

# BlueSpark Series

Residential All-in-One Energy Storage System

Smarter Energy

Safer Home

Higher Savings

# ABOUT KSTAR

• **1996**

## **Overseas Expansion**

Enter the European and US Market

**1993**

## **KSTAR Established**

Enter Offline UPS Field

• **2004**

## **Further Development**

Enter High-power Online UPS Field

**1998**

## **New Manufacturing Base**

Guanlan Industrial Park  
Inaugurated in Shenzhen

• **2010**

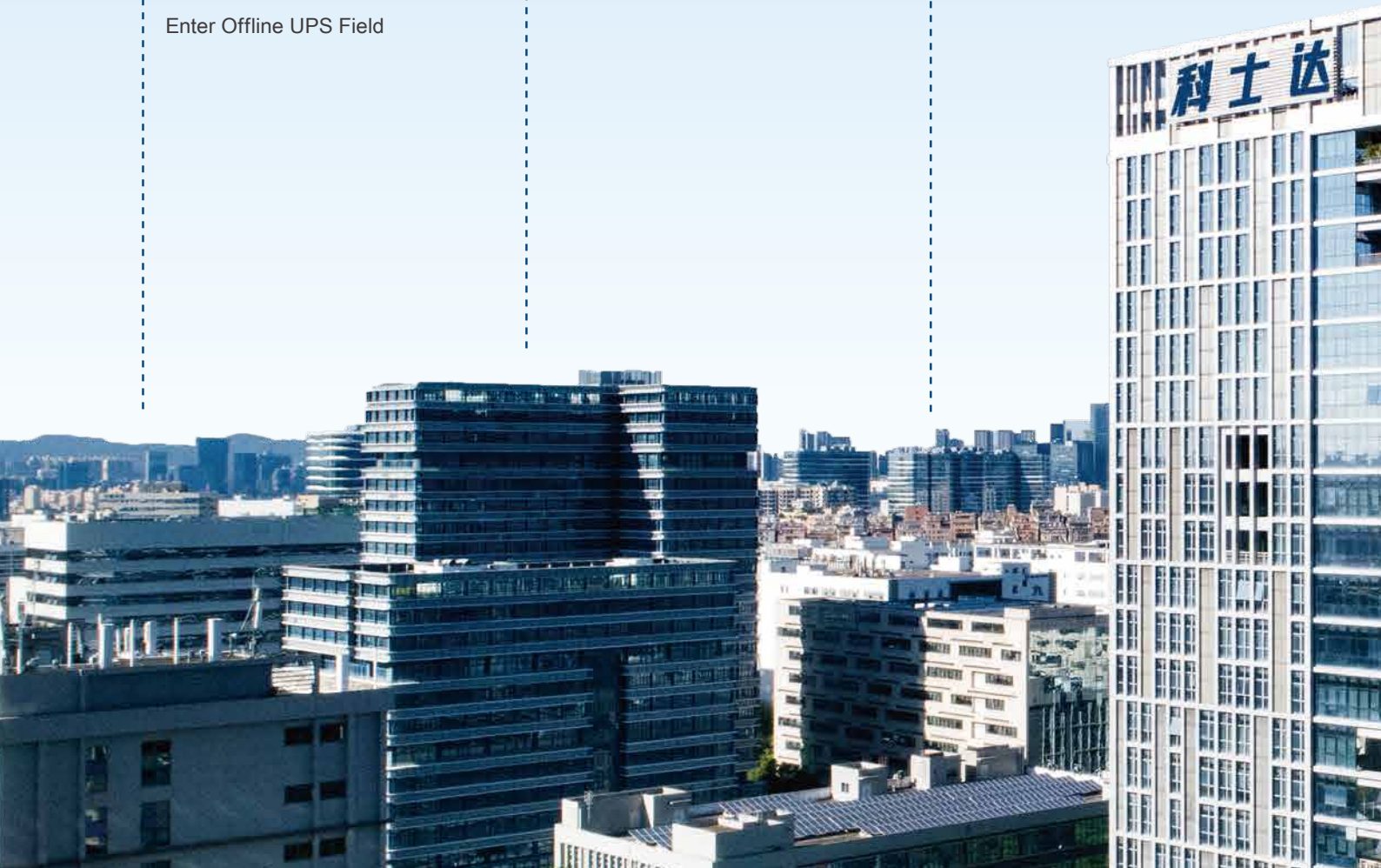
## **IPO and Public Debut**

Listed in Shenzhen Stock Exchange

**2009**

## **Enter New Energy Field**

1<sup>st</sup> PV Inverter Produced



• **2015**

**National Certified  
Technology Center**

Certified by National Quality  
Management System

**2013**

**Explore New  
Opportunities**

Enter the Electric Vehicles  
Market

• **2023**

**KSTAR Vietnam**

Vietnam Plant in Operation

**National-level  
Green Factory**

**2021**

**Further Invest in  
ESS Facilities**

Open Jiangxi Changxin Gold  
Sunshine Power Supply Co.,Ltd

**2019**

**CATL & KSTAR  
Partnership**

Establish Joint Venture Factory  
with CATL

• **2025**

**Jiangxi Gold  
Sunshine**

Launches advanced punched  
grid plate production

**2024**

**Construction of the  
High-end New  
Energy and Energy  
Storage Industrial  
Base**



# Who is KSTAR & What We Support



## Company Introduction

Founded in 1993 and listed on the Shenzhen Stock Exchange (Stock Code: 002518), KSTAR has been deeply engaged in the renewable energy and power electronics sector for over 30 years. Leveraging solid technical expertise and continuous R&D investment,

the company has built a comprehensive product portfolio covering PV Inverters, Energy Storage Systems, EV Charger, Data Center Solutions, and UPS products.



# Product Overview



Compact



Flexible



Reliable

## BlueSpark Series

**Power Range:** 3.68 ~ 12 kW

**Energy Capacity:** 5.12 ~ 40.96 kWh (scalable)

**Options:** Single-phase 3.68 ~ 6 kW / Three-phase 4 ~ 12 kW

**Warranty:** 5-year product warranty, 10-year battery performance warranty



# Why Choose BlueSpark?

## Ultra-Fast Backup Switching

<20 ms grid-to-backup transfer ensures uninterrupted power during outages

## High PV Utilisation

Supports up to 200% PV oversizing to maximise solar yield and system efficiency

## Advanced Safety Protection

Integrated AFCI optional and insulation monitoring ensure comprehensive system protection

## Smart Energy Management

Dynamic tariff optimisation reduces energy costs and maximises returns



## Premium Battery Technology

Safety you can trust. Performance that lasts.

### Tier-1 LiFePO<sub>4</sub> Cells

10-year performance warranty

UL 9540A certified with advanced thermal runaway protection

### Cell-Level Smart BMS

Independent cell monitoring for enhanced reliability and system redundancy

Multi-Layer Protection

### 0.8C High Power

Fast, stable charge and discharge for full household demand



# One Unit, Full Power, Zero Hassle



## **True All-in-One Integration**

Inverter, Battery, BMS, and EMS fully integrated into a single unit-no external battery boxes, no complex wiring



## **Fast & Easy Installation**

Simple AC/DC connections, grounding, and guided setup  
Automatic component detection reduces installation time and labor costs



## **Compact & Clean Design**

Space-saving all-in-one design for floor-standing installation  
Delivers a clean, professional appearance



## **High Reliability, Low Maintenance**

Fewer cables and connectors reduce potential failure points  
Ensures higher system stability and lower long-term maintenance effort



## **Future-Ready**

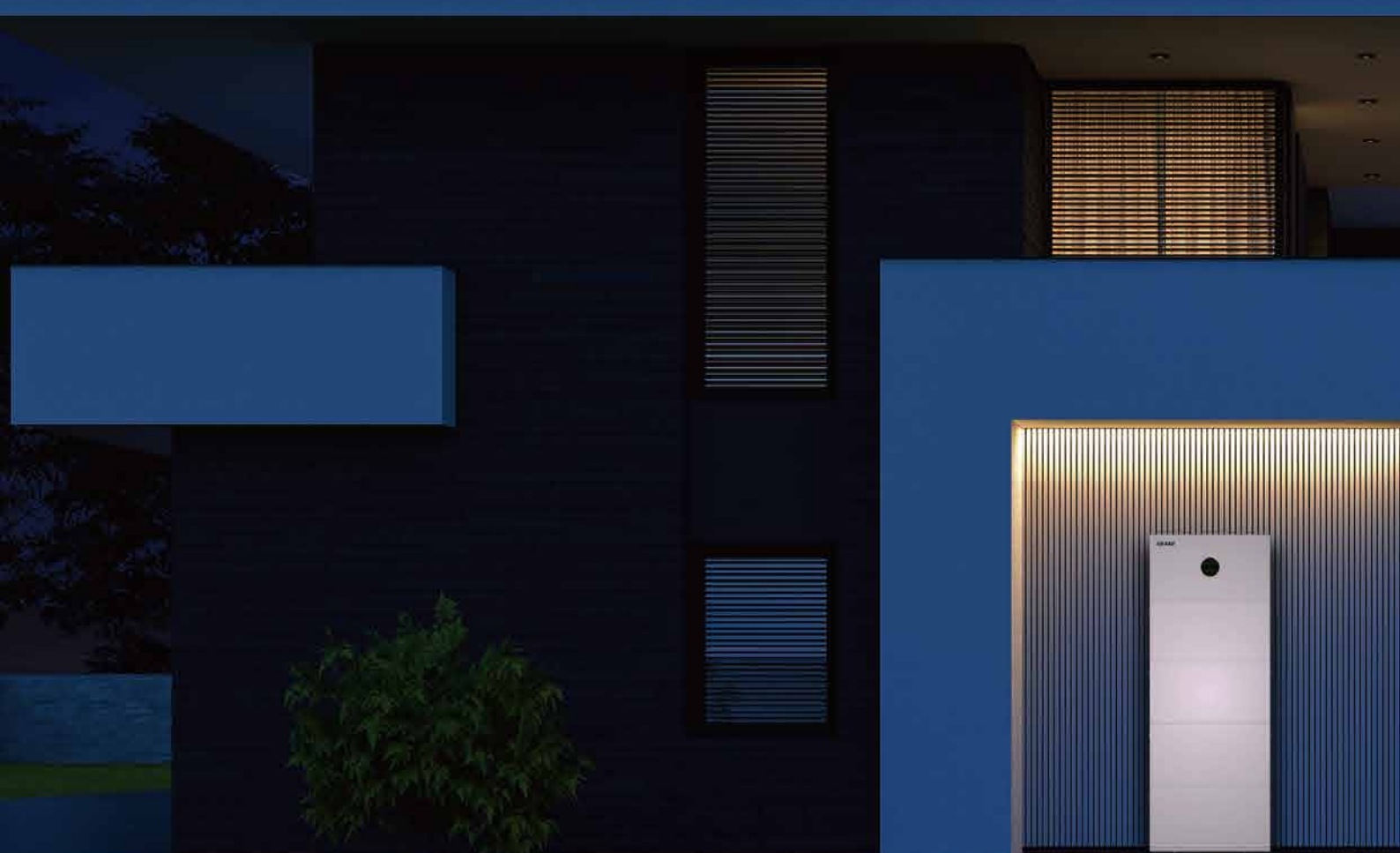
Supports easy system scaling and firmware upgrades  
Enables simplified servicing throughout the system's lifecycle



# Blackout-Proof Always On

Grid outages don't have to interrupt your power supply. The BlueSpark Series delivers uninterrupted backup with an industry-leading <20 ms transfer time. It seamlessly switches to backup mode, ensuring your home appliances continue running without disruption.

Reliable energy security keeps your home powered - whenever it matters most.



Uninterrupted Power  
for Daily Life



Fully Automated  
No Manual Intervention



**12** kW

Instant Backup Power

**< 20** ms

Seamless Transfer

**150** %

Overload Capacity

# Flexible Modular Capacity Expansion



**Flexible Expansion**



**Seamless Parallel Connection**



**Modular Power & Capacity Expansion**

## **Flexible Scalability**

Adapts power and capacity to your needs

## **Simple Installation**

Easy Ethernet and dedicated component connection

## **Reliable Whole-Home Power**

Supports all high-demand household loads

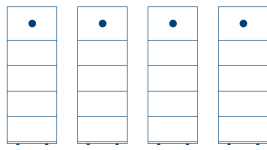
## **Future-Proof Design**

Expandable step by step as energy demand grows



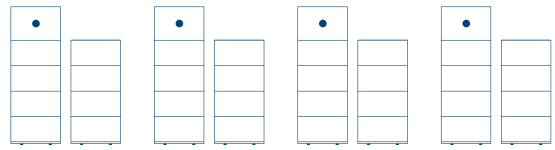
\* Inverter parallel via Ethernet cable; dedicated components for battery cluster connection

**Single-phase:**

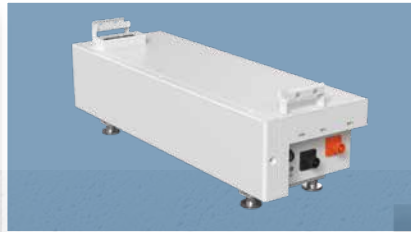


Up to 4 inverters + 4 battery units

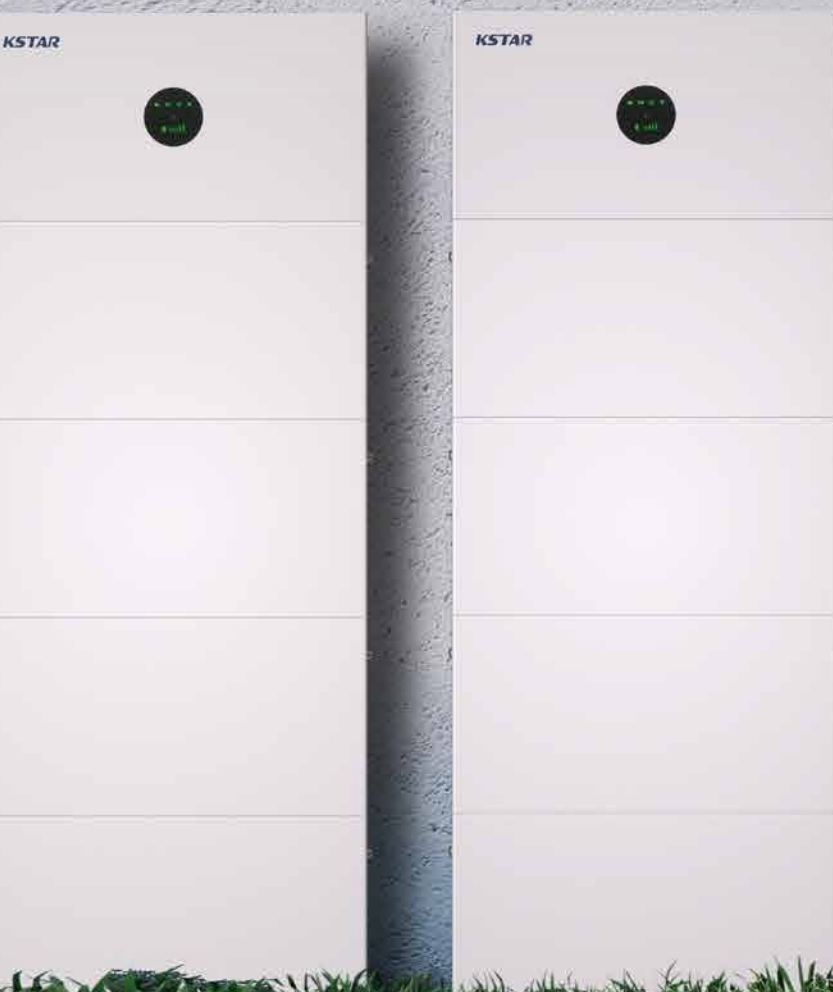
**Three-phase:**



Up to 4 inverters + 8 battery units (2 clusters)



**Dual-Tower Expansion Module**



# KSTAR SYNC

## ► Unified Cloud Platform

Centralised management of PV systems, energy storage, and EV chargers - eliminating data silos and enabling holistic system control.

## ► Smart O&M (Operations & Maintenance)

Real-time monitoring, intelligent alarms, and remote diagnostics improve operational efficiency while significantly reducing maintenance costs.

## ► Data-Driven Insights

Multi-dimensional analytics, reports, and statistics support optimised system performance and informed decision-making.

## ► Open Ecosystem

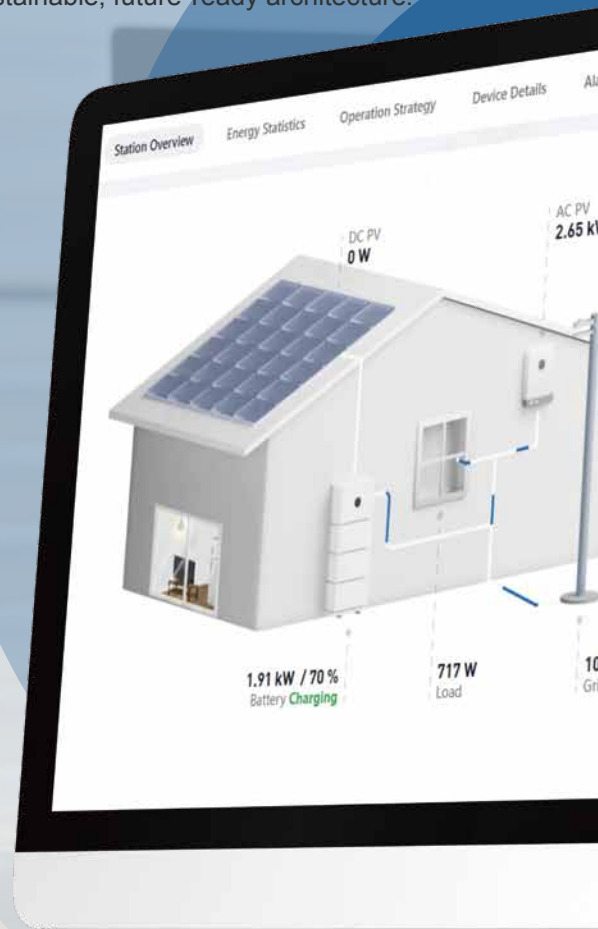
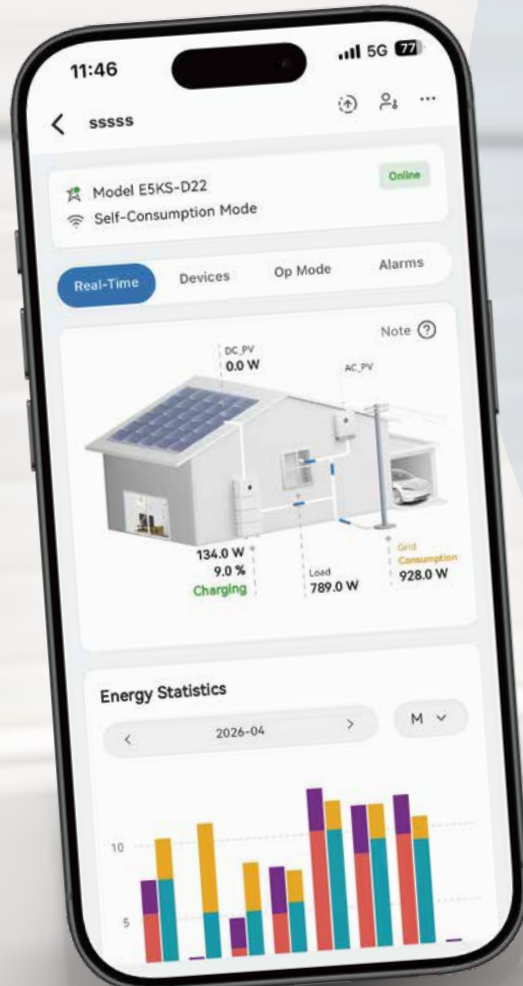
Seamless integration with third-party EMS, aggregators, and monitoring platforms ensures maximum flexibility and interoperability.

## ► Full-Role Collaboration

Multi-level access control enables smooth collaboration between internal teams, installers, distributors, and end users.

## ► Scalable & Future-Proof

Automatic device recognition, flexible system expansion, and full lifecycle service support ensure a sustainable, future-ready architecture.



# Why Choose KSTAR SYNC

AI-driven automation, eliminating manual effort

Intuitive user interface for homeowners & installers

End-to-end energy management in a single APP

Future-proof updates delivering long-term value



KSTAR APP



# Smart Tariff Control, Big Bill Cuts

## EPEX Real-Time Sync

Auto-charge on low/negative prices, discharge at peak rates, cutting electricity bills by up to 40%

## Negative Price Shield

Stop feed-in when prices drop, protecting your revenue

## PV Priority Optimisation

Maximise free solar self-consumption, reduce grid reliance

## Full App Control

Remote setup, real-time monitoring, custom energy strategies



# VPP-Ready Profit-Ready

## Seamless Aggregator Integration

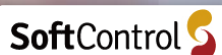
One-click connection to leading European energy partners for VPP and grid service programs

## Hassle-Free Passive Income

No manual scheduling or ongoing management - earn revenue while you sleep

## Grid Stabilisation Support

Contribute to a more stable energy network while increasing your investment ROI



# How Secure is Your Energy?

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## Multi-Level Battery Protection

Over-voltage, under-voltage, over-current, over-temperature, short-circuit, and reverse polarity protection safeguard the battery system 24/7

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## Cell-Level Safety Monitoring

Advanced BMS continuously monitors voltage, temperature, and insulation status in real time to prevent risks at the source

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## Arc Fault Circuit Interrupter AFCI(optional)

Rapidly detects and interrupts dangerous DC arcs, effectively reducing fire hazards

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## UPS-Level Seamless Switching

<20 ms grid-offline transition ensures uninterrupted, stable power without spikes or interruptions

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## IP-Class Ingress & Lightning Protection

Surge protection, dustproof and waterproof design enhance reliability in harsh environments

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## Remote Emergency Shutdown

Safe power-off control via app or cloud platform for maintenance and emergency situations



# Real Value for You



# BlueSpark Series Residential ESS

Single Phase (3.68~6 kW) / Three Phase (4~12 kW) / All-in-one Hybrid System



## Save Your Energy Bill

Powered by EVE  
Human safe low-voltage solution  
Optional AFCI



## Smart Home Energy

Supports Self Consumption, Peak Shaving,  
Time-of-use, and Battery Priority operation modes  
SG Ready Heat Pump compatible



## High Performance

DC / AC ratio up to 2  
Long battery cycle life



## Easy Installation

Stackable design, no wiring required  
Compact and space-saving  
IP66 rating for protection



## Flexible Expansion

Supports both on-grid and off-grid  
parallel configurations  
Max. 4 battery packs per system



## Smart O&M

24 / 7 cloud monitoring  
Easy commissioning via Bluetooth  
Remote firmware upgrades



| Battery Model                      |                                                                   | BP48100PF1A-G2 <sup>1)</sup>        |                                                                                                   |
|------------------------------------|-------------------------------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------------|
| General Parameters                 |                                                                   | Operation                           |                                                                                                   |
| Battery Type                       | LFP (LiFePO4)                                                     | Max. Continuous Charging Current    | 80 A (single battery pack)                                                                        |
| Cell Brand                         | EVE / CATL (optional)                                             | Max. Continuous Charging Power      | 4096 W                                                                                            |
| Energy Capacity                    | 5.12 kWh <sup>2)</sup>                                            | Max. Continuous Discharging Current | 80 A (single battery pack)                                                                        |
| Max. Depth of Discharge            | 100%                                                              | Max. Continuous Discharging Power   | 4096 W                                                                                            |
| Nominal Voltage                    | 51.2 V                                                            | Operating Temperature Range         | -10 to 50°C (Charging);<br>-10 to 50°C (Discharging) <sup>3)</sup>                                |
| Operating Voltage Range            | 44.8 ~ 57.6 V                                                     | Cooling Type                        | Natural Cooling                                                                                   |
| Battery Pack Round-Trip Efficiency | > 94%                                                             | Humidity                            | 0~90%                                                                                             |
| Weight                             | 51 kg                                                             | BMS                                 |                                                                                                   |
| Dimensions (W x H x D)             | 725 x 418 x 165 mm                                                | Modules Connection                  | Max. 4                                                                                            |
| IP Protection                      | IP65                                                              | Capacity                            | 100 / 200 / 300 / 400 Ah                                                                          |
| Certificate                        |                                                                   | Communication                       | CAN                                                                                               |
| Safety and Transportation          | Pack: IEC/EN 62619; UN38.3;<br>Cell: IEC/EN 62619; UN38.3; UL1973 | Monitoring Parameters               | System voltage, current, battery voltage,<br>Battery temperature, PCBA temperature<br>measurement |

1) Refer to two models of battery pack: BP48100P1-G2 (without heating foil) and BP48100PF1-G2 (with heating foil).

2) Total Energy Capacity is tested under the following conditions: Using a single battery pack (with new cells) in a laboratory environment, @25°C, 0.5C charging/discharge rate with a cutoff voltage of 2.5V per cell, at the beginning of life.

3) The operating temperature parameters only apply to battery pack models with heating function. For battery pack models without heating function, the operating temperature range will be: 0 to 50°C (Charging), -10 to 50°C (Discharging).

4) Minimum voltage for inverter to start power output.

| Hybrid Inverter Model                     | E3.68KS-D22                                                                                                                                                                                                                                                  | E5KS-D22        | E6KS-D22        |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------|
| PV Input                                  |                                                                                                                                                                                                                                                              |                 |                 |
| Recommended Max.PV Array Input Power @STC | 7.2 kW                                                                                                                                                                                                                                                       | 10 kW           | 10 kW           |
| Max PV Voltage                            | 500 V                                                                                                                                                                                                                                                        |                 |                 |
| Nominal Voltage                           | 360 V                                                                                                                                                                                                                                                        |                 |                 |
| MPPT Voltage Range                        | 120 ~ 480 V                                                                                                                                                                                                                                                  |                 |                 |
| MPPT Voltage Range with Full Load         | 200 ~ 425 V                                                                                                                                                                                                                                                  | 250 ~ 425 V     | 250 ~ 425 V     |
| Start Voltage <sup>4)</sup>               | 120 V                                                                                                                                                                                                                                                        |                 |                 |
| Number of MPPT Tracker                    | 2                                                                                                                                                                                                                                                            |                 |                 |
| String per MPPT Tracker                   | 1                                                                                                                                                                                                                                                            |                 |                 |
| Max. Input Current per MPPT               | 20 A                                                                                                                                                                                                                                                         |                 |                 |
| Max. Short-Circuit Current per MPPT       | 25 A                                                                                                                                                                                                                                                         |                 |                 |
| AC Output & Input (Grid)                  |                                                                                                                                                                                                                                                              |                 |                 |
| Max. AC Continuous Output Power           | 3680 W                                                                                                                                                                                                                                                       | 5000 W          | 6000 W          |
| Max. AC Apparent Output Power             | 3680 VA                                                                                                                                                                                                                                                      | 5000 VA         | 6000 VA         |
| Max. Continuous Input Power               | 7360 W                                                                                                                                                                                                                                                       | 9200 W          | 9200 W          |
| Nominal AC Voltage                        | 230 Vac                                                                                                                                                                                                                                                      |                 |                 |
| Normal Frequency                          | 50 Hz / 60 Hz (±5 Hz)                                                                                                                                                                                                                                        |                 |                 |
| Normal Output Current                     | 16 A                                                                                                                                                                                                                                                         | 21.7 A          | 26.1 A          |
| Max. Output Current                       | 16.7 A                                                                                                                                                                                                                                                       | 22.7 A          | 27.3 A          |
| Max. Input Current                        | 32 A                                                                                                                                                                                                                                                         | 40 A            | 40 A            |
| Power Factor (cos φ)                      | -0.8 (Lagging) ~ 0.8 (Leading)                                                                                                                                                                                                                               |                 |                 |
| THDi                                      | < 3%                                                                                                                                                                                                                                                         |                 |                 |
| AC Output (Backup)                        |                                                                                                                                                                                                                                                              |                 |                 |
| Normal AC Output Power                    | 3680 W                                                                                                                                                                                                                                                       | 5000 W          | 6000 W          |
| Max. AC Output Power                      | 3680 VA                                                                                                                                                                                                                                                      | 5000 VA         | 6000 VA         |
| Max. Output Current                       | 16 A                                                                                                                                                                                                                                                         | 21.7 A          | 26.1 A          |
| Normal Output Voltage                     | 230 Vac                                                                                                                                                                                                                                                      |                 |                 |
| Nominal Output Frequency                  | 50 Hz / 60 Hz                                                                                                                                                                                                                                                |                 |                 |
| Output THDv (@Linear Load)                | < 3% ( Linear Load )                                                                                                                                                                                                                                         |                 |                 |
| Battery Input                             |                                                                                                                                                                                                                                                              |                 |                 |
| Battery Type                              | LFP (LiFePO4)                                                                                                                                                                                                                                                |                 |                 |
| Nominal Battery Voltage                   | 48 V                                                                                                                                                                                                                                                         |                 |                 |
| Charging Voltage Range                    | 42 ~ 58 V                                                                                                                                                                                                                                                    |                 |                 |
| Max. Charging / Discharging Current       | 80 A / 80 A                                                                                                                                                                                                                                                  | 120 A / 120 A   | 125 A / 125 A   |
| Rated Charging / Discharging Power        | 3600 W / 3900 W                                                                                                                                                                                                                                              | 5000 W / 5400 W | 6000 W / 6400 W |
| Battery Capacity                          | 100 ~ 400 Ah                                                                                                                                                                                                                                                 |                 |                 |
| Efficiency                                |                                                                                                                                                                                                                                                              |                 |                 |
| Max. PV Efficiency                        | 97.2 %                                                                                                                                                                                                                                                       |                 |                 |
| Euro. Efficiency                          | 95.9 %                                                                                                                                                                                                                                                       | 96.4 %          | 96.5 %          |
| Protection                                |                                                                                                                                                                                                                                                              |                 |                 |
| DC Switch                                 | Integrated                                                                                                                                                                                                                                                   |                 |                 |
| Anti-islanding Protection                 | Integrated                                                                                                                                                                                                                                                   |                 |                 |
| Residual Current Monitoring               | Integrated                                                                                                                                                                                                                                                   |                 |                 |
| AC Short Circuit Protection               | Integrated                                                                                                                                                                                                                                                   |                 |                 |
| AC Overvoltage Protection                 | Integrated                                                                                                                                                                                                                                                   |                 |                 |
| DC / AC Surge Protection                  | DC Type II; AC Type III                                                                                                                                                                                                                                      |                 |                 |
| Remote Shutdown                           | Integrated                                                                                                                                                                                                                                                   |                 |                 |
| AFCI                                      | Optional                                                                                                                                                                                                                                                     |                 |                 |
| General Specifications                    |                                                                                                                                                                                                                                                              |                 |                 |
| Dimensions (W x H x D)                    | 725 × 390 × 230 mm                                                                                                                                                                                                                                           |                 |                 |
| Weight                                    | 24.8 kg                                                                                                                                                                                                                                                      | 25.5 kg         | 25.5 kg         |
| Operating Temperature Range               | -25°C to +60°C (> 45°C derating)                                                                                                                                                                                                                             |                 |                 |
| Cooling Type                              | Natural Convection                                                                                                                                                                                                                                           |                 |                 |
| Max. Operation Altitude                   | ≤ 4000m                                                                                                                                                                                                                                                      |                 |                 |
| Operation Humidity                        | 0 ~ 95% (No Condensation)                                                                                                                                                                                                                                    |                 |                 |
| IP Class                                  | IP66                                                                                                                                                                                                                                                         |                 |                 |
| Topology                                  | High Frequency Isolation                                                                                                                                                                                                                                     |                 |                 |
| Communication                             | RS-485 / 4G / Ethernet / Bluetooth / WIFI                                                                                                                                                                                                                    |                 |                 |
| Display                                   | LED / APP / WEB                                                                                                                                                                                                                                              |                 |                 |
| Certification & Standard                  | IEC/EN62109-1&2; IEC/EN 61000-6-1; IEC/EN 61000-6-2; EN 61000-6-3; IEC/EN 61000-6-4; IEC/EN 61000-3-11; EN 61000-3-12; IEC 60529; IEC 61727; IEC 62116; IEC 60068; IEC 61683; EN 50549-1; EN 50549-10; VDE-AR-N 4105; G98/G99; NC RfG:2018; C10/C11; CEI-021 |                 |                 |

| Hybrid Inverter Model                     | E4KT-D22                                                                                                                                                                                                                                   | E5KT-D22     | E6KT-D22     |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|
| PV Input                                  |                                                                                                                                                                                                                                            |              |              |
| Recommended Max.PV Array Input Power @STC | 10 kW                                                                                                                                                                                                                                      | 11 kW        | 12 kW        |
| Max PV Voltage                            | 1000 V                                                                                                                                                                                                                                     |              |              |
| Nominal Voltage                           | 720 V                                                                                                                                                                                                                                      |              |              |
| MPPT Voltage Range                        | 140 ~ 950 V                                                                                                                                                                                                                                |              |              |
| MPPT Voltage Range with Full Load         | 200 ~ 800 V                                                                                                                                                                                                                                | 230 ~ 800 V  | 250 ~ 800 V  |
| Start Voltage <sup>4)</sup>               | 200 V                                                                                                                                                                                                                                      |              |              |
| Number of MPPT Tracker                    | 2                                                                                                                                                                                                                                          |              |              |
| String per MPPT Tracker                   | 1                                                                                                                                                                                                                                          |              |              |
| Max. Input Current per MPPT               | 20 A                                                                                                                                                                                                                                       |              |              |
| Max. Short-Circuit Current per MPPT       | 25 A                                                                                                                                                                                                                                       |              |              |
| AC Output & Input (Grid)                  |                                                                                                                                                                                                                                            |              |              |
| Max. AC Continuous Output Power           | 4000 W                                                                                                                                                                                                                                     | 5000 W       | 6000 W       |
| Max. AC Apparent Output Power             | 4400 VA                                                                                                                                                                                                                                    | 5500 VA      | 6600 VA      |
| Max. Continuous Input Power               | 10000 W                                                                                                                                                                                                                                    | 11000 W      | 12000 W      |
| Nominal AC Voltage                        | 400 Vac                                                                                                                                                                                                                                    |              |              |
| Normal Frequency                          | 50 Hz / 60 Hz (±5 Hz)                                                                                                                                                                                                                      |              |              |
| Normal Output Current                     | 5.8 A (RMS)                                                                                                                                                                                                                                | 7.3 A (RMS)  | 8.7 A (RMS)  |
| Max. Output Current                       | 13.1 A (RMS)                                                                                                                                                                                                                               | 13.1 A (RMS) | 13.1 A (RMS) |
| Max. Input Current                        | 21.0 A (RMS)                                                                                                                                                                                                                               | 22.6 A (RMS) | 22.6 A (RMS) |
| Power Factor (cos φ)                      | -0.8 (Lagging) ~ 0.8 (Leading)                                                                                                                                                                                                             |              |              |
| THDi                                      | <3%                                                                                                                                                                                                                                        |              |              |
| AC Output (Backup)                        |                                                                                                                                                                                                                                            |              |              |
| Normal AC Output Power                    | 4000 W                                                                                                                                                                                                                                     | 5000 W       | 6000 W       |
| Max. AC Output Power                      | 4000 VA                                                                                                                                                                                                                                    | 5000 VA      | 6000 VA      |
| Normal Output Current                     | 5.8 A                                                                                                                                                                                                                                      | 7.3 A        | 8.7 A        |
| Max. Output Current                       | 13.1 A (RMS)                                                                                                                                                                                                                               |              |              |
| Normal Output Voltage                     | 400 Vac                                                                                                                                                                                                                                    |              |              |
| Nominal Output Frequency                  | 50 Hz / 60 Hz                                                                                                                                                                                                                              |              |              |
| Output THDv (@Linear Load)                | 2% (Linear Load)                                                                                                                                                                                                                           |              |              |
| Battery Input                             |                                                                                                                                                                                                                                            |              |              |
| Battery Type                              | LFP (LiFePO4)                                                                                                                                                                                                                              |              |              |
| Nominal Battery Voltage                   | 51.2 V                                                                                                                                                                                                                                     |              |              |
| Charging Voltage Range                    | 44 ~ 58 V                                                                                                                                                                                                                                  |              |              |
| Max. Charging / Discharging Current       | 100 / 100 A                                                                                                                                                                                                                                | 120 / 120 A  | 120 / 150A   |
| Rated Charging / Discharging Power        | 4000 W                                                                                                                                                                                                                                     | 5000 W       | 6000 W       |
| Battery Capacity                          | 100 ~ 800 Ah                                                                                                                                                                                                                               |              |              |
| Efficiency                                |                                                                                                                                                                                                                                            |              |              |
| Max. PV Efficiency                        | 96.6 %                                                                                                                                                                                                                                     |              |              |
| Euro. Efficiency                          | 94.5 %                                                                                                                                                                                                                                     |              |              |
| Protection                                |                                                                                                                                                                                                                                            |              |              |
| DC Switch                                 | Integrated                                                                                                                                                                                                                                 |              |              |
| Anti-islanding Protection                 | Integrated                                                                                                                                                                                                                                 |              |              |
| Residual Current Monitoring               | Integrated                                                                                                                                                                                                                                 |              |              |
| PV Reverse Polarity Protection            | Integrated                                                                                                                                                                                                                                 |              |              |
| AC Short Circuit Protection               | Integrated                                                                                                                                                                                                                                 |              |              |
| AC Overvoltage Protection                 | Integrated                                                                                                                                                                                                                                 |              |              |
| DC / AC Surge Protection                  | DC Type II; AC Type III                                                                                                                                                                                                                    |              |              |
| Remote Shutdown                           | Integrated                                                                                                                                                                                                                                 |              |              |
| AFCI                                      | Optional                                                                                                                                                                                                                                   |              |              |
| General Specifications                    |                                                                                                                                                                                                                                            |              |              |
| Dimensions (W x H x D)                    | 725 × 490 × 245 mm                                                                                                                                                                                                                         |              |              |
| Weight                                    | 40 kg                                                                                                                                                                                                                                      |              |              |
| Operating Temperature Range               | -25°C to +60°C (> 40°C derating)                                                                                                                                                                                                           |              |              |
| Cooling Type                              | Natural Convection                                                                                                                                                                                                                         |              |              |
| Max. Operation Altitude                   | ≤ 4000m                                                                                                                                                                                                                                    |              |              |
| Operation Humidity                        | 0 ~ 95% (No Condensation)                                                                                                                                                                                                                  |              |              |
| IP Class                                  | IP66                                                                                                                                                                                                                                       |              |              |
| Topology                                  | Transformerless                                                                                                                                                                                                                            |              |              |
| Communication                             | RS-485 / 4G / Ethernet / Bluetooth / WIFI                                                                                                                                                                                                  |              |              |
| Display                                   | LED / WIFI+APP / Web                                                                                                                                                                                                                       |              |              |
| Certification & Standard                  | IEC/EN62109-1&2; IEC/EN 61000-6-1; IEC/EN 61000-6-2; EN 61000-6-3; IEC/EN 61000-6-4; IEC/EN 61000-3-11; EN 61000-3-12; IEC 60529; IEC 61727; IEC 62116; IEC 60068; IEC 61683; EN 50549-1; EN 50549-10; VDE-AR-N 4105; NC RfG:2018; C10/C11 |              |              |

| Hybrid Inverter Model                     | E8KT-D22                                                                                                                                                                                                                                   | E10KT-D22              | E12KT-D22       |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------|
| PV Input                                  |                                                                                                                                                                                                                                            |                        |                 |
| Recommended Max.PV Array Input Power @STC | 16 kW                                                                                                                                                                                                                                      | 20 kW                  | 22 kW           |
| Max PV Voltage                            | 1000 V                                                                                                                                                                                                                                     |                        |                 |
| Nominal Voltage                           | 720 V                                                                                                                                                                                                                                      |                        |                 |
| MPPT Voltage Range                        | 140 ~ 950 V                                                                                                                                                                                                                                |                        |                 |
| MPPT Voltage Range with Full Load         | 290 ~ 800 V                                                                                                                                                                                                                                | 320 ~ 800 V            | 350 ~ 800 V     |
| Start Voltage <sup>4)</sup>               | 200 V                                                                                                                                                                                                                                      |                        |                 |
| Number of MPPT Tracker                    | 2                                                                                                                                                                                                                                          |                        |                 |
| String per MPPT Tracker                   | 1                                                                                                                                                                                                                                          |                        |                 |
| Max. Input Current per MPPT               | 20 A                                                                                                                                                                                                                                       |                        |                 |
| Max. Short-Circuit Current per MPPT       | 25 A                                                                                                                                                                                                                                       |                        |                 |
| AC Output & Input (Grid)                  |                                                                                                                                                                                                                                            |                        |                 |
| Max. AC Continuous Output Power           | 8000 W                                                                                                                                                                                                                                     | 10000 W                | 12000 W         |
| Max. AC Apparent Output Power             | 8800 VA                                                                                                                                                                                                                                    | 11000 VA <sup>4)</sup> | 13200 VA        |
| Max. Continuous Input Power               | 16000 W                                                                                                                                                                                                                                    | 20000 W                | 22000 W         |
| Nominal AC Voltage                        | 400 Vac                                                                                                                                                                                                                                    |                        |                 |
| Norminal Frequency                        | 50 Hz / 60 Hz (±5 Hz)                                                                                                                                                                                                                      |                        |                 |
| Norminal Output Current                   | 11.6 A (RMS)                                                                                                                                                                                                                               | 14.5 A (RMS)           | 17.4 A (RMS)    |
| Max. Output Current                       | 26.1 A (RMS)                                                                                                                                                                                                                               | 26.1 A (RMS)           | 26.1 A (RMS)    |
| Max. Input Current                        | 38.8 A (RMS)                                                                                                                                                                                                                               | 42 A (RMS)             | 42 A (RMS)      |
| Power Factor (cos φ)                      | -0.8 (Lagging) ~ 0.8 (Leading)                                                                                                                                                                                                             |                        |                 |
| THDi                                      | <3%                                                                                                                                                                                                                                        |                        |                 |
| AC Output (Backup)                        |                                                                                                                                                                                                                                            |                        |                 |
| Normal AC Output Power                    | 8000 W                                                                                                                                                                                                                                     | 10000 W                | 12000 W         |
| Max. AC Output Power                      | 8000 VA                                                                                                                                                                                                                                    | 10000 VA               | 12000 VA        |
| Normal Output Current                     | 11.6 A                                                                                                                                                                                                                                     | 14.5 A                 | 17.4 A          |
| Max. Output Current                       | 26.1 A (RMS)                                                                                                                                                                                                                               | 26.1 A (RMS)           | 26.1 A (RMS)    |
| Normal Output Voltage                     | 400 Vac                                                                                                                                                                                                                                    |                        |                 |
| Nominal Output Frequency                  | 50 Hz / 60 Hz                                                                                                                                                                                                                              |                        |                 |
| Output THDv (@Linear Load)                | 2% (Linear Load)                                                                                                                                                                                                                           |                        |                 |
| Battery Input                             |                                                                                                                                                                                                                                            |                        |                 |
| Battery Type                              | LFP (LiFePO4)                                                                                                                                                                                                                              |                        |                 |
| Nominal Battery Voltage                   | 51.2 V                                                                                                                                                                                                                                     |                        |                 |
| Charging Voltage Range                    | 44 ~ 58 V                                                                                                                                                                                                                                  |                        |                 |
| Max. Charging / Discharging Current       | 160 / 200 A                                                                                                                                                                                                                                | 200 / 240 A            | 200 / 240 A     |
| Rated Charging / Discharging Power        | 8000 W                                                                                                                                                                                                                                     | 10000 W                | 10000W / 12000W |
| Battery Capacity                          | 100 ~ 800 Ah                                                                                                                                                                                                                               |                        |                 |
| Efficiency                                |                                                                                                                                                                                                                                            |                        |                 |
| Max. PV Efficiency                        | 97.2 %                                                                                                                                                                                                                                     |                        |                 |
| Euro. Efficiency                          | 95.5 %                                                                                                                                                                                                                                     |                        |                 |
| Protection                                |                                                                                                                                                                                                                                            |                        |                 |
| DC Switch                                 | Integrated                                                                                                                                                                                                                                 |                        |                 |
| Anti-islanding Protection                 | Integrated                                                                                                                                                                                                                                 |                        |                 |
| Residual Current Monitoring               | Integrated                                                                                                                                                                                                                                 |                        |                 |
| PV Reverse Polarity Protection            | Integrated                                                                                                                                                                                                                                 |                        |                 |
| AC Short Circuit Protection               | Integrated                                                                                                                                                                                                                                 |                        |                 |
| AC Overvoltage Protection                 | Integrated                                                                                                                                                                                                                                 |                        |                 |
| DC/AC Surge Protection                    | DC Type II; AC Type III                                                                                                                                                                                                                    |                        |                 |
| Remote Shutdown                           | Integrated                                                                                                                                                                                                                                 |                        |                 |
| AFCI                                      | Optional                                                                                                                                                                                                                                   |                        |                 |
| General Specifications                    |                                                                                                                                                                                                                                            |                        |                 |
| Dimensions W x H x D                      | 725 × 490 × 245 mm                                                                                                                                                                                                                         |                        |                 |
| Weight                                    | 43 kg                                                                                                                                                                                                                                      |                        |                 |
| Operating Temperature Range               | -25°C to +60°C (> 40°C derating)                                                                                                                                                                                                           |                        |                 |
| Cooling Type                              | Natural Convection                                                                                                                                                                                                                         |                        |                 |
| Max. Operation Altitude                   | ≤ 4000m                                                                                                                                                                                                                                    |                        |                 |
| Operation Humidity                        | 0 ~ 95% (No Condensation)                                                                                                                                                                                                                  |                        |                 |
| IP Class                                  | IP66                                                                                                                                                                                                                                       |                        |                 |
| Topology                                  | Transformerless                                                                                                                                                                                                                            |                        |                 |
| Communication                             | RS-485 / 4G / Ethernet / Bluetooth / WIFI                                                                                                                                                                                                  |                        |                 |
| Display                                   | LED / WIFI+APP / Web                                                                                                                                                                                                                       |                        |                 |
| Certification & Standard                  | IEC/EN62109-1&2; IEC/EN 61000-6-1; IEC/EN 61000-6-2; EN 61000-6-3; IEC/EN 61000-6-4; IEC/EN 61000-3-11; EN 61000-3-12; IEC 60529; IEC 61727; IEC 62116; IEC 60068; IEC 61683; EN 50549-1; EN 50549-10; VDE-AR-N 4105; NC RfG:2018; C10/C11 |                        |                 |

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✉ [info@kstar.com](mailto:info@kstar.com)

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