

**KSE-3.6K-048 / KSE-5K-048 / KSE-6K-048**  
Residential Hybrid Inverter



Dual MPPT  
Compatible with Li-ion and Lead-acid



Inbuilt UPS function  
IP65 protection



Integrated EMS via LCD  
On-grid and Off-grid mode



Reactive power controller  
Export control function

**Technical Specifications**

| Model                                     | KSE-3.6K-048                                                                                                                                                                | KSE-5K-048 | KSE-6K-048 |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|
| <b>PV Input</b>                           |                                                                                                                                                                             |            |            |
| Max. PV input power                       | 4400W                                                                                                                                                                       | 6000W      | 6600W      |
| Max. PV input voltage                     | 550Vdc (*1)                                                                                                                                                                 |            |            |
| MPPT voltage range                        | 120~500Vdc                                                                                                                                                                  |            |            |
| Rated input voltage                       | 420Vdc                                                                                                                                                                      |            |            |
| MPPT range for full load                  | 184~500V                                                                                                                                                                    | 230~500V   | 254~500V   |
| Number of MPPT                            | 2                                                                                                                                                                           |            |            |
| Max. PV input current                     | 13A*2                                                                                                                                                                       |            |            |
| <b>AC Output(On-grid)</b>                 |                                                                                                                                                                             |            |            |
| Rated output voltage                      | 230Vac                                                                                                                                                                      |            |            |
| Output voltage range                      | 150V~280V                                                                                                                                                                   |            |            |
| Output frequency range                    | 50 / 60Hz (±5Hz) (adjustable)                                                                                                                                               |            |            |
| Max. current from utility grid            | 32A                                                                                                                                                                         |            |            |
| Max. apparent power from utility grid     | 7360VA                                                                                                                                                                      |            |            |
| Max. power output to utility grid         | 3680W                                                                                                                                                                       | 5000W(*2)  | 6000W      |
| Max. current output to utility grid       | 16A                                                                                                                                                                         | 22A(*3)    | 25A        |
| AC output connection                      | L+N+PE, Transformerless                                                                                                                                                     |            |            |
| Power factor (cosφ)                       | 1(0.8 leading ~0.8 lagging) (adjustable)                                                                                                                                    |            |            |
| THDi                                      | <3%                                                                                                                                                                         |            |            |
| <b>AC Output(Back-up)</b>                 |                                                                                                                                                                             |            |            |
| Rated output voltage                      | 230Vac (Fluctuation range±2%)                                                                                                                                               |            |            |
| Rated output frequency                    | 50/60Hz (Fluctuation range±0.2%)                                                                                                                                            |            |            |
| Rated output current                      | 16A                                                                                                                                                                         | 20A        | 20A        |
| Rated output power                        | 3680W                                                                                                                                                                       | 4600W      | 4600W      |
| Max. output apparent power                | 4000VA                                                                                                                                                                      | 5000VA     | 5000VA     |
| THDv                                      | <2% (Linear load)                                                                                                                                                           |            |            |
| Automatic switch time                     | <20ms                                                                                                                                                                       |            |            |
| <b>Battery Input</b>                      |                                                                                                                                                                             |            |            |
| Battery type                              | Li-ion or lead-acid                                                                                                                                                         |            |            |
| Rated battery voltage                     | 48V                                                                                                                                                                         |            |            |
| Depth of discharging                      | Li-ion 90%DOD(10%~90% adjustable) / Lead-acid 50%DOD(50%~80% adjustable)                                                                                                    |            |            |
| Max. discharging current(*4)              | 80A                                                                                                                                                                         | 105A       | 105A       |
| Max. charging current(*5)                 | 80A (5~80A adjustable)                                                                                                                                                      |            |            |
| Max. discharging power                    | 4000W                                                                                                                                                                       | 5000W      | 5000W      |
| Max. charging power                       | 3000W                                                                                                                                                                       | 4200W      | 4200W      |
| <b>Efficiency</b>                         |                                                                                                                                                                             |            |            |
| Max. conversion efficiency (from battery) | 95.0%                                                                                                                                                                       |            |            |
| Max. conversion efficiency (from PV)      | 97.6%                                                                                                                                                                       |            |            |
| Euro efficiency                           | 97.0%                                                                                                                                                                       |            |            |
| Protection function                       | Short Circuit Protection, AC Leakage Fault Protection, Grounding Fault Protection, Anti-islanding Protection, Overload Protection, Surge Protection, DC Polarity Protection |            |            |
| <b>General</b>                            |                                                                                                                                                                             |            |            |
| Cooling                                   | Natural Convection                                                                                                                                                          |            |            |
| DC switch                                 | Optional                                                                                                                                                                    |            |            |
| Communication Interface                   | RS485/CAN2.0/WIFI                                                                                                                                                           |            |            |
| Dimensions W x D x H (mm)                 | 527x472x180                                                                                                                                                                 |            |            |
| Weight (Kg)                               | 25                                                                                                                                                                          | 25         | 26         |
| Operating temperature range               | -20 C ~+60 C (Rated Power@45 C )                                                                                                                                            |            |            |
| Humidity range                            | 0~95% (No condensation)                                                                                                                                                     |            |            |
| Altitude                                  | ≤ 2000m                                                                                                                                                                     |            |            |
| Protection                                | IP65                                                                                                                                                                        |            |            |
| <b>Certification &amp; Standard</b>       |                                                                                                                                                                             |            |            |
| Grid regulation                           | AS/NZS 4777.2, VDE-AR-N4105, VDE0126-1-1                                                                                                                                    |            |            |
| Safety regulation                         | IEC/EN 62109-1&2, IEC62040-1                                                                                                                                                |            |            |
| EMC                                       | EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4, EN61000-4-16, EN61000-4-18, EN61000-4-29                                                                                |            |            |

\*1. Max. operating voltage is 530V .

\*2. It will be 4600W under the selection of VDE-AR-N4105 & VDE0126-1-1.

\*3. It will be 21.7A under the selection of AS 4777.2.

\*4. For Lead-acid batteries, the default discharging current limit is shown in the table, and Li-ion batteries discharging current is in accordance with BMS instructions, but not more than the value shown in the table.

\*5. For Lead-acid batteries, the default charging current is 0.1C. The default charging current can be set by APP as shown in the table, and the Li-ion batteries charging current is in accordance with BMS instructions, but not more than the value shown in the table.