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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

2nd plant (DK) established in Shenzhen

2010

Renewable Energy Business set up

1997

1st 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

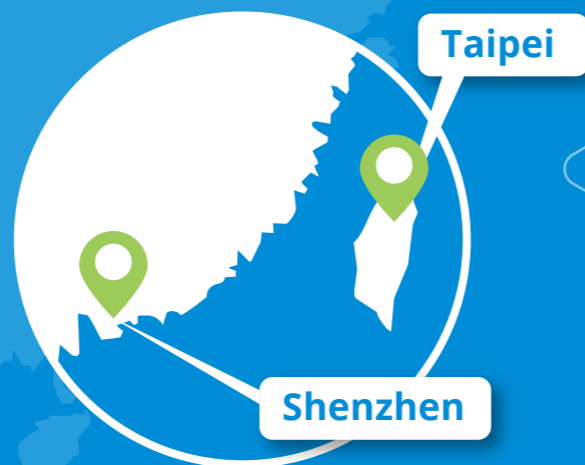
- ▶ Dual manufacturing bases in Taipei and Shenzhen
- ▶ Full industry process ranging from PCBA manufacturing to burn-in tests
- ▶ Highly-automated production equipment and flexible production line

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

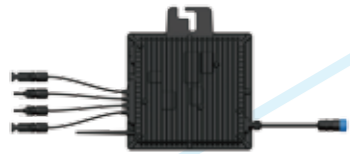
- 01** 3D Solder Paste Thickness Testing
 - 02** 1st Auto-Optical Detection for SMD
 - 03** 2nd Optical Detection for PCBA
 - 04** Functional Circuit Test
 - 05** Conformal Coating
 - 06** Hi-Pot Testing & ATE Testing before Burn-In
 - 07** Automatic Burn-In
 - 08** ATE Test after BI
 - 09** Tightness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



PRODUCT LINE PLATFORM

Microinverter Residential Use

Single Phase
1kW



Grid-Tied Inverter Residential Use

Single Phase
2kW-10kW



Three Phase
5kW-15kW



Grid-Tied Inverter Small-Medium C&I Use

Three Phase
10kW-25kW



Grid-Tied Inverter Medium-Large C&I Use

Three Phase
30kW-50kW



Three Phase
100kW-110kW



Energy Storage Inverter Residential Use

Single Phase
3.6kW-6kW (LV)



Single Phase
3kW-6kW (HV)



Single Phase
8kW-10kW-T/EU



Three Phase
5kW-10kW



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

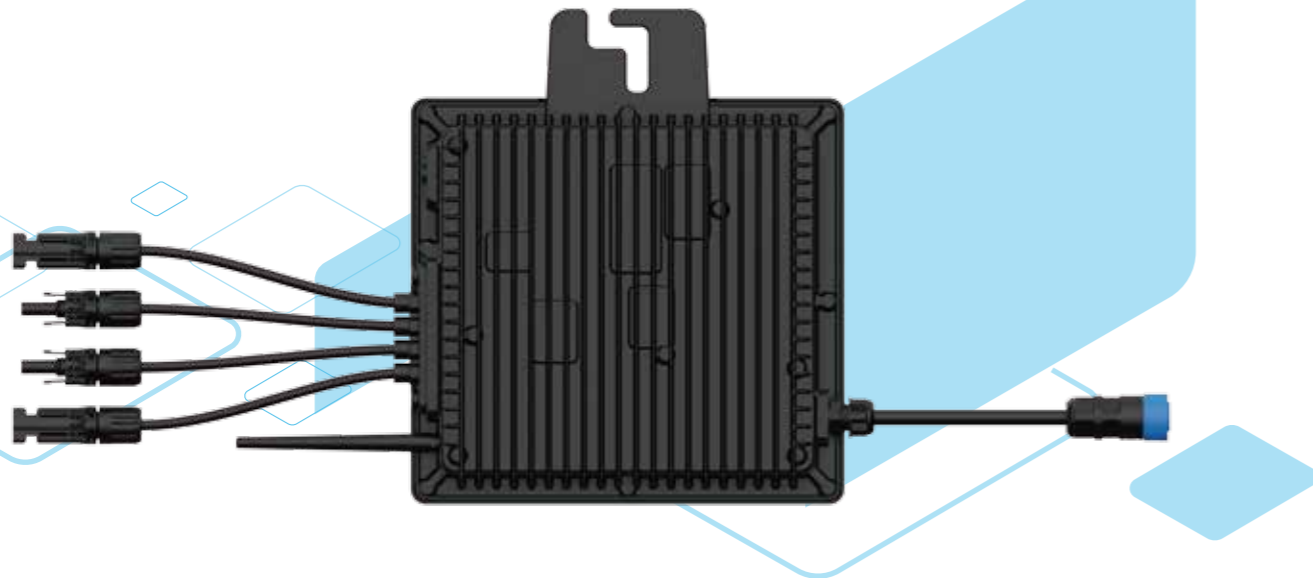
Three Phase
12kW-30kW



SINGLE PHASE & DUAL MPPT

SE 1KMI-D12

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 1KMI-D12 |
|-------------------------------------|---|-------------|
| Input (PV) | | |
| 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 | 2 | |
| No. of MPPTs | 2 | |
| MPPT Voltage Range | 28V~55V | |
| Operating Range | 16V~60V | |
| Max Input DC Voltage | 60V | |
| Max Input DC Current | 15A | |
| Maximum Input Short Circuit Current | 2*19.9A | |
| Output (Grid) | | |
| Peak Output Power | 1100VA | |
| Nominal Output Power | 1000VA | |
| 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 | |
| Efficiency | | |
| Peak Efficiency | 97.0% | |
| MPPT Efficiency | 99.5% | |
| CEC Weighted Efficiency | 96.0% | |
| General | | |
| 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) | 224mm*210mm*44mm | |
| Weight | 2.1Kg | |
| HMI & COM | | |
| Communication | WiFi inside | |
| Compliance | | |
| Safety | EN 62109-1/-2, EN 61000-6-1/-2/-3/-4, EN 50549-1, PN-EN 50549-1, DIN V VDE V 0126-1-1, VFR 2019, G98/NI, G99/NI | |
| 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 |
|-----------------------------------|---|----------------|-----------------|
| Efficiency | | | |
| Max. Efficiency | | 97.8% | |
| European Efficiency | 96.5% | 96.8% | 96.8% |
| Input (PV) | | | |
| 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 | |
| Output (Grid) | | | |
| 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 ^① | 160V-300V (Adjustable) | | |
| Rated Grid Frequency | 50Hz / 60Hz | | |
| Grid Frequency Range ^② | 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) | | |
| Protection | | | |
| 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 | | |
| General | | | |
| 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 | | |
| HMI & COM | | | |
| Display | Wireless & APP+LED, LCD (Optional) | | |
| Communication | Optional: WiFi / GPRS / RS485 / LAN | | |
| Certification | | | |
| 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: · ^{①②}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

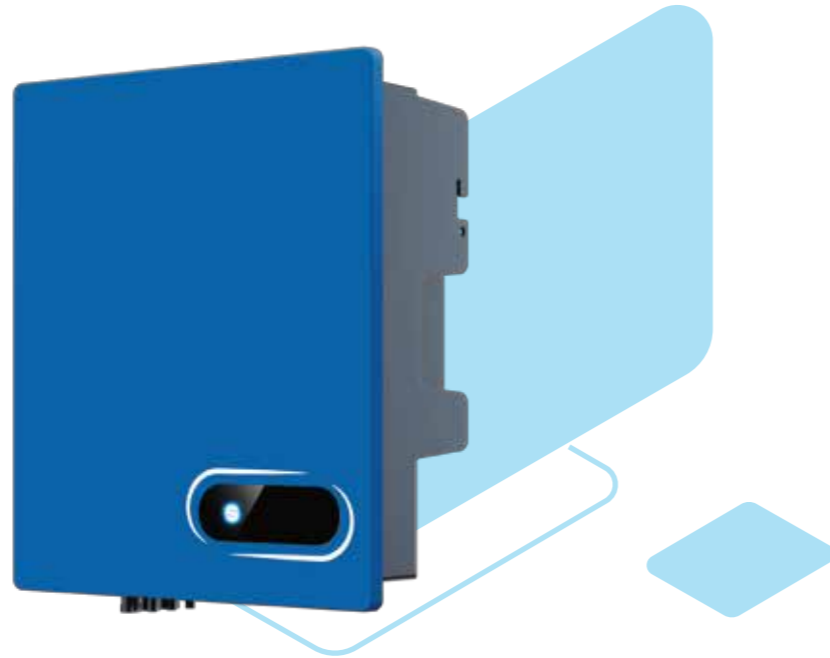
| Model | SE 4KTL-D1/G2P | SE 5KTL-D1/G2P | SE 6KTL-D1/G2P |
|-----------------------------------|---|----------------|----------------|
| Efficiency | | | |
| Max. Efficiency | | 98.2% | |
| European Efficiency | 97.0% | 97.3% | 97.4% |
| Input (PV) | | | |
| Max. Input Voltage | | 550V | |
| Max. PV 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 | |
| Output (Grid) | | | |
| 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 Range ^① | 160V-300V (Adjustable) | | |
| Rated Grid Frequency | 50Hz / 60Hz | | |
| Grid Frequency Range ^② | 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) | | |
| Protection | | | |
| 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 | | |
| General | | | |
| 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 | | |
| HMI & COM | | | |
| Display | Wireless & APP+LED, LCD (Optional) | | |
| Communication | Optional: WiFi / GPRS / RS485 / LAN | | |
| Certification | | | |
| 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: · ^{①②}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 |
|-----------------------------------|---|-------------|--------------|
| Efficiency | | | |
| Max. Efficiency | 98.2% | | |
| European Efficiency | 97.5% | | |
| Input (PV) | | | |
| Max. Input Voltage | 550V | | |
| Max. PV Configuration (STC) | 150% | | |
| Rated Input Voltage | 360V | | |
| Max. Input Current | 20A/20A | 20A/30A | |
| Max. Short Circuit Current | 20A/20A | 20A/40A | |
| Start Input Voltage | 90V | | |
| MPPT Operating Voltage Range | 60V-540V | | |
| Max. Number of PV Strings | 1/1 | 1/2 | |
| No. of MPPTs | 2 | | |
| Output (Grid) | | | |
| 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 Range ^① | 160V-300V (Adjustable) | | |
| Rated Grid Frequency | 50Hz / 60Hz | | |
| Grid Frequency Range ^② | 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) | | |
| Protection | | | |
| 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 | | |
| General | | | |
| 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 | | |
| HMI & COM | | | |
| Display | Wireless & APP+LED, LCD (Optional) | | |
| Communication | Optional: WiFi / GPRS / RS485 / LAN | | |
| Certification | | | |
| 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: · ^{①②}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 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 |
|-----------------------------------|--|---------------|---------------|----------------|----------------|----------------|
| Efficiency | | | | | | |
| Max. Efficiency | 98.2% | | | 97.8% | | 98.3% |
| European Efficiency | 97.8% | | | | | |
| Input (PV) | | | | | | |
| 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 | 26A/26A | | | 26A/40A | | 26A/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 | | | | | |
| Output (Grid) | | | | | | |
| 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 Range ^① | 260V-510V (Adjustable) | | | | | |
| Rated Grid Frequency | 50Hz / 60Hz | | | | | |
| Grid Frequency Range ^② | 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) | | | | | |
| Protection | | | | | | |
| 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 | | | | | |
| General | | | | | | |
| 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 |
| HMI & COM | | | | | | |
| Display | Wireless & APP +LED, LCD (Optional) | | | | | |
| Communication | RS485, Optional: WiFi / GPRS / LAN | | | | | |
| Certification | | | | | | |
| 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: · ^{①②}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 17/20/22/25KTL-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 | |
|-----------------------------------|--|-----------------|----------------|----------------|----------------|----------------|--------|
| Efficiency | | | | | | | |
| Max. Efficiency | | | | | | 98.4% | |
| European Efficiency | 97.8% | | | | | 98.0% | |
| Input (PV) | | | | | | | |
| Max. Input Voltage | | | | | | 1100V | |
| Max. PV Configuration (STC) | | | | | | 150% | |
| Rated Input Voltage | | | | | | 620V | |
| Max. Input Current | 15A/30A | | | | | 30A/30A | |
| Max. Short Circuit Current | 20A/40A | | | | | 40A/40A | |
| Start Input Voltage | | | | | | 180V | |
| MPPT Operating Voltage Range | | | | | | 160V-1000V | |
| Max. Number of PV Strings | 1/2 | | | | | 2/2 | |
| No. of MPPTs | | | | | | 2 | |
| Output (Grid) | | | | | | | |
| Rated AC Active Power | 10,000W | 15,000W | 17,000W | 20,000W | 22,000W | 25,000W | |
| Max. AC Apparent Power | 11,000VA | 16,500VA | 18,700VA | 22,000VA | 24,200VA | 27,500VA | |
| Max. AC Output Current | 3*16.8A | 3*25.3A | 3*28.6A | 3*33.7A | 3*37A | 3*39.8A | |
| Rated AC Voltage | 380V / 400V / 415V, 3W+N+PE | | | | | | |
| AC Voltage Range ^① | 260V-510V (Adjustable) | | | | | | |
| Rated Grid Frequency | 50Hz / 60Hz | | | | | | |
| Grid Frequency Range ^② | 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) | | | | | | |
| Protection | | | | | | | |
| 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 | |
| General | | | | | | | |
| 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 |
| HMI & COM | | | | | | | |
| Display | Wireless & APP +LED, LCD (Optional) | | | | | | |
| Communication | RS485, Optional: WiFi / GPRS / LAN | | | | | | |
| Certification | | | | | | | |
| 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: · ^{①②}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 30KTL-T3/G2, SE 50KTL-Q3/G2

Application: Commercial & Industrial Sites



SUPERIOR PERFORMANCE

- Maximum efficiency of 98.5%
- 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

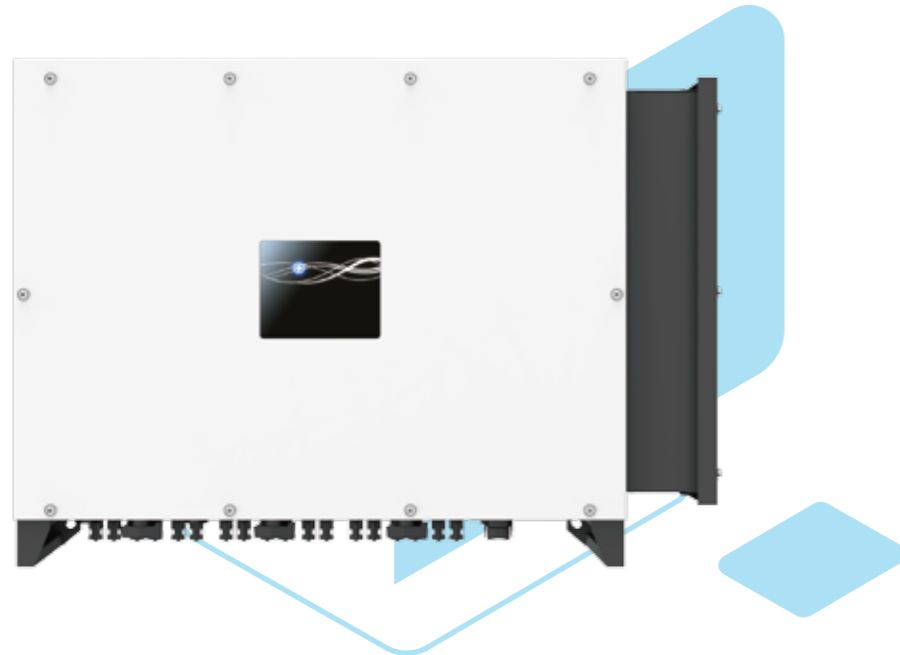
| Model | SE 30KTL-T3/G2 | SE 50KTL-Q3/G2 |
|-----------------------------------|-----------------|--|
| Efficiency | | |
| Max. Efficiency | | 98.5% |
| European Efficiency | 98.0% | 97.9% |
| Input (PV) | | |
| Max. Input Voltage | | 1100V |
| Max. PV Configuration (STC) | | 150% |
| Rated Input Voltage | | 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 |
| No. of MPPTs | 3 | 4 |
| Output (Grid) | | |
| Rated AC Active Power | 30,000W | 50,000W |
| Max. AC Apparent Power | 33,400VA | 55,600VA |
| Max. AC Output Current | 3*51A | 3*84.3A |
| Rated AC Voltage | | 380V/400V/415V, 3W+N+PE |
| AC Voltage Range ^① | | 320V-520V (Adjustable) |
| Rated Grid Frequency | | 50Hz / 60Hz |
| Grid Frequency Range ^② | | 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) |
| Protection | | |
| 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 |
| General | | |
| 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 |
| Weight | 36Kg | 42Kg |
| HMI & COM | | |
| Display | | Wireless & APP+LED, LCD (Optional) |
| Communication | | RS485, Optional: WiFi / GPRS / LAN |
| Certification | | |
| 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 |
| Warranty | | 5 Years |

Remarks: · ^{①②}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 100/110KTL-M3

Application: Commercial & Industrial Sites



SUPERIOR PERFORMANCE

- Maximum efficiency of 98.6%
- 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 |
|---|---|--------------|
| Efficiency | | |
| Max. Efficiency | 98.5% | 98.6% |
| European Efficiency | 98.0% | 98.2% |
| Input (PV) | | |
| 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 |
| Output (Grid) | | |
| Rated AC Active Power | 100,000W | 110,000W |
| Max. AC Apparent Power | 111,000VA | 123,000VA |
| Max. AC Output Current | 3*168.8A | 3*187A |
| Rated AC Voltage | 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) | |
| Protection | | |
| 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 | |
| General | | |
| 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 |
| HMI & COM | | |
| Display | Wireless & APP+LED, LCD (Optional) | |
| Communication | RS485, Optional: WiFi / GPRS / LAN | |
| Certification | | |
| 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.

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 |
|-------------------------------------|--|---------------|---------------|---------------|
| Efficiency | | | | |
| Max. Efficiency (PV to AC) | 97.3% | | | |
| Eur. Efficiency (PV to AC) | 96.8% | | | |
| Max. Efficiency (BAT to AC) | 94.3% | | | |
| Input (PV) | | | | |
| 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 | | | |
| Input/Output (BAT) | | | | |
| 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 |
| Output (Grid) | | | | |
| 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) | | | |
| Output (Back up) | | | | |
| 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 | | | |
| Protection | | | | |
| 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 | | | |
| General | | | | |
| 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 | | | |
| HMI & COM | | | | |
| Display | Bluetooth & APP + LED, LCD (Optional) | | | |
| Communication Interface | RS485/CAN (for BMS), RS485, Ethernet, DRM/RS485 (for Meter), Optional: Wi-Fi/LAN | | | |
| Certification | | | | |
| 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 | | | |
| 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 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 |
|-------------------------------------|--|----------------|----------------|---------------|---------------|
| Efficiency | | | | | |
| Max. Efficiency (PV to AC) | 97.8% | | | | |
| Eur. Efficiency (PV to AC) | 97.5% | | | | |
| Max. Efficiency (BAT to AC) | 97.0% | | | | |
| Input (PV) | | | | | |
| 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 | | | | |
| Input/Output (BAT) | | | | | |
| 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 | | |
| Output (Grid) | | | | | |
| 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) | | | | |
| Output (Back up) | | | | | |
| 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 | | | | |
| Protection | | | | | |
| 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 | | | | |
| General | | | | | |
| 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 | | | | |
| HMI & COM | | | | | |
| Display | Bluetooth & APP + LED, LCD (optional) | | | | |
| Communication interface | RS485/CAN (BMS), DRM/RS485 (for Meter), RS485, Optional: Wi-Fi/LAN | | | | |
| Certification | | | | | |
| 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)

| Model | SE 8KHB-180-T/EU | SE 10KHB-210-T/EU |
|-------------------------------------|--|-------------------|
| Efficiency | | |
| Max. Efficiency (PV to AC) | 98.0% | |
| Max. Efficiency (BAT to AC) | 94.5% | |
| Input (PV) | | |
| 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 | |
| Input/Output (BAT) | | |
| 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 |
| Output (Grid) | | |
| 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) | |
| Output (Back up) | | |
| 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 | |
| Protection | | |
| 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 | |
| General | | |
| 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 | |
| HMI & COM | | |
| Display | Bluetooth & APP + LED , LCD (optional) | |
| Communication Interface | RS485/CAN (for BMS), DRM/RS485 (for Meter), RS485, Optional: Wi-Fi/LAN | |
| Certification | | |
| 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.

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 |
|-------------------------------------|---|----------------|----------------|-----------------|
| Efficiency | | | | |
| 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% |
| Input (PV) | | | | |
| 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 | | | |
| Input/Output (BAT) | | | | |
| 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 |
| Output (Grid) | | | | |
| 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% | | | |
| Output (Back up) | | | | |
| 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 | | | |
| Protection | | | | |
| 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 | | | |
| General | | | | |
| 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 | | | |
| HMI & COM | | | | |
| Display | LED , LCD (optional), APP | | | |
| Communication Interface | RS485/CAN (for BMS), DRM, RS485 (for Meter), Wi-Fi/LAN (Optional, for Portal) | | | |
| Certification | | | | |
| 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 |
|--------------------------------------|--|------------------|------------------|-------------------|------------------|
| Efficiency | | | | | |
| Max. Efficiency (PV to AC) | 98.2% | | | 98.4% | |
| Eur. Efficiency (PV to AC) | 97.9% | | | | |
| Max. Efficiency (BAT to AC) | 98.0% | | | | |
| Input (PV) | | | | | |
| 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 | |
| Input/Output (BAT) | | | | | |
| 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 |
| Output (Grid) | | | | | |
| 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) | | | | |
| Output (Back up) | | | | | |
| 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 | | | | |
| Protection | | | | | |
| 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 | | | | |
| General | | | | | |
| 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 | | | | |
| HMI & COM | | | | | |
| 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 | | | | |
| Certification | | | | | |
| 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 |
| Input | |
| Input Voltage | Input: AC 90V-250V 50/60Hz Output: DC 5V |
| Static Current Consumption | 1A |
| General | |
| Operating Temperature | -25 C ~55 C |
| Humidity | 10%~95% relative humidity, no condensation |
| IP Rating | IP20 |
| Dimension (L*W*H) | 118mm*78mm*29mm |
| Certification | |
| 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 |
| Input | |
| Input Voltage | DC 5V |
| Static Power Consumption | <1.6W |
| General | |
| Operating Temperature | -25 C ~60 C |
| Humidity | 0%~100% relative humidity, no condensation |
| IP Rating | IP65 |
| Dimension (L*W*H) | 71mm*41mm*92mm |
| Certification | |
| 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

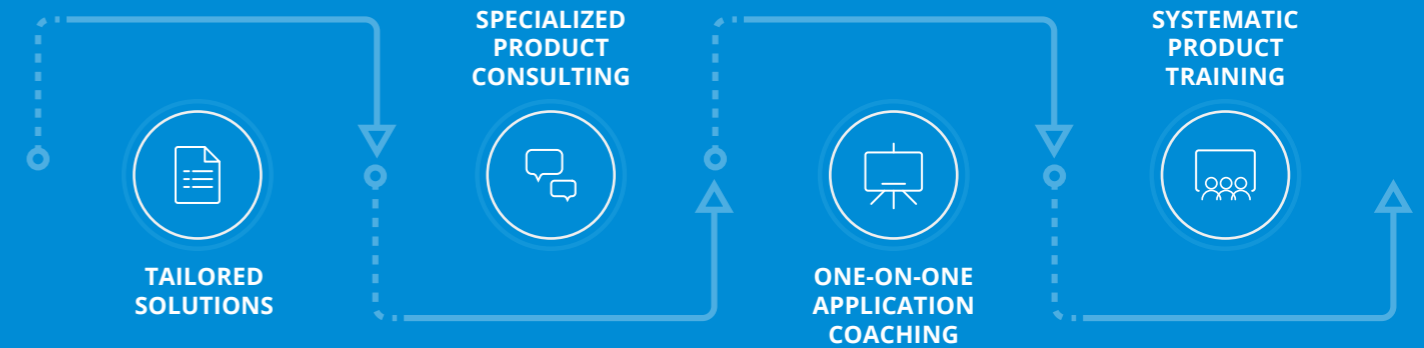
| Model | SE LAN-R |
|-------------------------------|--|
| Connection | TTL |
| Standards | IEEE 802.3 |
| Transmission Maximum Distance | 100m CAT5 |
| Setting | APP |
| Input | |
| Input Voltage | DC 5V |
| Static Power Consumption | <1.6W |
| General | |
| Operating Temperature | -25 C ~60 C |
|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

SMART SOLAR CLOUD

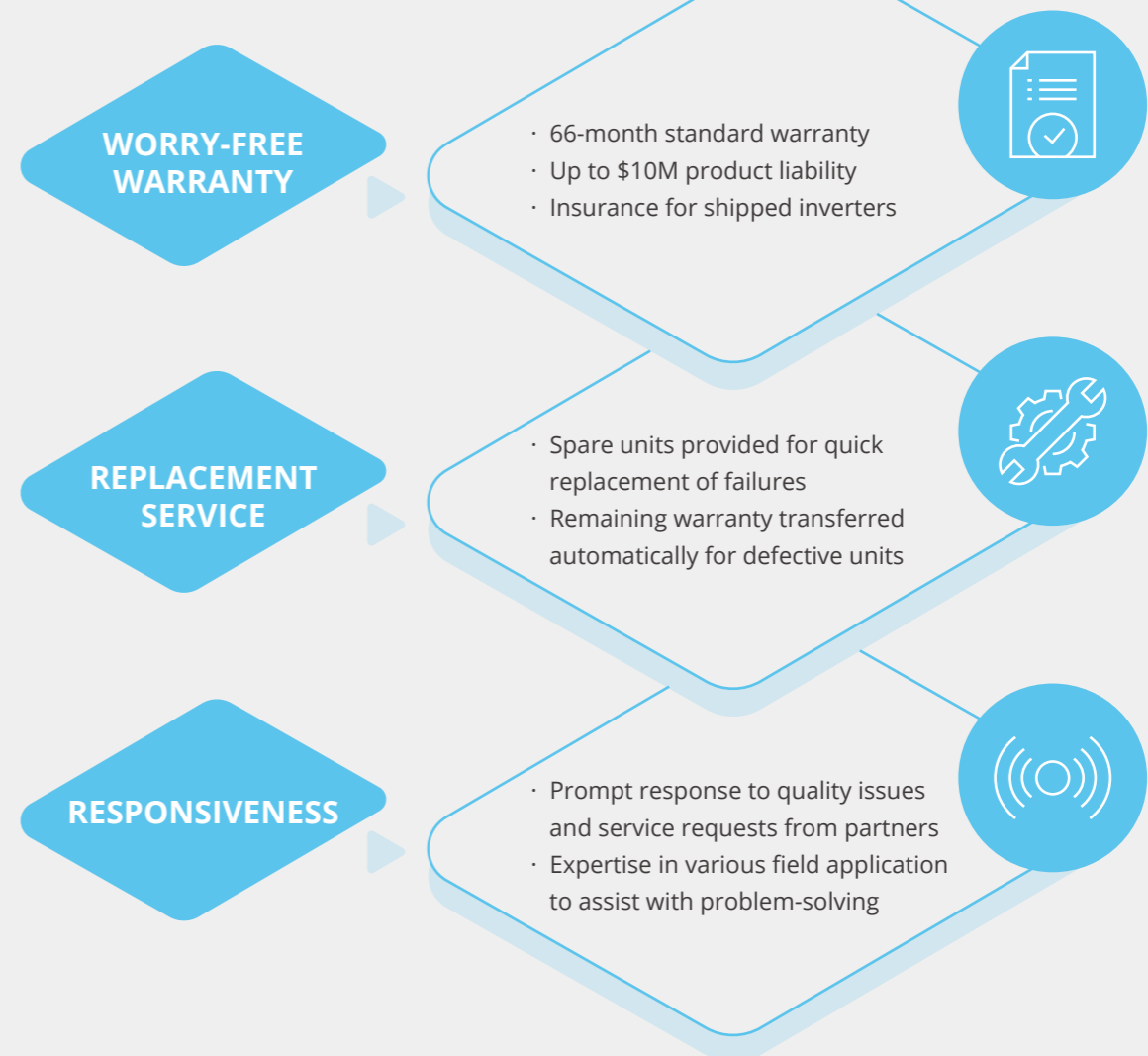


- Suitable for residential/commercial/storage applications
- Cloud services provided from Europe, the Americas, Singapore, India and China
- Monitoring the operational status of inverters, generators, communication modules, energy storage within the system
- Full visibility into energy consumption and 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

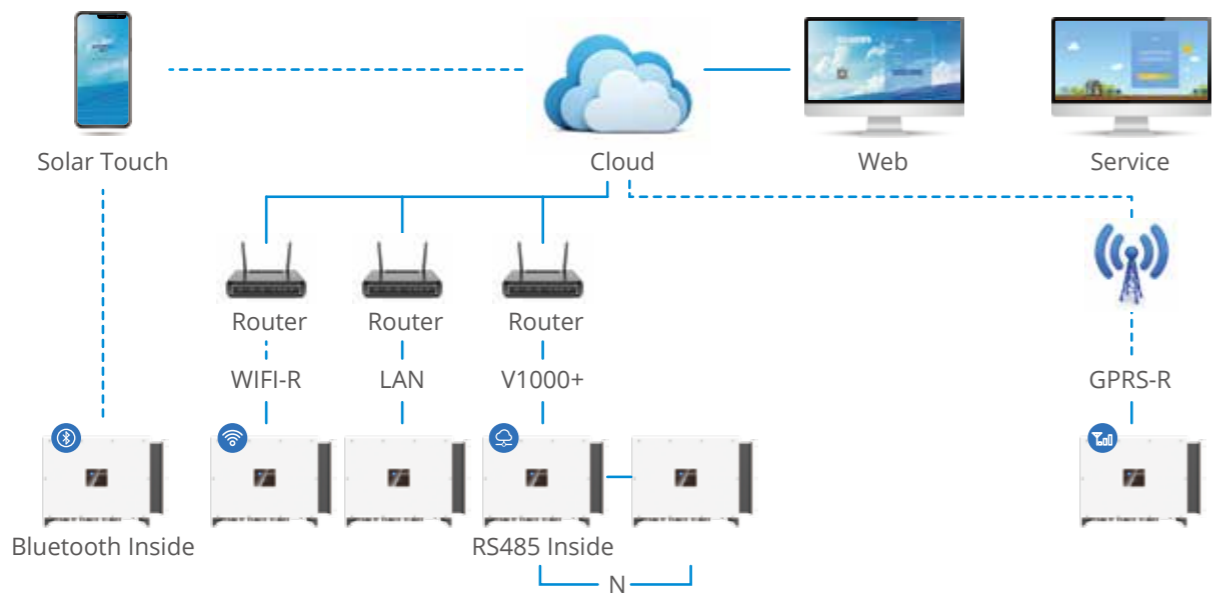
REPLACEMENT SERVICE

- 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

— Ethernet Connection — Wireless Connection



GLOBAL NETWORK



VISION & MISSION

Become the technology and market leader in the new energy industry through continuous innovation, distinctive and highly competitive products and services.

MARKETING PROMOTION



APPLICATION REFERENCES



FOSHAN, CHINA
4.2MW



SHANTOU, CHINA
2MW



HUNAN, CHINA
6MW



VIETNAM
200kW



TAICHUNG CITY, TAIWAN
1.5MW



CHIAYI COUNTY, TAIWAN
20MW