Voltage Range①	260V-510V (Adjustable)					
Rated Grid Frequency	50Hz / 60Hz					
Grid Frequency Range②	45Hz-55Hz / 55Hz-65Hz (Adjustable)					
THDI	<3%@Rated Power					
DC Current Injection	<0.5%@Rated Current					
Power Factor	> 0.99 Rated power (Adjustable 0.8 LD - 0.8 LG)					
<b>Protection</b>						
DC Switch	Yes					
Anti-Islanding Protection	Yes					
AC Overcurrent Protection	Yes					
AC Short Circuit Protection	Yes					
DC Reverse Protection	Yes					
Surge Arrester	DC Type III(Type II optional) / AC Type III(Type II optional)					
Insulation Detection	Yes					
Leakage Current Protection	Yes					
<b>General</b>						
Topology	Transformerless					
IP Rating	IP66					
Night Self Consumption	< 1W (Standard)					
Cooling	Natural cooling					
Operating Temperature Range	-25 °C -60 °C					
Relative Humidity Range	0-100%					
Max. Operating Altitude	4000m					
Dimensions (W*H*D)	398mm*460mm*190mm					
Weight	16.8Kg			18.7Kg		18.7Kg
<b>HMI &amp; COM</b>						
Display	Wireless & APP +LED, LCD (Optional)					
Communication	RS485, Optional: WiFi / GPRS / LAN					
<b>Certification</b>						
Safety	IEC62109-1, IEC62109-2					
Grid Code	VDE-AR-N 4105, EN 50549-1, CEI 0-21, UNE 206006/206007-1, RD 1699/661&413, IEC 61727/62116, AS4777.2					
Warranty	5 Years					

Remarks: · ①②The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.

# THREE PHASE & SINGLE MPPT

## SE 5/6/8/10KTL-S3/G2R

Application: Residential & Small C&I Use



### SUPERIOR PERFORMANCE

- Maximum efficiency of 98.2%
- Max. string current up to 20A
- Lower cost, higher power generation, optimal consumption
- Compact for easy installation



### HIGH RELIABILITY

- IP66 protection level for outdoor installation
- Optional: DC/AC Type II SPD
- Optional: AFCI function



### INTELLIGENT MAINTENANCE

- Power consumption monitoring
- Remote configuration and upgrade
- Quick commissioning via mobile app
- Multiple I/O and communication configurations

Model	SE 5KTL-S3/G2R	SE 6KTL-S3/G2R	SE 8KTL-S3/G2R	SE 10KTL-S3/G2R
<b>Efficiency</b>				
Max. Efficiency				98.2%
European Efficiency				97.8%
<b>Input (PV)</b>				
Max. Input Voltage				1100V
Max. PV Configuration				150%
Rated Input Voltage				620V
Max. Input Current				20A
Max. Short Circuit Current				30A
Start Input Voltage				180V
MPPT Operating Voltage Range				160V-1000V
Max. Number of PV Strings				1
No. of MPPTs				1
<b>Output (Grid)</b>				
Rated AC Active Power	5,000W	6,000W	8,000W	10,000W
Max. AC Apparent Power	5,500VA	6,600VA	8,800VA	11,200VA
Max. AC Output Current	3*8.4A	3*10.1A	3*13.4A	3*17A
Rated AC Voltage	380V/400V/415V, 3W+N+PE			
AC Voltage Range <sup>①</sup>	260V-510V (Adjustable)			
Rated Grid Frequency	50Hz/60Hz			
Grid Frequency Range <sup>②</sup>	45Hz-55Hz/55Hz-65Hz (Adjustable)			
THDI	<3%@Rated Power			
DC Current Injection	<0.5%@Rated Current			
Power Factor	> 0.99 Rated power (Adjustable 0.8 LD - 0.8 LG)			
<b>Protection</b>				
DC Switch	Yes			
Anti-islanding Protection	Yes			
AC Overcurrent Protection	Yes			
AC Short Circuit Protection	Yes			
DC Reverse Connection	Yes			
Surge Arrester	DC Type III (Type II optional) / AC Type III (Type II optional)			
Insulation Detection	Yes			
Leakage Current Protection	Yes			
<b>General</b>				
Topology	Transformerless			
IP Rating	IP66			
Night Self Consumption	< 1W (Standard)			
Cooling	Natural cooling			
Operating Temperature Range	-25°C -60°C			
Relative Humidity Range	0-100%			
Max. Operating Altitude	4000m			
Dimensions (W*H*D)	398mm*460mm*190mm			
Weight	16.8kg			
<b>HMI &amp; COM</b>				
Display	Wireless & APP+LED, LCD (Optional)			
Communication	RS485, Optional: WiFi / GPRS / LAN			
<b>Certification</b>				
Safety	IEC 62109-1, IEC 62109-2			
Grid Code	IEC 61727/62116, IEC 61683, IEC60068			
Warranty	5 Years			

Remarks: · <sup>①②</sup>The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.

# THREE PHASE & DUAL MPPT

SE 10/15KTL-D3/G2P, SE 17/20/22/25/30KTL-D3/G2

Application: Residential & Small-Medium C&I Use



## SUPERIOR PERFORMANCE

- Maximum efficiency of 98.4%
- Large string current, compatible with large PV modules
- Wide voltage range, compatible with various power grids
- Compact for easy installation



## HIGH RELIABILITY

- IP66 protection level for outdoor installation
- Optional: DC/AC Type II SPD
- Optional: AFCI function



## INTELLIGENT MAINTENANCE

- Power consumption monitoring
- Remote configuration and upgrade
- Quick commissioning via mobile app
- Multiple I/O and communication configurations

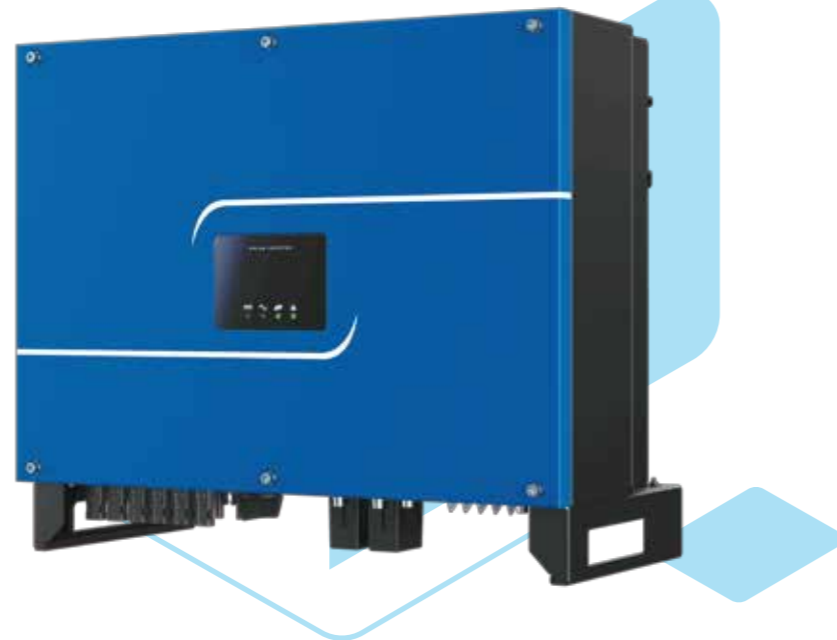
Model	SE 10KTL-D3/G2P	SE 15KTL-D3/G2P	SE 17KTL-D3/G2	SE 20KTL-D3/G2	SE 22KTL-D3/G2	SE 25KTL-D3/G2	SE 30KTL-D3/G2
<b>Efficiency</b>							
Max. Efficiency	98.4%						
European Efficiency	97.8%					98.0%	
<b>Input (PV)</b>							
Max. Input Voltage	1100V						
Max. PV Configuration (STC)	150%						
Rated Input Voltage	620V						
Max. Input Current	15A/30A					30A/30A	30A/40A
Max.Short Circuit Current	20A/40A					40A/40A	37.5A/50A
Start Input Voltage	180V						
MPPT Operating Voltage Range	160V-1000V						
Max. Number of PV Strings	1/2					2/2	
No. of MPPTs	2						
<b>Output (Grid)</b>							
Rated AC Active Power	10,000W	15,000W	17,000W	20,000W	22,000W	25,000W	30,000W
Max. AC Apparent Power	11,000VA	16,500VA	18,700VA	22,000VA	24,200VA	27,500VA	33,000VA
Max. AC Output Current	3*16.8A	3*25.3A	3*28.6A	3*33.7A	3*37A	3*39.8A	3*50.2A
Rated AC Voltage	380V / 400V / 415V, 3W+N+PE						
AC Voltage Range <sup>①</sup>	260V-510V (Adjustable)						
Rated Grid Frequency	50Hz / 60Hz						
Grid Frequency Range <sup>②</sup>	45Hz-55Hz / 55Hz-65Hz (Adjustable)						
THDI	<3%@Rated Power						
DC Current Injection	<0.5%@Rated Current						
Power Factor	> 0.99 Rated power (Adjustable 0.8 LD - 0.8 LG)						
<b>Protection</b>							
DC Switch	Yes						
Anti-Islanding Protection	Yes						
AC Overcurrent Protection	Yes						
AC Short Circuit Protection	Yes						
DC Reverse Protection	Yes						
Surge Arrester	DC Type III(Type II optional) / AC Type III(Type II optional)						
Insulation Detection	Yes						
Leakage Current Protection	Yes						
<b>General</b>							
Topology	Transformerless						
IP Rating	IP66						
Night Self Consumption	<1W (Standard)						
Cooling	Natural cooling					Fan cooling	
Operating Temperature Range	-25 C -60 C						
Relative Humidity Range	0-100%						
Max. Operating Altitude	4000m						
Dimensions (W*H*D)	398mm*460mm*190mm						
Weight	18.7Kg					20.1Kg	20.3Kg
<b>HMI &amp; COM</b>							
Display	Wireless & APP +LED, LCD (Optional)						
Communication	RS485, Optional: WiFi / GPRS / LAN						
<b>Certification</b>							
Safety	IEC62109-1, IEC62109-2						
Grid Code	VDE-AR-N 4105, EN 50549-1, CEI 0-21, UNE 206006/206007-1, RD 1699/661&413, IEC 61727/62116, AS4777.2						
Warranty	5 Years						

Remarks: · <sup>①②</sup>The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.

# THREE PHASE & DUAL MPPT

## SE 10/12KTL-DL3

Application: Small-Scale Industrial and Residential Use



### SUPERIOR PERFORMANCE

- Max efficiency of 97.3%
- Ultra-wide voltage range (180V-750V)



### HIGH RELIABILITY

- Integrated type II DC/AC SPD
- Natural cooling design



### INTELLIGENT MAINTENANCE

- Intelligent monitoring via APP & Web
- Multiple remote monitoring for convenient operation and maintenance
- Supports 3Phase 208/220/240V grid system

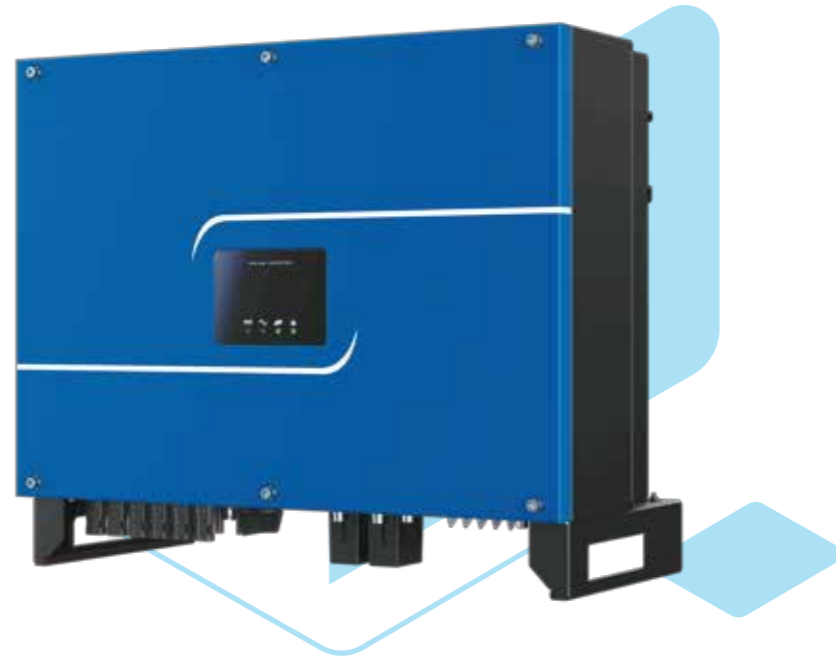
Model	SE 10KTL-DL3	SE 12KTL-DL3
<b>Efficiency</b>		
Max. Efficiency	97.3%	97.3%
<b>Input (PV)</b>		
Max. Input Voltage	800V	
Max. PV Configuration	150%	
Rated Input Voltage	360V	
Max. Input Current	27A/27A	
Max.Short Circuit Current	30A/30A	
Start Input Voltage/ Min. Operating Voltage	250V/180V	
MPPT Operating Voltage Range	180V-750V	
MPPT Operating Voltage Range (Full-Load)	300V-680V	
Max. Number of PV Strings	2/2	
No. of MPPTs	2	
<b>Output (Grid)</b>		
Rated AC Active Power	10,500W	12,000W
Max. AC Apparent Power	11,500VA	13,500VA
Max. AC Output Current	3*28.3A	3*33.5A
Rated AC Voltage	220V, 3W+N+PE	
AC Voltage Range <sup>①</sup>	180V-300V (Adjustable)	
Rated Grid Frequency	60Hz	
Grid Frequency Range <sup>②</sup>	55Hz-65Hz (Adjustable)	
THDI	<3% (Rated Power)	
DC Current Injection	<0.5%In	
Power Factor	>0.99 Rated power (Adjustable 0.8 LG - 0.8 LD)	
<b>Protection</b>		
DC Switch	Yes	
Anti-Islanding Protection	Yes	
AC Overcurrent Protection	Yes	
AC Short Circuit Protection	Yes	
DC Reverse Protection	Yes	
Surge Arrester	DC Type II / AC Type II	
Insulation Detection	Yes	
Leakage Current Protection	Yes	
<b>General</b>		
Topology	Transformerless	
IP Rating	IP65	
Night Self Consumption	<1W (Standard)	
Cooling	Natural cooling	
Operating Temperature Range	-25 C -60 C	
Relative Humidity Range	0-100%	
Max. Operating Altitude	4000m	
Dimensions (W*H*D)	555mm*446mm*270mm	
Weight	37Kg	
<b>HMI &amp; COM</b>		
Display	Wireless & APP+LED, LCD (Optional)	
Communication	RS485, WiFi (Optional), GPRS (Optional)	
<b>Certification</b>		
Safety	IEC62109-1, IEC62109-2	
Grid Code	IEC61727, IEC62116, IEEE 1547	
Warranty	5 Years	

Remarks: · <sup>①②</sup>The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.

# THREE PHASE & DUAL MPPT

## SE 16/18KTL-DL3

Application: Small-Scale Industrial and Residential Use



### SUPERIOR PERFORMANCE

- Max efficiency of 97.5%
- Ultra-wide voltage range (180V-750V)



### HIGH RELIABILITY

- Integrated type II DC/AC SPD
- Natural cooling design



### INTELLIGENT MAINTENANCE

- Intelligent monitoring via APP & Web
- Multiple remote monitoring for convenient operation and maintenance
- Supports 3Phase 208/220/240V grid system

Model	SE 16KTL-DL3	SE 18KTL-DL3
<b>Efficiency</b>		
Max. Efficiency	97.5%	97.5%
<b>Input (PV)</b>		
Max. Input Voltage	800V	
Max. PV Configuration	150%	
Rated Input Voltage	360V	
Max. Input Current	40.5A/40.5A	
Max.Short Circuit Current	45A/45A	
Start Input Voltage/ Min. Operating Voltage	250V/180V	
MPPT Operating Voltage Range	180V-750V	
MPPT Operating Voltage Range (Full-Load)	300V-680V	
Max. Number of PV Strings	3/3	
No. of MPPTs	2	
<b>Output (Grid)</b>		
Rated AC Active Power	16,000W	17,500W
Max. AC Apparent Power	18,000VA	20,000VA
Max. AC Output Current	3*42A	3*48A
Rated AC Voltage	220V, 3W+N+PE	
AC Voltage Range <sup>①</sup>	150V-300V (Adjustable)	
Rated Grid Frequency	60Hz	
Grid Frequency Range <sup>②</sup>	55Hz-65Hz (Adjustable)	
THDI	<3% (Rated Power)	
DC Current Injection	<0.5%In	
Power Factor	>0.99 Rated power (Adjustable 0.8 Leading - 0.8 Lagging)	
<b>Protection</b>		
DC Switch	Yes	
Anti-Islanding Protection	Yes	
AC Overcurrent Protection	Yes	
AC Short Circuit Protection	Yes	
DC Reverse Protection	Yes	
Surge Arrester	DC Type II / AC Type II	
Insulation Detection	Yes	
Leakage Current Protection	Yes	
<b>General</b>		
Topology	Transformerless	
IP Rating	IP65	
Night Self Consumption	<1W (Standard)	
Cooling	Fan cooling	
Operating Temperature Range	-25°C -60°C	
Relative Humidity Range	0-100%	
Max. Operating Altitude	4000m	
Dimensions (W*H*D)	555mm*446mm*270mm	
Weight	41Kg	
<b>HMI &amp; COM</b>		
Display	Wireless & APP+LED	
Communication	RS485, WiFi (Optional), GPRS (Optional)	
<b>Certification</b>		
Safety	IEC62109-1, IEC62109-2	
Grid Code	IEEE 1547, IEC 61727, IEC62116	
Warranty	5 Years	

Remarks: · <sup>①②</sup>The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.

# THREE PHASE & DUAL MPPT

## SE 30/36KTL-QL3

Application: Large-Scale Industrial and Commercial Sites



### SUPERIOR PERFORMANCE

- Max efficiency of 98.0%
- 4 independent MPPTs
- ECO Invention patent technology



### HIGH RELIABILITY

- Integrated type II DC/AC surge arresters



### INTELLIGENT MAINTENANCE

- Intelligent monitoring via APP & Web
- Multiple remote monitoring for convenient operation and maintenance
- Supports 3Phase 208/220/240V grid system

Model	SE 30KTL-QL3	SE 36KTL-QL3
<b>Efficiency</b>		
Max. Efficiency	98.0%	
<b>Input (PV)</b>		
Max. Input Voltage	800V	
Max. PV Configuration	150%	
Rated Input Voltage	360V	
Max. Input Current	26A/26A/39A/39A	39A/39A/39A/39A
Max.Short Circuit Current	30A/30A/45A/45A	45A/45A/45A/45A
Start Input Voltage/ Min. Operating Voltage	250V/200V	
MPPT Operating Voltage Range	200V-750V	
MPPT Operating Voltage Range (Full-Load)	300V-680V	
Max. Number of PV Strings	2/2/3/3	3/3/3/3
No. of MPPTs	4	
<b>Output (Grid)</b>		
Rated AC Active Power	29,000W	34,500W
Max. AC Apparent Power	33,000VA	40,000VA
Max. AC Output Current	3*83A	3*92A
Rated AC Voltage	220V, 3W+N+PE	
AC Voltage Range <sup>①</sup>	150V-300V (Adjustable)	
Rated Grid Frequency	60Hz	
Grid Frequency Range <sup>②</sup>	55Hz-65Hz (Adjustable)	
THDI	<3% (Rated Power)	
DC Current Injection	<0.5%In	
Power Factor	>0.99 Rated power (Adjustable 0.8 Leading - 0.8 Lagging)	
<b>Protection</b>		
DC Switch	Yes	
Anti-Islanding Protection	Yes	
AC Overcurrent Protection	Yes	
AC Short Circuit Protection	Yes	
DC Reverse Protection	Yes	
Surge Arrester	DC Type II / AC Type II	
Insulation Detection	Yes	
Leakage Current Protection	Yes	
<b>General</b>		
Topology	Transformerless	
IP Rating	IP65	
Night Self Consumption	<1W (Standard)	
Cooling	Fan cooling	
Operating Temperature Range	-25 C -60 C	
Relative Humidity Range	0-100%	
Max. Operating Altitude	4000m	
Dimensions (W*H*D)	855mm*555mm*275mm	
Weight	65Kg	67Kg
<b>HMI &amp; COM</b>		
Display	Wireless & APP+LED, LCD (Optional)	
Communication	RS485, WiFi (Optional), GPRS (Optional)	
<b>Certification</b>		
Safety	IEC62109-1, IEC62109-2	
Grid Code	IEEE 1547, IEC 61727, IEC62116	
Warranty	5 Years	

Remarks: · ①②The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.



# THREE PHASE & MULTIPLE MPPT

SE 25KTL-TL3, SE 30/36KTL-QL3/G2

Application: Commercial & Industrial Sites



## SUPERIOR PERFORMANCE

- Maximum efficiency of 98.0%
- Large string current, compatible with large PV modules



## HIGH RELIABILITY

- IP66 protection level for outdoor installation
- DC/AC Type II SPD
- Optional: AFCI, Night SVG, I/V detection, and integrated PID



## INTELLIGENT MAINTENANCE

- Power consumption monitoring
- Remote configuration and upgrade
- Quick commissioning via mobile app
- String level current detection

Model	SE 25KTL-TL3	SE 30KTL-QL3/G2	SE 36KTL-QL3/G2
<b>Efficiency</b>			
Max. Efficiency	97.8%	97.8%	98.0%
<b>Input (PV)</b>			
Max. Input Voltage	800V		
Max. PV configuration (STC)	150%		
Rated Input Voltage	360V		
Max. Input Current	32A/32A/40A	32A/32A/32A/40A	32A/32A/32A/40A
Max.Short Circuit Current	45A/45A/50A	45A/45A/45A/50A	45A/45A/45A/50A
Start Input Voltage	200V		
MPPT Operating Voltage Range	180-800V		
Max. Number of PV Strings	2/2/2	2/2/2/2	2/2/2/2
No. of MPPTs	3	4	4
<b>Output (Grid)</b>			
Rated AC Active Power	25,000W	30,000W	35,000W
Max. AC Apparent Power	27,800VA	33,400VA	35,100VA
Max. AC Output Current	3*73A	3*87.7A	3*92A
Rated AC Voltage	220V, 3L/N/PE, 3L/PE		
AC Voltage Range <sup>①</sup>	187V-300V (Adjustable)		
Rated Grid Frequency	50Hz/60Hz		
Grid Frequency Range <sup>②</sup>	45-55Hz/55-65Hz (Adjustable)		
THDI	<3% (Rated Power)		
DC Current Injection	<0.5%In		
Power Factor	>0.99 Rated power (Adjustable 0.8 LD - 0.8LG)		
<b>Protection</b>			
DC Switch	Yes		
Anti-Islanding Protection	Yes		
AC Overcurrent Protection	Yes		
AC Short Circuit Protection	Yes		
DC Reverse Protection	Yes		
Surge Arrester	DC Level II / AC Type II		
Insulation Detection	Yes		
Leakage Current Protection	Yes		
AC SPS	Optional		
PID	Optional		
AFCI	Optional		
<b>General</b>			
Topology	Transformerless		
IP Rating	IP66		
Night Self Consumption	<1W (Standard)		
Cooling	Fan cooling		
Operating Temperature Range	-25 °C -60 °C		
Relative Humidity Range	0-100%		
Max. Operating Altitude	4000m		
Dimensions (W*H*D)	635mm*530mm*224mm	635mm*530mm*233mm	
Weight	41.5Kg	42Kg	
<b>HMI &amp; COM</b>			
Display	Wireless & APP+LED, LCD (Optional)		
Communication	RS485, Optional: WiFi/GPRS/LAN		
<b>Certification</b>			
Safety	IEC 62109-1, IEC 62109-2		
Grid Code	IEC 61727, IEC62116		
Warranty	5 Years		

Remarks: · <sup>①②</sup>The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.

# THREE PHASE & MULTIPLE MPPT

SE 30/40KTL-T3/G2, SE 50/60KTL-Q3/G2

Application: Commercial & Industrial Sites



## SUPERIOR PERFORMANCE

- Maximum efficiency of 98.6%
- Large string current, compatible with large PV modules
- 30kW with natural cooling design



## HIGH RELIABILITY

- IP66 protection level for outdoor installation
- DC/AC Type II SPD
- Optional: AFCI, Night SVG, I/V detection, and integrated PID



## INTELLIGENT MAINTENANCE

- Power consumption monitoring
- Remote configuration and upgrade
- Quick commissioning via mobile app
- String level current detection

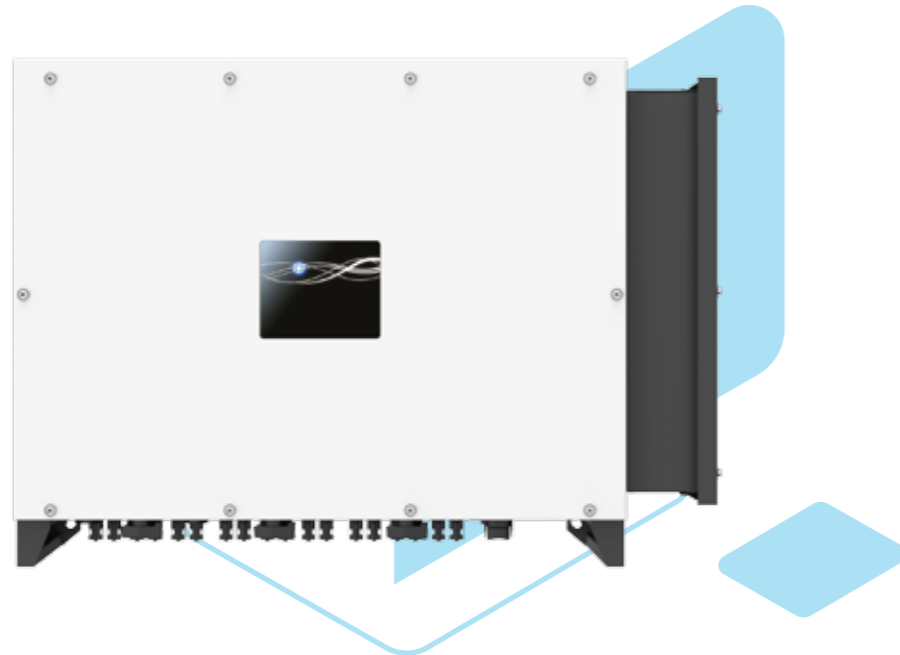
Model	SE 30KTL-T3/G2	SE 40KTL-T3/G2	SE 50KTL-Q3/G2	SE 60KTL-Q3/G2
<b>Efficiency</b>				
Max. Efficiency	98.5%		98.6%	
European Efficiency	98.0%	98.0%	97.9%	98.0%
<b>Input (PV)</b>				
Max. Input Voltage	1100V			
Max. PV Configuration (STC)	150%			
Rated Input Voltage	620V			
Max. Input Current	32A/32A/40A		32A/32A/32A/40A	
Max.Short Circuit Current	45A/45A/50A		45A/45A/45A/50A	
Start Input Voltage	200V			
MPPT Operating Voltage Range	180V-1000V			
Max. Number of PV Strings	2/2/2	2/2/2	2/2/2/2	2/2/2/2
No. of MPPTs	3	3	4	4
<b>Output (Grid)</b>				
Rated AC Active Power	30,000W	40,000W	50,000W	60,000W
Max. AC Apparent Power	33,400VA	44,500VA	55,600VA	66,700VA
Max. AC Output Current	3*51A	3*67.5A	3*84.3A	3*92A
Rated AC Voltage	380V/400V/415V, 3W+N+PE			
AC Voltage Range①	320V-520V (Adjustable)			
Rated Grid Frequency	50Hz / 60Hz			
Grid Frequency Range②	45Hz-55Hz / 55Hz-65Hz (Adjustable)			
THDI	<3% (Rated Power)			
DC Current Injection	<0.5%In			
Power Factor	>0.99 Rated power (Adjustable 0.8 LD - 0.8 LG)			
<b>Protection</b>				
DC Switch	Yes			
Anti-Islanding Protection	Yes			
AC Overcurrent Protection	Yes			
AC Short Circuit Protection	Yes			
DC Reverse Protection	Yes			
Surge Arrester	DC Type II / AC Type II			
Insulation Detection	Yes			
Leakage Current Protection	Yes			
PV String Monitoring	Optional			
Consumption Monitoring	Optional			
<b>General</b>				
Topology	Transformerless			
IP Rating	IP66			
Night Self Consumption	<1W (Standard)			
Cooling	Natural cooling	Fan cooling		
Operating Temperature Range	-25°C -60°C			
Relative Humidity Range	0-100%			
Max. Operating Altitude	4000m			
Dimensions (W*H*D)	635mm*530mm*224mm			635mm*530mm*233mm
Weight	36Kg	40Kg	42Kg	
<b>HMI &amp; COM</b>				
Display	Wireless & APP+LED, LCD (Optional)			
Communication	RS485, Optional: WiFi / GPRS / LAN			
<b>Certification</b>				
Safety	IEC62109-1, IEC62109-2			
Grid Code	VDE-AR-N 4105, EN 50549-1, CEI 0-21, UNE 206006/206007-1, RD 1699/661&413, IEC 61727/62116, CQC			IEC 61727/62116, IEC 61683, CQC
Warranty	5 Years			

Remarks: · ①②The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.

# THREE PHASE & MULTIPLE MPPT

## SE 100/110/125KTL-M3

Application: Commercial & Industrial Sites



### SUPERIOR PERFORMANCE

- Maximum efficiency of 98.8%
- Large string current, compatible with large PV modules
- 9 MPPT, fuse-free design technology



### HIGH RELIABILITY

- IP66 protection level for outdoor installation
- Replaceable DC/AC Type II SPD
- Optional: AFCI, Night SVG, I/V detection, and integrated PID



### INTELLIGENT MAINTENANCE

- Power consumption monitoring
- Remote configuration and upgrade
- Quick commissioning via mobile app
- String level current detection

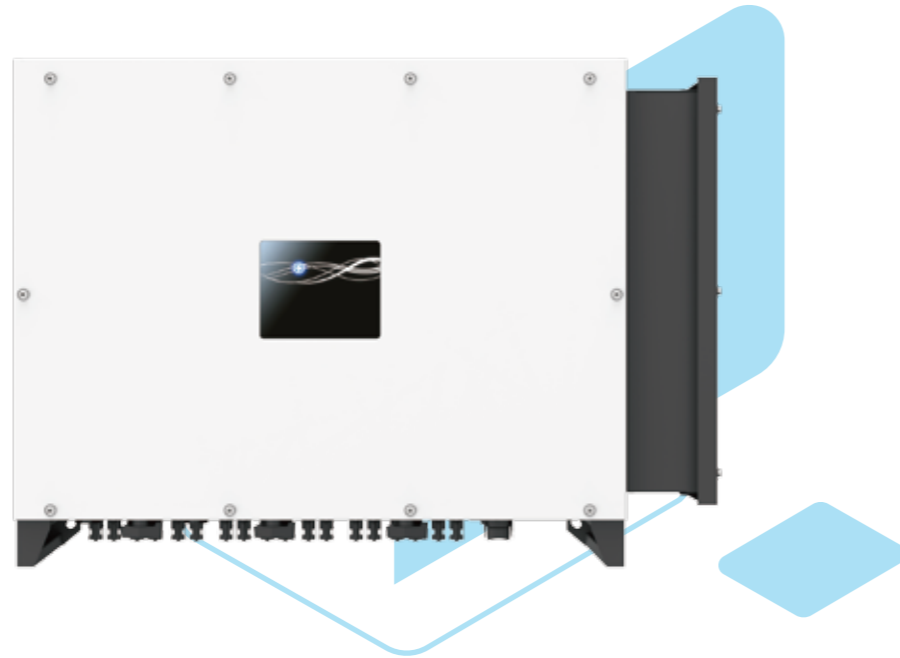
Model	SE 100KTL-M3	SE 110KTL-M3	SE 125KTL-M3
<b>Efficiency</b>			
Max. Efficiency	98.5%	98.6%	98.8%
European Efficiency	98.0%	98.2%	98.2%
<b>Input (PV)</b>			
Max. Input Voltage	1100V		
Max. PV Configuration	150%		
Rated Input Voltage	620V		
Max. Input Current	5*32A/3*40A	6*32A/3*40A	
Max. Short Circuit Current	5*45A/3*50A	6*45A/3*50A	
Start Input Voltage/ Min. Operating Voltage	250V / 200V		
MPPT Operating Voltage Range	200V-1000V		
Max. Number of PV Strings	8*2	9*2	
No. of MPPTs	8	9	
<b>Output (Grid)</b>			
Rated AC Active Power	100,000W	110,000W	125,000W
Max. AC Apparent Power	111,000VA	123,000VA	125,000VA
Max. AC Output Current	3*168.8A	3*187A	3*181A
Rated AC Voltage	380V/400V, 3W+N+PE		
AC Voltage Range*	320V-520V (Adjustable)		
Rated Grid Frequency	50Hz / 60Hz		
Grid Frequency Range**	45Hz-55Hz / 55Hz-65Hz (Adjustable)		
THDI	<3% (Rated Power)		
DC Current Injection	<0.5%In		
Power Factor	>0.99 Rated power (Adjustable 0.8 LD - 0.8 LG)		
<b>Protection</b>			
DC Switch	Yes		
Anti-Islanding Protection	Yes		
AC Overcurrent Protection	Yes		
AC Short Circuit Protection	Yes		
DC Reverse Protection	Yes		
Surge Arrester	DC Type II / AC Type II		
Insulation Detection	Yes		
Leakage Current Protection	Yes		
AFCI	Optional		
PID Recovery	Optional		
PV String Monitoring	Yes		
Consumption Monitoring	Optional		
<b>General</b>			
Topology	Transformerless		
IP Rating	IP66		
Night Self Consumption	<10W (Standard)		
Cooling	Fan cooling		
Operating Temperature Range	-25 C -60 C		
Relative Humidity Range	0-100%		
Max. Operating Altitude	4000m		
Dimensions (W*H*D)	936mm*678mm*365mm		
Weight	91.5Kg	92Kg	
<b>HMI &amp; COM</b>			
Display	Wireless & APP+LED, LCD (Optional)		
Communication	RS485, Optional: WiFi / GPRS / LAN		
<b>Certification</b>			
Safety	IEC62109-1, IEC62109-2		
Grid Code	EN 50549-1/-2, IEC 61727/62116, VDE-AR-N 4105, CEI 0-21/16, UNE 206006/206007-1, UNE 217001		
Warranty	5 Years		

Remarks: · The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.

# THREE PHASE & MULTIPLE MPPT

## SE 75KTL-ML3

Application: Commercial & Industrial Sites



### SUPERIOR PERFORMANCE

- Maximum efficiency of 98.0%
- Large string current, compatible with large PV modules
- 9 MPPT, fuse-free design technology



### HIGH RELIABILITY

- IP66 protection level for outdoor installation
- Replaceable DC/AC Type II SPD
- Optional: AFCI, Night SVG, I/V detection, and integrated PID



### INTELLIGENT MAINTENANCE

- Power consumption monitoring
- Remote configuration and upgrade
- Quick commissioning via mobile app
- String level current detection

Model	SE 75KTL-ML3
<b>Efficiency</b>	
Max. Efficiency	98.0%
European Efficiency	97.5%
<b>Input (PV)</b>	
Max. Input Voltage	800V
Max. PV Configuration	150%
Rated Input Voltage	360V
Max. Input Current	6*32A/3*40A
Max.Short Circuit Current	6*45A/3*50A
Start Input Voltage/ Min. Operating Voltage	250V/200V
MPPT Operating Voltage Range	200V-750V
Max. Number of PV Strings	9*2
No. of MPPTs	9
<b>Output (Grid)</b>	
Rated AC Active Power	75,000W
Max. AC Apparent Power	82,500VA
Max. AC Output Current	3*197A
Rated AC Voltage	220V, 3W+N+PE
AC Voltage Range①	187V~300V (Adjustable)
Rated Grid Frequency	50Hz/60Hz
Grid Frequency Range②	45Hz-55Hz/55Hz-65Hz (Adjustable)
THDI	<3% (Rated Power)
DC Current Injection	<0.5%In
Power Factor	> 0.99 Rated power (Adjustable 0.8 LD - 0.8 LG)
<b>Protection</b>	
DC Switch	Yes
Anti-Islanding Protection	Yes
AC Overcurrent Protection	Yes
AC Short Circuit Protection	Yes
DC Reverse Protection	Yes
Surge Arrester	DC Type II/AC Type II
Insulation Detection	Yes
Leakage Current Protection	Yes
AFCI	Optional
PID Recovery	Optional
PV String Monitoring	Yes
Consumption Monitoring	Optional
<b>General</b>	
Topology	Transformerless
IP Rating	IP66
Night Self Consumption	<10W (Standard)
Cooling	Fan cooling
Operating Temperature Range	-25 C -60 C
Relative Humidity Range	0-100%
Max. Operating Altitude	4000m
Dimensions (W*H*D)	936mm*678mm *365mm
Weight	92Kg
<b>HMI &amp; COM</b>	
Display	Optional: Wireless & APP+LED, LCD
Communication	WiFi, Optional: GPRS/RS485/LAN
<b>Certification</b>	
Safety	IEC 62109-1, IEC 62109-2
Grid Code	IEC 61727:2004, IEC 62116:2014
Warranty	5 Years

Remarks: · ①②The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.

# SINGLE PHASE HYBRID INVERTER

SE 3.6KHB-60, SE 4.6/5/6KHB-120

Application: Residential Use



## EXCELLENT PERFORMANCE

- Maximum efficiency of 97.3% and battery efficiency of 94.3%
- Maximum 9kW PV input power
- Maximum battery charge/discharge current of 120A
- Large MPPT current, compatible with high-power solar panels
- Advanced parallel function



## HIGH RELIABILITY

- Key components from international renowned brands
- IP65 protection rating, ensuring adaptability to complex outdoor environment
- Multiple built-in protections



## INTELLIGENT MAINTENANCE

- Quick commission via mobile app, 24/7 remote monitoring, configuration and upgrade
- Advanced energy management mechanism, with multiple built-in working modes and flexible customized settings
- Optional generator and smart load functions

Model	SE 3K6HB-60	SE 4K6HB-120	SE 5KHB-120	SE 6KHB-120
<b>Efficiency</b>				
Max. Efficiency (PV to AC)	97.3%			
Eur. Efficiency (PV to AC)	96.8%			
Max. Efficiency (BAT to AC)	94.3%			
<b>Input (PV)</b>				
Max. PV Input Power	6,300W	9,000W		
Max. PV Voltage	550V			
Start-up Voltage	90V			
MPPT Operating Voltage Range	70V-540V			
Max. Input Current per MPPT	15A/15A			
Max. Short Circuit Current per MPPT	20A/20A			
String per MPPT	1/1			
Nos. of MPPT	2			
<b>Input/Output (BAT)</b>				
Battery Type	Lithium-ion/Lead-acid			
Nominal Battery Voltage	48V			
Battery Voltage Range	40V-65V			
Max. Charge/Discharge Current	60A/60A	120A/120A	120A/120A	120A/120A
Max. Charge/Discharge Power	3,000W/3,000W	6,000W/6,000W	6,000W/6,000W	6,000W/6,000W
<b>Output (Grid)</b>				
Nominal AC Output Power	3,600W	4,600W	5,000W	6,000W
Max. AC Output Apparent Power	3,960VA	4,600VA	5,500VA	6,000VA
Max.AC Output Power (PF=1)	3,960W	4,600W	5,500W	6,000W
Max. AC Output Current	18A	22A	25A	27.2A
Nominal Grid Voltage	220V/230V/240V, L+N+PE			
Grid Voltage Range	150V-300V (Adjustable)			
Nominal Grid Frequency	50Hz/60Hz			
Grid Frequency Range	45Hz-55Hz/55Hz-65Hz (Adjustable)			
Power Factor	> 0.99 @rated power (Adjustable 0.8 LD - 0.8 LG)			
THDI	<3% (Rated Power)			
<b>Output (Back up)</b>				
Nominal Output Power	3,000W	4,600W	5,000W	6,000W
Nominal Output Current	13A	20A	21.7A	26A
Peak Output Apparent Power (>1s)	4,500VA	6,900VA	7,500VA	9,000VA
Nominal Output Voltage	220V/230V/240V, L+N+PE			
Nominal Output Frequency	50Hz/60Hz			
Transfer Time	<10ms (typical)			
THDV	<3% @100% R Load			
<b>Protection</b>				
Protection Category	Class I			
DC Switch	Yes			
Anti-islanding Protection	Yes			
AC Overcurrent Protection	Yes			
DC/AC Overvoltage Protection	DC Type II, AC Type III			
AC Short Circuit Protection	Yes			
DC Reverse Protection	Yes			
Surge Arrester	DC Type III, AC Type III			
Insulation Resistance Detection	Yes			
Leakage Current Protection	Yes			
Generator	Optional			
<b>General</b>				
Max. Operating Altitude	4000m (>2000m derating)			
Ingress Protection Rating	IP65			
Operating Temperature Range	-25°C~60°C (>45°C derating)			
Relative Humidity	0~100%			
Cooling Method	Natural Cooling			
Mounting	Wall bracket			
Dimensions (W*H*D)	515mm*487mm*175mm			
Weight	16Kg	25Kg		
PV Connection Way	MC4/H4			
Battery Connection Way	Dedicated DC connector			
AC Connection Way (Grid & Back up)	Dedicated AC connector			
<b>HMI &amp; COM</b>				
Display	Bluetooth & APP + LED, LCD (Optional)			
Communication Interface	RS485/CAN (for BMS), RS485, Ethernet, DRM/RS485 (for Meter), Optional: Wi-Fi/LAN			
<b>Certification</b>				
Safety	IEC 62109-1&2, IEC62040-1, IEC 62477-1			
Grid	VDE 4105, IEC 61727/62116, AS 4777.2, EN 50549-1, C10/11, G98/G99/G100, CEI 0-21, NRS 097-2-1, RD 1699/661/647/413, UNE 217002			
<b>Warranty</b>				
	5 Years			

Remarks: · The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.

# SINGLE PHASE HYBRID INVERTER

## SE 3/3.6/4.6/5/6KHB-D1/HV

Application: Residential Use



### EXCELLENT PERFORMANCE

- Maximum efficiency of 97.8% and battery efficiency of 97.0%
- Maximum 12kW PV input power
- Maximum battery charge/discharge current of 42A
- Large MPPT current, compatible with high-power solar panels
- Supporting full-house load on backup port, with maximum capacity of 12kW



### HIGH RELIABILITY

- Key components from international renowned brands
- IP66 protection rating, ensuring adaptability to complex outdoor environment
- Multiple built-in protections, with optional AFCI



### INTELLIGENT MAINTENANCE

- Quick commission via mobile app, 24/7 remote monitoring, configuration and upgrade
- Advanced energy management mechanism, with multiple built-in working modes and flexible customized settings

Model	SE 3KHB-D1/HV	SE 3K6HB-D1/HV	SE 4K6HB-D1/HV	SE 5KHB-D1/HV	SE 6KHB-D1/HV
<b>Efficiency</b>					
Max. Efficiency (PV to AC)	97.8%				
Eur. Efficiency (PV to AC)	97.5%				
Max. Efficiency (BAT to AC)	97.0%				
<b>Input (PV)</b>					
Max. PV Input Power	12,000W				
Max. PV Voltage	550V				
Start-up Voltage	90V				
MPPT Operating Voltage Range	70V-540V				
Max. Input Current per MPPT	16A/16A				
Max. Short Circuit Current per MPPT	20A/20A				
String per MPPT	1/1				
Nos. of MPPT	2				
<b>Input/Output (BAT)</b>					
Battery Type	Lithium-ion/Lead-acid				
Nominal Battery Voltage	360V				
Battery Voltage Range	80V-480V				
Max. Charge/Discharge Current	42A/42A				
Max. Charge/Discharge Power	9,000W/4,200W		9,000W/6,600W		
<b>Output (Grid)</b>					
Nominal AC Output Power	3,000W	3,600W	4,600W	5,000W	6,000W
Max. AC Output Apparent Power	3,300VA	3,960VA	4,600VA	5,500VA	6,600VA
Max. AC Output Power (PF=1)	3,300W	3,960W	4,600W	5,500W	6,600W
Max. AC Output Current	15.0A	18.0A	21.0A	25.0A	28.7A
Nominal Grid voltage	220V/230V/240V, L+N+PE				
Grid Voltage Range	150V-300V (Adjustable)				
Nominal Grid Frequency	50Hz/60Hz				
Grid Frequency Range	45Hz-55Hz/55Hz-65Hz (Adjustable)				
Power Factor	> 0.99 @rated power (Adjustable 0.8 LD - 0.8 LG)				
THDI	<3% (Rated Power)				
<b>Output (Back up)</b>					
Nominal Output Power	3,000W	3,600W	4,600W	5,000W	6,000W
Nominal Output Current	13A	15.7A	20A	21.7A	26.1A
Peak Output Apparent Power (1min)	3,600VA	4,320VA	5,520VA	6,000VA	7,200VA
Peak Output Apparent Power (15s)	4,350VA	5,220VA	6,670VA	7,250VA	8,700VA
Nominal Output Voltage	220V/230V/240V, L+N+PE				
Nominal Output Frequency	50Hz/60Hz				
Transfer Time	<10ms (typical)				
THDV	<3% @100% R Load				
<b>Protection</b>					
Protection Category	Class I				
DC Switch	Yes				
Anti-islanding Protection	Yes				
AC Over Current Protection	Yes				
DC/AC Overvoltage Protection	DC Type II, AC Type III				
AC Short Circuit Protection	Yes				
DC Reverse Protection	Yes				
Surge Arrester	DC Type III, AC Type III				
Insulation Resistance Detection	Yes				
Leakage Current Protection	Yes				
AFCI	Optional				
<b>General</b>					
Max. Operation Altitude	4000m (>2000m derating)				
Ingress Protection Degree	IP66				
Operating Temperature Range	-25~60 C (>45 C derating)				
Relative Humidity	0~100%				
Cooling Method	Natural Cooling				
Mounting	Wall bracket				
Dimensions (W*H*D)	470mm*360mm*172mm				
Weight	14.1Kg			14.6Kg	
PV Connection Way	MC4/H4				
<b>HMI &amp; COM</b>					
Display	Bluetooth & APP + LED, LCD (optional)				
Communication interface	RS485/CAN (BMS), DRM/RS485 (for Meter), RS485, Optional: Wi-Fi/LAN				
<b>Certification</b>					
Safety	IEC 62109-1/2				
Grid	EN 50549-1, VDE 4105, AS 4777, CEI 0-21, G98/G99/G100, RD 1699/661/647/413, UNE 217002				
Warranty	5 Years				

Remarks: · The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.

# SINGLE PHASE HYBRID INVERTER

## SE 8/10KHB-T/EU

Application: Residential Use



### MAXIMIZE PV INPUT POWER

- Up to 200% oversizing allowed with 3 MPPTs
- Support high power module with 30A PV input current
- Support AC coupled solar input



### VERSATILE APPLICATIONS

- Stackable up to 9 units
- Standby generator connection for whole-home back up
- Four application modes
- Remote configuration and upgrade



### FLEXIBLE BATTERY CONFIGURATION

- Support 40-64V Lithium or Lead-acid battery
- Maximum battery charge/discharge current of 210A



### STABLE OUTPUT POWER

- Continuous 110% of nominal AC power
- Seamless backup transition (<10ms)

	SE 8KHB-180-T/EU	SE 10KHB-210-T/EU
<b>Efficiency</b>		
Max. Efficiency (PV to AC)	98.0%	
Max. Efficiency (BAT to AC)	94.5%	
<b>Input (PV)</b>		
Max. PV Input Power	12,000W	15,000W
Max. PV Voltage	600V	
Start-up Voltage	90V	
MPPT Operating Voltage Range	70V-540V	
Max. Input Current per MPPT	30A/22A/22A	
Max. Short Circuit Current per MPPT	40A/30A/30A	
String per MPPT	2/2/2	
Nos. of MPPT	3	
<b>Input/Output (BAT)</b>		
Battery Type	Lithium-ion/Lead-acid	
Nominal Battery Voltage	48V	
Battery Voltage Range	40V-64V	
Max. Charge/Discharge Current	210A/180A	210A/210A
Max. Charge/Discharge Power	10,000W/8,000W	10,000W/10,000W
<b>Output (Grid)</b>		
Nominal AC Output Power	8,000W	10,000W
Max. AC Output Apparent Power	8,800VA	11,000VA
Max. AC Output Power (PF=1)	8,800W	11,000W
Max. AC Output Current	40A	50A
Nominal Grid Voltage	220V/230/240V, L+N+PE	
Grid Voltage Range	150V-300V (Adjustable)	
Nominal Grid Frequency	50Hz/60Hz	
Grid Frequency Range	45Hz-55Hz/55Hz-65Hz (Adjustable)	
Power Factor	> 0.99 @rated power (Adjustable 0.8 LD - 0.8 LG)	
THDI	<3% (Rated Power)	
<b>Output (Back up)</b>		
Nominal Output Power	8,000W	10,000W
Nominal Output Current	34.8A	43.5A
Peak Output Apparent Power (1s)	16,000VA	20,000VA
Nominal Output Voltage	220V/230/240V, L+N+PE	
Nominal Output Frequency	50Hz/60Hz	
Transfer Time	<10ms (typical)	
THDV	<3% @100% R Load	
<b>Protection</b>		
Protection Category	Class I	
DC Switch	Yes	
Anti-islanding Protection	Yes	
AC Overcurrent Protection	Yes	
DC/AC Overvoltage Protection	DC Type II, AC Type III	
AC Short Circuit Protection	Yes	
DC Reverse Protection	Yes	
Surge Arrester	DC Type II, AC Type II	
Insulation Resistance Detection	Yes	
Leakage Current Protection	Yes	
AFCI	Optional	
Generator	Yes	
<b>General</b>		
Max. Operation Altitude	4000m (>2000m derating)	
Ingress Protection Degree	IP66	
Operating Temperature Range	-25 C ~60 C (>45 C derating)	
Relative Humidity	0~100%	
Cooling	Fan Cooling	
Mounting	Wall bracket	
Dimensions (W*H*D)	420mm*800mm*240mm	
Weight	39Kg	
PV Connection Way	Terminals	
<b>HMI &amp; COM</b>		
Display	Bluetooth & APP + LED , LCD (optional)	
Communication Interface	RS485/CAN (for BMS), DRM/RS485 (for Meter), RS485, Optional: Wi-Fi/LAN	
<b>Certification</b>		
Safety	IEC 62109-1&2	
Grid	IEC 61727/62116, AS 4777.2, NRS 097-2-1	
Warranty	5 Years	

Remarks: · The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.

# SPLIT PHASE HYBRID INVERTER

SE 5/6/7.6/10/11.4KHB-UL

Application: Residential Use



## MAXIMIZE PV INPUT POWER

- Up to 200% oversizing allowed with 3 MPPTs
- Support high power module with 30A PV input current
- Support AC coupled solar input
- Integrated arc fault circuit interrupter (AFCI) and rapid shutdown



## VERSATILE APPLICATIONS

- Stackable up to 9 units
- Standby generator connection for whole-home back up
- Four application modes, mixed with time control
- Remote configuration and upgrade



## FLEXIBLE BATTERY CONFIGURATION

- Built-in DC Breaker for safety and reliability
- Support 40-64V Lithium or Lead-acid battery
- Maximum battery charge/discharge current of 210A



## STABLE OUTPUT POWER

- Continuous 110% of nominal AC power
- Support 120/240/208V connections
- Seamless backup transition (<10ms)

Model	SE 5KHB-130-D2/UL	SE 6KHB-130-D2/UL	SE 7K6HB-180 T2/UL	SE 10KHB-210-T2/UL	SE 11K4HB-210 T2/UL
<b>Efficiency</b>					
Max. Efficiency (PV to AC)	98.0%				
Max. Efficiency (BAT to AC)	94.5%				
CEC. Efficiency	96.5%				
<b>Input (PV)</b>					
Max. PV Input Power	7,500W	9,000W	12,000W	15,000W	15,000W
Max. PV Voltage	600V				
Start-up Voltage	90V				
MPPT Operating Voltage Range	70V-540V				
Max. Input Current per MPPT	30A/22A		30A/22A/22A		
Max short current per MPPT	40A/30A		40A/30A/30A		
String per MPPT	2/2		2/2/2		
Nos. of MPPT	2		3		
<b>Input/Output (BAT)</b>					
Battery Type	Lithium-ion/Lead-acid				
Nominal Battery Voltage	48V				
Battery Voltage Range	40V-64V				
Max. Charge/Discharge Current	210A/130A	210A/130A	210A/180A	210A/210A	210A/210A
Max. Charge/Discharge Power	10,000W/5,000W	10,000W/6,000W	10,000W/7,600W	10,000W/10,000W	10,000W/10,000W
<b>Output (Grid)</b>					
Nominal AC Output Power	5,000W	6,000W	7,600W	10,000W	10,000W
Max. AC Output Apparent Power	5,500VA	6,600VA	7,600VA	11,000VA	11,400VA
Max. AC Output Power (PF=1)	5,500W	6,600W	7,600W	11,000W	11,400W
Nominal AC Output Current	20.9A	25A	31.7A	41.7A	41.7A
Max. AC Output Current	22.9A	27.5A	34.8A	45.8A	47.5A
Nominal Grid Voltage	120V/240V (Split phase) / 208V (2/3 phase)				
Nominal Grid Frequency	50Hz /60Hz				
Grid Frequency Range	45Hz-55Hz/55Hz-65Hz (Adjustable)				
Power Factor	> 0.99 @rated power (Adjustable 0.8 LD - 0.8 LG)				
THDI	<3% (Rated Power)				
<b>Output (Back up)</b>					
Nominal Output Power	5,000W	6,000W	7,600W	10,000W	10,000W
Max. AC Output Power (PF=1)	5,500W	6,600W	7,600W	11,000W	11,400W
Nominal Output Current	20.9A	25A	31.7A	41.7A	41.7A
Peak Power (1s)	10,000VA	12,000VA	15,200VA	20,000VA	20,000VA
Nominal Output Voltage	120V/240V (Split phase) / 208V (2/3 phase)				
Nominal Output Frequency	50Hz/60Hz				
Transfer Time	< 10ms (typical)				
THDV	<3% @100% R Load				
<b>Protection</b>					
Protection Category	Class I				
DC Switch	Yes				
Anti-islanding Protection	Yes				
AC Overcurrent Protection	Yes				
DC/AC Overvoltage Protection	DC Type II, AC Type IV				
AC Short Circuit Protection	Yes				
DC Reverse Protection	Yes				
Surge Arrester	DC Type II, AC Type II				
Insulation Resistance Detection	Yes				
Leakage Current Protection	Yes				
AFCI	Yes				
RSD	Yes				
Generator	Yes				
<b>General</b>					
Max. Operation Altitude	2000m				
Ingress Protection Degree	NEMA 3R				
Operating Temperature Range	-25 C ~60 C (>45 C derating)				
Relative Humidity	0~100%				
Cooling Method	Fan Cooling				
Mounting	Wall bracket				
Dimensions (W*H*D)	16.5*31.5*9.4 inch (420mm*800mm*240mm)				
Weight	40Kg/88lb				
PV Connection Way	Terminals				
<b>HMI &amp; COM</b>					
Display	Wireless & APP + LED, LCD (optional)				
Communication Interface	RS485/CAN (for BMS), DRM/RS485 (for meter), RS485, Optional: Wi-Fi/LAN				
<b>Certification</b>					
Safety	UL 1741/CSA C22.2/UL 1699B				
Grid	UL1741SB, IEEE1547: 2018, HECO SRD 2.0				
EMC	FCC Part 15 Class B				
Warranty	5 Years				

Remarks: · The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.



# THREE PHASE HYBRID INVERTER

## SE 5/6/8/10KHB-D3P

Application: Residential Use



### EXCELLENT PERFORMANCE

- Maximum efficiency of 97.8% and battery efficiency of 97.0%
- Maximum 15kW PV input power, supporting continuous overload capacity of 110% and unbalanced output of 150%
- Maximum battery charge/discharge current of 50A
- Large MPPT current, compatible with high-power solar panels
- Advanced parallel function



### HIGH RELIABILITY

- Key components from international renowned brands
- IP65 protection rating, ensuring adaptability to complex outdoor environment
- Multiple built-in protections, with optional AFCI



### INTELLIGENT MAINTENANCE

- Quick commission via mobile app, 24/7 remote monitoring, configuration and upgrade
- Advanced energy management mechanism, with multiple built-in working modes and flexible customized settings

Model	SE 5KHB-D3P	SE 6KHB-D3P	SE 8KHB-D3P	SE 10KHB-D3P
<b>Efficiency</b>				
Max. Efficiency (PV to AC)	97.3%			97.8%
Eur. Efficiency (PV to AC)	96.7%			97.0%
Max. Efficiency (BAT to AC)	96.9%	97.0%	96.9%	97.0%
<b>Input (PV)</b>				
Max. PV Input Power	15,000W			
Max. PV Voltage	1000V			
Start-up Voltage	120V			
MPPT Operating Voltage Range	160V-950V			
Max. Input Current per MPPT	20A/30A			
Max. Short Circuit Current per MPPT	30A/40A			
String per MPPT	1/2			
Nos. of MPPT	2			
<b>Input/Output (BAT)</b>				
Battery Type	Lithium-ion/Lead-acid			
Nominal Battery Voltage	250V-600V			
Battery Voltage Range	120V-600V			
Max. Charge/Discharge Current	50A/50A			
Max. Charge/Discharge Power	15,000W/5,800W	15,000W/7,000W	15,000W/9,100W	15,000W/11,300W
<b>Output (Grid)</b>				
Nominal AC Output Power	5,000W	6,000W	8,000W	10,000W
Max. AC Output Apparent	5,500VA	6,600VA	8,800VA	11,000VA
Max. AC Output Power (PF=1)	5,500W	6,600W	8,800W	11,000W
Max. AC Output Current	3*8.3A	3*10A	3*13.3A	3*16.7A
Max. Single Phase Power	2,500W	3,000W	4,000W	5,000W
Max. Input Power	15,800W			
Max. Input Current	3*25A			
Nominal Grid Voltage	380V/400V/415V, 3W+N+PE			
Grid Voltage Range	260V-520V (Adjustable)			
Nominal Grid Frequency	50Hz/60Hz			
Grid Frequency Range	45Hz-55Hz/55Hz-65Hz (Adjustable)			
Power Factor	> 0.99 @rated power (Adjustable 0.8 LD - 0.8 LG)			
THDI	<5%			
<b>Output (Back up)</b>				
Nominal Output Power	5,000W	6,000W	8,000W	10,000W
Nominal Output Current	3*7.6A	3*9.1A	3*12.2A	3*15.2A
Max. Single Phase Power	2,500W	3,000W	4,000W	5,000W
Peak Output Apparent Power (5min)	6,000VA	7,200VA	9,600VA	12,000VA
Peak Output Apparent Power (10s)	7,500VA	9,000VA	12,000VA	15,000VA
Nominal Output Voltage	380V/400V/415V, 3W+N+PE			
Nominal Output Frequency	50Hz/60Hz			
Transfer Time	<10ms (typical)			
THDV	<3% @100% R Load			
<b>Protection</b>				
Protection Category	Class I			
DC Switch	Yes			
Anti-islanding Protection	Yes			
AC Overcurrent Protection	Yes			
DC/AC Overvoltage Protection	DC Type II, AC Type III			
AC Short Circuit Protection	Yes			
DC Reverse Protection	Yes			
Surge Arrester	DC Type II, AC Type II			
Insulation Resistance Detection	Yes			
Leakage Current Protection	Yes			
GFCI	Yes			
AFCI	Optional			
<b>General</b>				
Max. Operation Altitude	4000m (>2000m derating)			
Ingress Protection Degree	IP65			
Operating Temperature Range	-25 C ~60 C (>45 C derating)			
Relative Humidity	0~100%			
Cooling Method	Natural Cooling			
Mounting	Wall bracket			
Dimensions (W*H*D)	560mm*580mm*218.3mm			
Weight	32Kg			
PV Connection Way	MC4/H4			
<b>HMI &amp; COM</b>				
Display	LED, LCD (optional), APP			
Communication Interface	RS485/CAN (for BMS), DRM, RS485 (for Meter), Wi-Fi/LAN (Optional, for Portal)			
<b>Certification</b>				
Safety	IEC/EN 62109-1&2			
EMC	IEC/EN 61000			
Grid	VDE 4105, EN 50549-1, CEI 0-21, PPDS, RD 1699/661/647/413, UNE 217002, AS 4777.2, C10/11, G98/G100, IEC 61727/62116			
Warranty	5 Years			

Remarks: · The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.

# THREE PHASE HYBRID INVERTER

## SE 12/15/20/25/30KHB

Application: Residential & Small-Medium C&I Use



### EXCELLENT PERFORMANCE

- Maximum efficiency of 98.4% and battery efficiency of 98.0%
- Large MPPT current, compatible with high-power solar panels
- Supporting continuous overload capacity of 110% and unbalanced output
- Maximum battery charge/discharge current of 2\*75A
- Advanced parallel function



### HIGH RELIABILITY

- Key components from international renowned brands
- IP66 protection rating, ensuring adaptability to complex outdoor environment
- Multiple built-in protections, with optional AFCI



### INTELLIGENT MAINTENANCE

- Quick commission via mobile app, 24/7 remote monitoring, configuration and upgrade
- Advanced energy management mechanism, with multiple built-in working modes and flexible customized settings

Model	SE 12KHB-D3	SE 15KHB-D3	SE 20KHB-D3	SE 25KHB-T3	SE 30KHB-T3
<b>Efficiency</b>					
Max. Efficiency (PV to AC)	98.2%			98.4%	
Eur. Efficiency (PV to AC)	97.9%				
Max. Efficiency (BAT to AC)	98.0%				
<b>Input (PV)</b>					
Max. PV Input Power	30,000W	30,000W	30,000W	45,000W	45,000W
Max. PV Voltage	1000V				
Start-up Voltage	150V				
MPPT Voltage Range	160V-950V				
Max. Input Current per MPPT	32A/32A			32A/32A/32A	
Max. Short Circuit Current per MPPT	40A/40A			40A/40A/40A	
String per MPPT	2/2			2/2/2	
Nos. of MPPT	2			3	
<b>Input/Output (BAT)</b>					
Battery Type	Lithium-ion/Lead-acid				
Battery Voltage Range at Rated Power	230V-800V	285V-800V	380V-800V	190V-800V	230V-800V
Battery Voltage Range	120V-800V				
Max. Charge/Discharge Current	60A/60A			2*75A/2*75A	
Max. Charge/Discharge Power	30,000W/ 14,400W	30,000W/ 18,000W	30,000W/ 24,000W	45,000W/ 36,000W	45,000W/ 36,000W
<b>Output (Grid)</b>					
Nominal AC Output Power	12,000W	15,000W	20,000W	25,000W	30,000W
Max. AC Output Power	13,200VA	16,500VA	22,000VA	27,500VA	33,000VA
Max. AC Output Power (PF=1)	13,200W	16,500W	22,000W	27,500W	33,000W
Max. AC Output Current	3*20A	3*25A	3*33.3A	3*41.7A	3*50A
Max. Single Phase power	10,000VA	10,000VA	10,000VA	11,000VA	11,000VA
Max. Input Power	36,000VA		40,000VA		45,000VA
Max. Input Current	3*54.5A		3*60.6A		3*68.2A
Nominal Grid Voltage	380V/400V/415V, 3W+N+PE				
Grid Voltage Range	277V-520V (Adjustable)				
Nominal Grid Frequency	50Hz/60Hz				
Grid Frequency Range	45Hz-55Hz/55Hz-65Hz (Adjustable)				
Power Factor	> 0.99 @rated power (Adjustable 0.8 LD - 0.8 LG)				
THDI	<3% (Rated Power)				
<b>Output (Back up)</b>					
Nominal Output Power	12,000W	15,000W	20,000W	25,000W	30,000W
Nominal Output Current	3*18.2A	3*22.7A	3*30.3A	3*37.9A	3*45.5A
Peak Output Apparent Power (5min)	14,400VA	18,000VA	24,000VA	30,000VA	36,000VA
Peak Output Apparent Power (10s)	18,000VA	22,500VA	30,000VA	37,500VA	45,000VA
Nominal Output Voltage	380V/400V/415V, 3W+N+PE				
Nominal Output Frequency	50Hz/60Hz				
Transfer Time	<10ms (typical)				
THDV	<3% @100% R Load				
<b>Protection</b>					
Protection Category	Class I				
DC Switch	Yes				
Anti-islanding Protection	Yes				
AC Overcurrent Protection	Yes				
DC/AC Overvoltage Protection	DC Type II, AC Type III				
AC Short Circuit Protection	Yes				
DC Reverse Protection	Yes				
Surge Arrester	DC Type II, AC Type II				
Insulation Resistance Detection	Yes				
Leakage Current Protection	Yes				
AFCI	Optional				
<b>General</b>					
Max. Operation Altitude	4000m (>2000m derating)				
Ingress Protection Degree	IP66				
Operating Temperature Range	-25°C ~60°C (>45°C derating)				
Relative Humidity	0-100%				
Cooling	Natural Cooling		Smart Fan Cooling		
Mounting Method	Wall bracket				
Dimensions (W*H*D)	660mm*596mm*235mm				
Weight	45Kg			55Kg	
PV Connection Way	MC4/H4				
<b>HMI &amp; COM</b>					
Display	Bluetooth & APP + LED, LCD (optional)				
Communication Interface	RS485/CAN (for BMS), RS485, DRM/RS485 (for Meter), Optional: Wi-Fi/LAN, 3*DO, 2*DI				
<b>Certification</b>					
Safety	IEC 62109-1&2				
EMC	IEC/EN 61000				
Grid	VDE 4105, EN 50549-1, CEI 0-21, NRS 097-2-1, RD 1699/661/647/413, UNE 217002, AS 4777.2, C10/11, IEC 61727/62116				
Warranty	5 Years				

Remarks: · The range of output voltage and frequency may vary depending on different grid codes.  
· Specifications are subject to change without advanced notice.

# DATA LOGGER V1000+



- Built-in web server for LAN monitoring
- 12 Months of data storage
- Automatic network clock synchronization
- RS485 interface for inverter connection
- Standard RJ45 patch cable
- Power export control supported

Model	V1000+
Connection	Inverter: RS485 Router: RJ45
Access Number	40pcs
Transmission Maximum Distance	1200m
Display	LED
<b>Input</b>	
Input Voltage	Input: AC 90V-250V 50/60Hz Output: DC 5V
Static Current Consumption	1A
<b>General</b>	
Operating Temperature	-25 C ~55 C
Humidity	10%~95% relative humidity, no condensation
IP Rating	IP20
Dimension (L*W*H)	118mm*78mm*29mm
<b>Certification</b>	
Safety	FCC, CE, ROHS

# WIFI COMMUNICATION MODULE SE WIFI-R



- Easy plug-and-play installation for quick and convenient setup
- Preferred monitoring solution for residential use

Model	SE WIFI-R
Connection	TTL
Standards	802.11 b/g/n
Transmission Maximum Distance	100m Unobstructed environment
Setting	APP / WEB
<b>Input</b>	
Input Voltage	DC 5V
Static Power Consumption	<1.6W
<b>General</b>	
Operating Temperature	-25 C ~60 C
Humidity	0%~100% relative humidity, no condensation
IP Rating	IP65
Dimension (L*W*H)	71mm*41mm*92mm
<b>Certification</b>	
Safety	FCC / CE-RED / SRRC

# LAN COMMUNICATION MODULE SE LAN-R



- Easy plug-and-play installation for quick and convenient setup
- Mobile internet monitoring, ideal for rural and remote areas

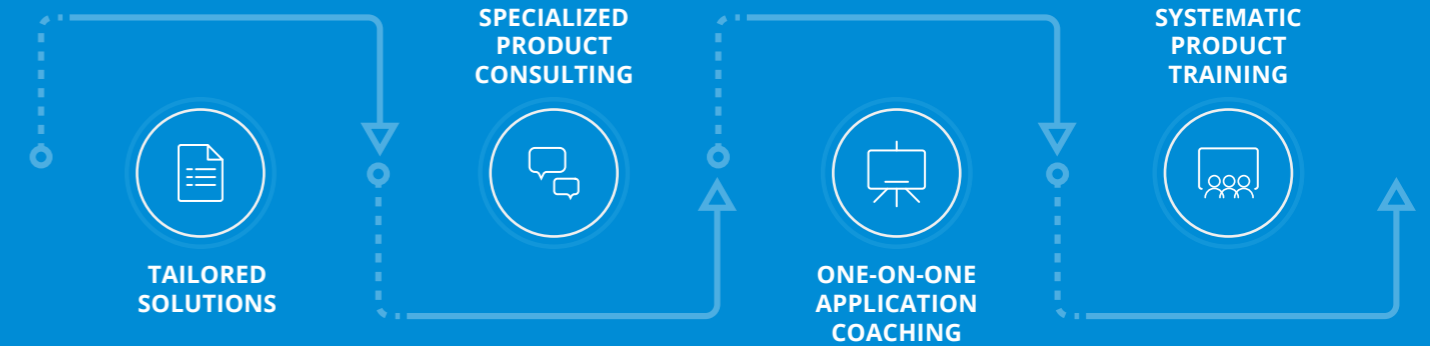
Model	SE LAN-R
Connection	TTL
Standards	IEEE 802.3
Transmission Maximum Distance	100m CAT5
Setting	APP
<b>Input</b>	
Input Voltage	DC 5V
Static Power Consumption	<1.6W
<b>General</b>	
Operating Temperature	-25 C ~60 C
Humidity	0%~100% relative humidity, no condensation
IP Rating	IP65
Dimension (L*W*H)	71mm*41mm*117mm
<b>Certification</b>	
Safety	FCC, CE-RED, SRRC

# SMART SOLAR CLOUD

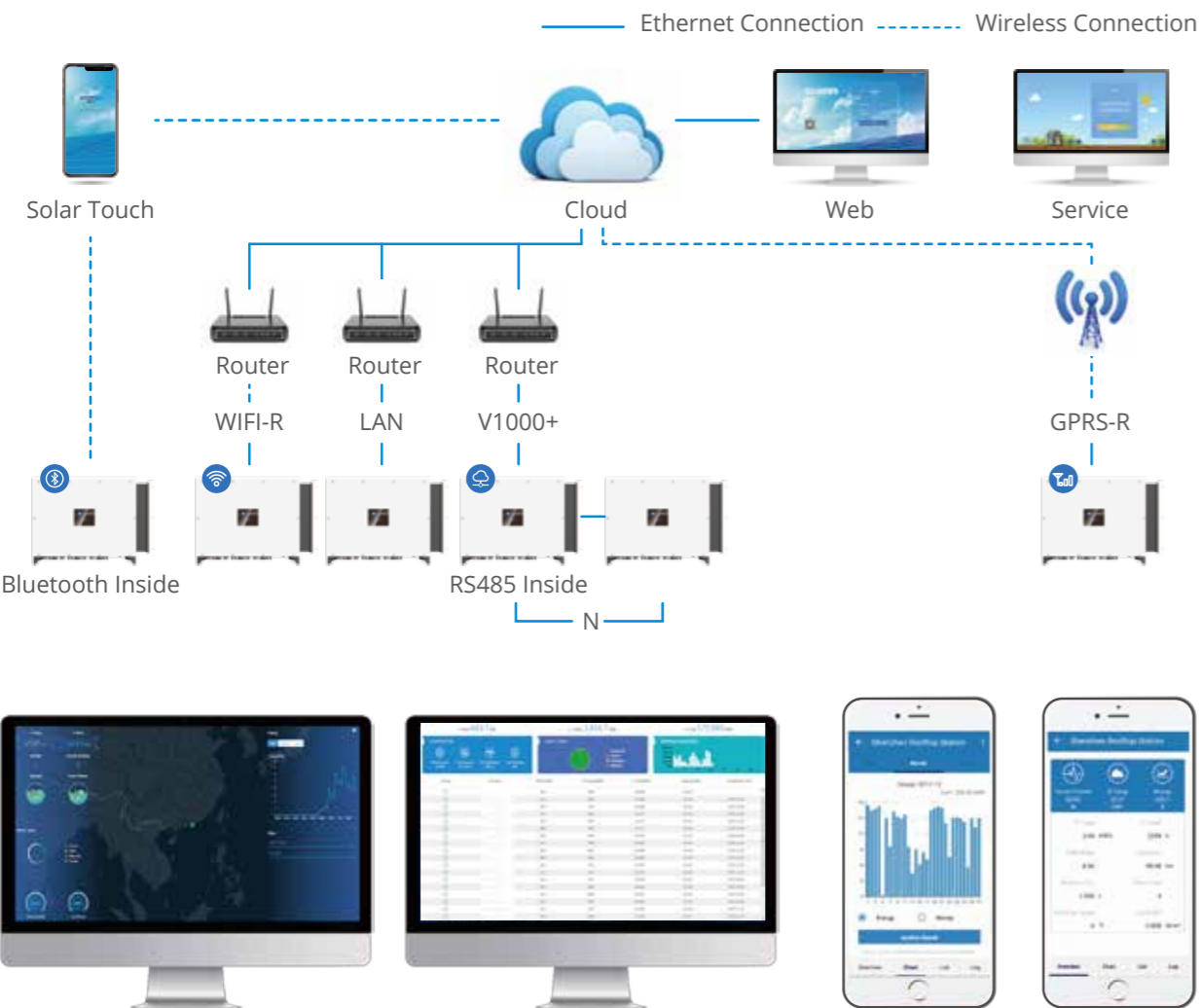
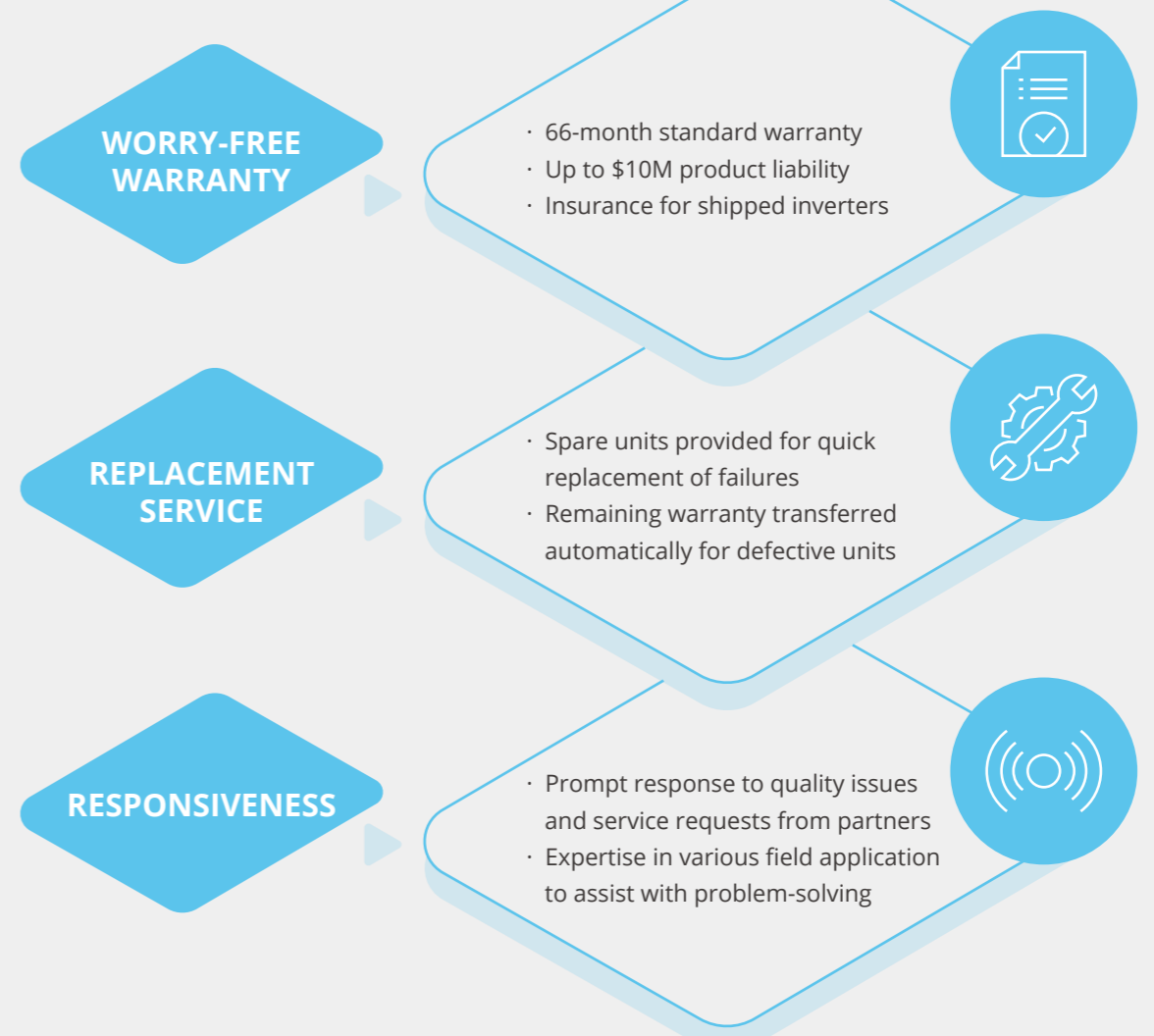


- Suitable for residential/commercial/storage applications
- Cloud services provided from Europe, the Americas, Singapore, India and China
- Monitoring the operational status of inverters, generators, communication modules, energy storage within the system
- Full visibility into energy consumption and production processes
- Remote diagnosis and detection technology with operational data visualization and intelligent analysis

# PRESALES SUPPORT



# AFTER SALE SERVICE



**WORRY-FREE WARRANTY**

- 66-month standard warranty
- Up to \$10M product liability
- Insurance for shipped inverters

**REPLACEMENT SERVICE**

- Spare units provided for quick replacement of failures
- Remaining warranty transferred automatically for defective units

**RESPONSIVENESS**

- Prompt response to quality issues and service requests from partners
- Expertise in various field application to assist with problem-solving

